



Prepared for

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**2021 ANNUAL GROUNDWATER
MONITORING & CORRECTIVE
ACTION REPORT**

**GEORGIA POWER COMPANY
PLANT HAMMOND ASH POND 3 (AP-3)**

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CERTIFICATION STATEMENT

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



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July 30, 2021
Date

SUMMARY

This summary of the 2021 Annual Groundwater Monitoring and Corrective Action Report provides the status of groundwater monitoring and corrective action program for the reporting period of August 2020 through July 2021 at the Georgia Power Company (Georgia Power) Plant Hammond Ash Pond 3 (AP-3) (the Site). This summary was prepared by Geosyntec Consultants, Inc. (Geosyntec) on behalf of Georgia Power to meet the requirements listed in Part A, Section 6¹ of the U.S. Environmental Protection Agency (USEPA) coal combustion residual (CCR) rule (40 Code of Federal Regulations [CFR] 257 Subpart D).

Plant Hammond is located at 5963 Alabama Highway SW, approximately 10 miles west of Rome in Floyd County, Georgia. Plant Hammond was a four-unit, coal-fired electric generating facility. All four units at Plant Hammond were decommissioned in July 2019 and no longer produce electricity. AP-3 is located on the northeastern corner of the Plant



Plant Hammond and Location of AP-3

Hammond property. Ash sluicing and placement operations at AP-3 commenced in June 1977. In the early 1980's, AP-3 was converted into a dry ash disposal area and in the early 1990's the pond stopped receiving CCR materials. Final capping of the pond with a low-permeability cover system was completed in the second quarter of 2018. A Closure Plan for AP-3 was submitted to the Georgia Environmental Protection Division (GA EPD) as part of the closure permit application package, which described the closure activities and requirements in accordance with § 257.102.

Groundwater at the Site is monitored using a monitoring system comprised of seven upgradient and five downgradient wells installed between November 2014 and August 2020 that meet federal and state monitoring requirements. Groundwater monitoring-related activities have been performed at AP-3 since August 2016. Based on groundwater conditions at the Site, an assessment monitoring program and assessment of corrective measures were established in August 2019 and July 2020, respectively. During the 2021

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

annual reporting period, the Site remained in assessment monitoring as corrective measures are being evaluated.

During the 2021 annual reporting period, Geosyntec conducted groundwater sampling events in August 2020, September 2020, and March 2021. Groundwater samples were submitted to Pace Analytical Services, LLC., for analysis. Per the CCR rule, groundwater results for assessment monitoring events conducted in September 2020 and March 2021 were evaluated in accordance with the certified statistical methods. That evaluation identified statistically significant values of Appendix III² and Appendix IV³ parameters in wells provided in the table below.

Based on review of the Appendix III and Appendix IV statistical results completed for the groundwater monitoring and corrective action program through March 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 the website and provided to GA EPD semiannually.

<i>Appendix III Parameter</i>	<i>September 2020</i>	<i>March 2021</i>
Boron	HGWC-120, HGWC-121A, HGWC-124, HGWC-125	HGWC-120, HGWC-121A, HGWC-124, HGWC-125
Calcium	HGWC-120, HGWC-121A, HGWC-125	HGWC-120, HGWC-121A, HGWC-125, HGWC-126
Sulfate	HGWC-120, HGWC-121A, HGWC-125	HGWC-120, HGWC-121A, HGWC-125
Total dissolved solids (TDS)	HGWC-125	HGWC-125
<i>Appendix IV Parameter⁴</i>	<i>September 2020</i>	<i>March 2021</i>
Molybdenum	<i>State only:</i> HGWC-120, MW-32, MW-39	<i>State only:</i> HGWC-120, MW-32, MW-39, MW-41

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 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 RSL, if no MCL is available, or the calculated background interwell prediction limit.

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LIST OF ACRONYMS

AP	ash pond
ACM	assessment of corrective measures
CCR	coal combustion residuals
CFR	Code of Federal Regulations
CFS	Civil Field Services
cm/sec	centimeters per second
DO	dissolved oxygen
ft	feet
ft/day	feet per day
ft/ft	feet per foot
GA EPD	Georgia Environmental Protection Division
Georgia Power	Georgia Power Company
GWPS	Groundwater Protection Standard
HAR	Hydrogeologic Assessment Report
HDPE	high density polyethylene
K _h	horizontal hydraulic conductivity
mg/L	milligram per liter
NELAP	National Environmental Laboratory Accreditation Program
NTU	Nephelometric turbidity units
Pace Analytical	Pace Analytical Services, LLC.
PE	professional engineer
PL	prediction limit
QA/QC	Quality Assurance/Quality Control
SCS	Southern Company Services
SSI	statistically significant increase
SSL	statistically significant level
s.u.	standard unit
TDS	total dissolved solids
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 (Geosyntec) has prepared this *2021 Annual Groundwater Monitoring & Corrective Action Report* to document groundwater monitoring activities conducted at Georgia Power Company (Georgia Power) Plant Hammond (Site) Ash Pond 3 (AP-3) for the reporting period of August 2020 through July 2021.

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

AP-3 ceased receiving waste prior to the effective date of the CCR Rule promulgated in April 2015. A notification of intent to initiate closure of the inactive CCR surface impoundment was certified on December 7, 2015 and posted to Georgia Power's website. Groundwater monitoring and reporting for AP-3 are being completed in accordance with the alternate schedule in § 257.100(e)(5) of the revised CCR Rule (August 5, 2016).

Due to a statistically significant level (SSL) of molybdenum identified in the 2020 Annual Groundwater Monitoring and Corrective Action Report (Geosyntec, 2020a), Georgia Power initiated an assessment of corrective measures (ACM) program for AP-3 in July 2020. Pursuant to § 257.96(b), Georgia Power continues to monitor groundwater associated with AP-3 in accordance with the assessment monitoring program established for the unit in 2019, 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). This report includes the results of the initial annual monitoring event conducted in August 2020 and the subsequent semiannual assessment monitoring events conducted in September 2020 and March 2021.

1.1 Site Description and Background

Plant Hammond is located in Floyd County, Georgia, approximately 10 miles west of Rome and is bordered by Georgia Highway 20 (GA-20) on the north, the Coosa River on

the south, Cabin Creek and industrial land on the east, and sparsely populated, forested, rural and industrial land on the west (**Figure 1**). The physical address of the plant is 5963 Alabama Highway, Rome, Georgia, 30165.

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

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

Closure of AP-3 commenced in 2016. As part of closure, AP-3 was dewatered sufficiently to remove the free liquids. The CCR material remaining in AP-3 was graded and a final cover system installed. The final cover system consists of a 60-mil high density polyethylene (HDPE) liner, geocomposite drainage media, a minimum 18-inch thick protective soil cover, and a 6-inch thick vegetative layer. The final cover system was designed to limit infiltration of precipitation with low permeability materials and is graded to promote positive drainage and shed stormwater away from AP-3 via riprap drainage ditches toward three outfall locations around AP-3. Final capping of the unit was completed in the second quarter of 2018.

1.2 Regional Geology & Hydrogeologic Setting

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

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-3 is underlain by the middle units of the Cambrian age Conasauga Formation, consisting of mostly shaley limestone. Based on review of site-specific subsurface investigations, the bedrock at AP-3 was identified as limestone or shaley limestone. AP-3 is underlain primarily by five

lithologic units; (i) fill material, (ii) terrace alluvium, (iii) residuum, (iv) highly weathered/fractured limestone bedrock, and (v) unweathered limestone bedrock.

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

1.2.2 Hydrogeologic Setting

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

1.3 Groundwater Monitoring Well Network

In accordance with § 257.91, a groundwater monitoring system was installed at AP-3 that (1) consists of a sufficient number of wells, (2) is installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer, and (3) represents the groundwater quality both upgradient of the units (i.e., background conditions) and

passing the waste boundary of the units. The number, spacing, and depths of the groundwater monitoring wells were selected based on the characterization of site-specific hydrogeologic conditions.

The current groundwater monitoring well network consists of seven upgradient compliance monitoring wells (HGWA-1, HGWA-2, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, and HGWA-122) and five downgradient compliance monitoring wells (HGWC-120, HGWC-121A, HGWC-124, HGWC-125, and HGWC-126). Prior to November 2019, the certified compliance monitoring well network for AP-3 consisted of only one upgradient and three downgradient compliance monitoring wells (HGWA-122, HGWC-120, HGWC-121A, and HGWC-124). Downgradient wells HGWC-125 and HGWC-126 were added to the network in May 2020 at the request of GA EPD. Upgradient wells HGWA-1, HGWA-2, HGWA-3, HGWA-43D, HGWA-44D, and HGWA-45D were incorporated into the AP-3 compliance well network in September 2020 to supplement HGWA-122 and further characterize background groundwater conditions upgradient of AP-3. Of this subset, wells HGWA-1, HGWA-2, and HGWA-3 were installed before January 2016. Upgradient wells HGWA-43D, HGWA-44D, and HGWA-45D were installed in August 2020 and screened in bedrock to characterize groundwater conditions within deeper portions of the aquifer (481.76 to 544.08 ft NAVD88) than that provided by HGWA-1, HGWA-2, HGWA-3, and HGWA-122 (543.23 to 573.12 ft NAVD88). Data from these three deeper wells will be used to better characterize background conditions for AP-3.

In addition, three delineation wells (MW-32, MW-41, and MW-46D) and three piezometers (MW-21, MW-23, and MW-39) are used to characterize groundwater conditions upgradient and downgradient of AP-3. The locations of the compliance monitoring wells, delineation wells, and piezometers associated with AP-3 are shown on **Figure 2**; well construction details are listed in **Table 1**.

2.0 GROUNDWATER MONITORING ACTIVITIES

In accordance with § 257.90(e), the following describes groundwater monitoring-related activities performed for AP-3 between August 2020 and July 2021. Groundwater monitoring was performed in accordance with § 257.93.

2.1 Monitoring Well Installation and Maintenance

Three compliance monitoring wells (HGWA-43D, HGWA-44D, and HGWA-45D) and one delineation well (MW-46D) were installed in August 2020 to provide additional data to characterize groundwater quality and flow conditions at deeper depths. A well installation report that includes detailed boring logs and well construction diagrams for these wells is provided in **Appendix A-1**. The installation report was submitted to GA EPD under separate cover in November 2020.

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

The AP-3 well network was re-surveyed by GEL Solutions May 11-14, 2020; a subsequent survey of the wells installed at the Site after May 2020 was conducted on September 1-2, 2020. The top of the PVC well casing [top of casing (TOC) elevation] and the survey pin installed at each well pad were surveyed to within 0.5-foot horizontal accuracy and to 0.01-foot vertical accuracy. The horizontal location (i.e., northings and eastings) was recorded in feet relative to the North America Datum of 1983 (NAD) with the vertical elevation recorded in feet relative to the North American Vertical Datum of 1988. The new survey data are incorporated into this report's applicable tables and figures. A memorandum was prepared to update and modify well construction details based on the updated survey data and included updated boring and well construction logs for the entire AP-3 well network. The *September 2020 Well Installation Addendum* was submitted to GA EPD on September 29, 2020 (Geosyntec, 2020c), and included the survey data certified by a Georgia-licensed surveyor. The certified survey data is also presented in **Appendix A-2**.

2.2 Assessment Monitoring

Georgia Power initiated an assessment monitoring program for groundwater at AP-3 in August 2019. Statistical analyses of the groundwater data from the August 2019, October 2019, and March 2020 assessment monitoring events identified SSLs of lithium and molybdenum in compliance well HGWC-120. A reduced lithium groundwater concentration reported in March 2020 for HGWC-120 reduced the lower confidence interval to below the state GWPS, and therefore an SSL for lithium was no longer identified in HGWC-120. Details regarding the statistical analyses are provided in the *2020 Annual Groundwater and Corrective Action Monitoring Report* (Geosyntec, 2020a). Pursuant to § 257.96, an ACM was initiated for AP-3 in July 2020. An *Assessment of Corrective Measures Report* (ACM Report) was subsequently prepared for AP-3 (Geosyntec, 2020d) and submitted to GA EPD in December 2020 and posted to the Georgia Power CCR compliance website. In accordance with § 257.96(b), groundwater continues to be monitored at AP-3 under the assessment monitoring program as the ACM phase is implemented.

For the current reporting period, the initial annual Appendix IV sampling event was conducted in August 2020; and the first and second semiannual assessment monitoring events were conducted in September 2020 and March 2021, respectively. The number of groundwater samples collected for analysis and the dates the samples were collected at AP-3 during the reporting period are summarized in **Table 2**. Details of these events and analytical results are discussed in Section 3, while the statistical results are discussed in Section 4.

2.3 Additional Groundwater and Surface Water Sampling

A supplemental groundwater sampling event was conducted in November 2020 to sample well MW-46D in support of the continued efforts to characterize groundwater quality and flow conditions downgradient of AP-3. Efforts to characterize groundwater quality and evaluate the corrective measures outlined in the ACM Report are presented in the *Annual Remedy Selection and Design Progress Report* provided in **Appendix C**.

Due to the presence of surface water features in the downgradient direction of MW-41, Georgia Power proactively collected surface water samples in July 2020, December 2020, and March 2021 from three locations along Cabin Creek, two of which are applicable to evaluating the surface water conditions downgradient AP-3 (i.e., H-SCC NBR and H-SCC E41), as shown on **Figure 2**. The laboratory reports associated with the July 2020,

December 2020 and March 2021 surface water sampling events are provided in **Appendix D**. Georgia Power will continue collecting the surface water samples semiannually.

During this reporting period, additional samples were collected at HGWC-125, HGWC-126, HGWA-43D, HGWA-44D, and HGWA-45D in November and December 2020, and January 2021. For each event, the samples were analyzed for the complete list of Appendix III and Appendix IV constituents. The laboratory reports associated with the three additional sampling events are provided in **Appendix D**.

In response to GA EPD comments received on January 26, 2021, Georgia Power added three surface water sampling locations to the stormwater outfalls at AP-3. Upon issuance of the Hammond AP-3 solid waste permit, these will be sampled semiannually for the full Appendix IV parameter list.

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-3 during the reporting period.

3.1 Groundwater Level Measurement

Prior to each sampling event, a synoptic round of depth-to-groundwater level measurements were recorded from the AP-3 wells and piezometers and used to calculate the groundwater elevations. The calculated groundwater elevations for the August 2020, September 2020, and March 2021 monitoring events are presented in **Table 3**. The most recent survey data for each well/piezometer were used to calculate the groundwater elevations for the August 2020, September 2020, and March 2021 events.

The groundwater elevation data presented in **Table 3** were used to prepare potentiometric surface contour maps for the August 2020, September 2020, and March 2021 assessment monitoring events, which are presented on **Figures 3, 4, and 5**, respectively. Groundwater in the AP-3 area flows under the influence of topography from slightly higher ground surface elevations on the western side of the Site towards lower elevations to the east of AP-3. The flow direction is consistent with previous observations for AP-3.

3.2 Groundwater Gradient and Flow Velocity

The representative groundwater hydraulic gradient within the uppermost aquifer beneath AP-3 was calculated using the August 2020, September 2020, and March 2021 groundwater elevation data. The hydraulic gradient is commonly calculated along the groundwater flow path perpendicular to contours of equal hydraulic head using elevations of two equipotential lines. However, at the request of GA EPD, the hydraulic gradients in this report have been 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 between wells MW-21 and HGWC-125, and MW-21 and HGWC-121A (March 2021), respectively. The hydraulic gradient and groundwater flow velocity calculations are presented in **Table 4**. The general trajectories of the flow paths are shown on each potentiometric map. The average hydraulic gradient for this reporting period across AP-3 is 0.010 feet per foot (ft/ft).

The approximate horizontal flow velocity associated with AP-3 groundwater was calculated using the following derivative of Darcy's Law.

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

where:

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

$$K_h = \text{Average hydraulic conductivity} \left(\frac{\text{feet}}{\text{day}} \right)$$

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

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

Aquifer testing was conducted by LETCO in 1977, SCS in 2014, and Geosyntec in 2017 to evaluate horizontal hydraulic conductivity of the water bearing units in the vicinity of AP-3. Slug testing was performed to estimate the horizontal hydraulic conductivity (K_h) for units above the top of bedrock, while single packer testing was used to estimate the K_h for the bedrock intervals. Additional details are presented in the HAR Rev 01 (Geosyntec, 2020b).

The groundwater flow velocity calculation was performed using the geometric mean value for K_h of the highly weathered/fractured rock of 9.8×10^{-4} centimeters per second (cm/sec) or 2.76 feet per day (ft/day). An estimated effective porosity of 0.15 is used to represent average lithologic conditions at AP-3, derived based on review of literature, observed site lithology, and professional judgement. With these variables determined, and accounting for the average hydraulic gradient discussed above, the average horizontal groundwater flow velocity underneath AP-3 for this reporting period was calculated to be 0.17 ft/day, or 62.05 ft/year.

3.3 Groundwater Sampling Procedures

Groundwater samples were collected from the compliance monitoring network using low-flow sampling procedures in accordance with § 257.93(a). For the August 2020 monitoring event, nine wells were sampled using dedicated bladder pumps and tubing installed in each well. Monitoring wells MW-32 and MW-41 and piezometer MW-39 were sampled using a peristaltic pump equipped with new disposable polyethylene

tubing. For the September 2020 and March 2021 events, 13 of the 16 wells were purged and sampled using the installed dedicated bladder pumps with tubing. Wells MW-32 and MW-41 and piezometer MW-39 were sampled using a peristaltic pump equipped with new disposable polyethylene tubing. Monitoring wells HGWA-43D, HGWA-44D, HGWA-45D, MW-46D, HGWC-125, and HGWC-126 were purged using a non-dedicated bladder pump with disposable polyethylene tubing. 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 listed below 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 \pm 0.1 Standard Units (s.u.).
- Conductivity \pm 5%.
- \pm 0.2 milligrams per liter (mg/L) or \pm 10%, whichever is greater for dissolved oxygen (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. If turbidity remained above 10 NTU after three hours of purging, in conjunction with stabilized pH, conductivity, and ORP field measurements as previously specified, both an unfiltered and filtered groundwater sample was collected. An in-line 0.45-micron filter was used to collect the filtered sample; a new filter was used for each sample. The in-line filters were conditioned prior to filling sample bottles by allowing at least 2 filter volumes of water to pass through before transferring the water to the sample bottles. 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 are provided in **Appendix D**.

3.4 Laboratory Analyses

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

The groundwater analytical results from the August 2020, September 2020, and March 2021 sampling events, and additional sampling events for HGWA-43D, HGWA-44D, HGWA-45D, HGWC-125, and HGWC-126 are summarized in **Table 5**.

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

In addition to collecting QA/QC samples, the data were validated based on the pertinent methods referenced in the laboratory reports, professional and technical judgment, and applicable federal guidance documents (USEPA, 2001, 2011, and 2017). Where necessary, the data were qualified with supporting documentation and justifications. The data are considered usable for meeting project objectives and the results are considered valid. The associated data validation reports are provided in **Appendix D**, 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 monitoring constituents and completed statistical analyses of the Appendix IV groundwater monitoring data obtained during the assessment monitoring events. Reports generated from the statistical analyses are provide in **Appendix E**. Statistical data analyses were performed by Groundwater Stats Consulting (GSC).

4.1 Statistical Methods

Analytical data from the September 2020 and March 2021 semiannual monitoring events were statistically analyzed in accordance with the PE-certified Statistical Analysis Method Certification (October 2017, revised January 2020). The Sanitas groundwater statistical software was used to perform the statistical analyses. Sanitas is a decision-support software package, that incorporates the statistical tests required of Subtitle C and D facilities by USEPA regulations and guidance as recommended in the USEPA document *Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance* (Unified Guidance) (USEPA, 2009).

Appendix III statistical analysis was performed to determine if Appendix III constituents have returned to background levels. Appendix IV assessment monitoring constituents were evaluated to determine if concentrations statistically exceeded the established state and federal GWPS. Detailed statistical methods used for Appendix III and Appendix IV constituents are discussed in statistical analysis packages provided in **Appendix E** and summarized in Sections 4.1.1 and 4.1.2. The GWPS were finalized pursuant to § 257.95(d)(2) and presented in **Table 6**.

4.1.1 Appendix III Statistical Methods

Statistical tests used to evaluate the groundwater monitoring data consist of interwell prediction limits combined with a 1-of-2 verification resample plan for each of the Appendix III parameters. Interwell prediction limits (PLs) pool upgradient well data to establish a background limit for an individual constituent. The most recent sample from each downgradient well is compared to the background limit to determine whether there are significant statistical increases (SSIs). An "initial exceedance" occurs when an Appendix III constituent reported in the groundwater of a downgradient compliance monitoring well exceeds the constituent's associated PL. The 1-of-2 resample plan

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

4.1.2 Appendix IV Statistical Methods

To statistically compare groundwater data to GWPS, confidence intervals are constructed for each of the detected Appendix IV constituents in any downgradient well for which a minimum of four independent sampling events has occurred. In accordance with Section 21.1.1 of the Unified Guidance (USEPA, 2009), four independent data are the minimum population size recommended to construct confidence intervals required to assess SSLs for Appendix IV constituents. Due to non-routine (or ACM investigation) sampling, some Appendix IV constituents at a well location have differing numbers of data.

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 is identified.

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

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

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

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

Following the above federal and state rule requirements, GWPS have been established for statistical comparison of Appendix IV constituents and are presented in **Table 6**.

4.2 Statistical Analyses Results

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

September 2020 Assessment Monitoring Event

AP-3 (Federal CCR Rule):

- No SSLs were reported above federal GWPS.

AP-3 (GA EPD CCR Rule):

- Molybdenum: HGWC-120, MW-32, and MW-39

March 2021 Assessment Monitoring Event

AP-3 (Federal CCR Rule):

- No SSLs were reported above federal GWPS.

AP-3 (GA EPD CCR Rule):

- Molybdenum: HGWC-120, MW-32, MW-39, and MW-41

The identified SSL of molybdenum in compliance well HGWC-120 in exceedance of the state GWPS is consistent with the statistical results of previous reporting periods. This

is the first reporting period for which an SSL has been identified in wells MW-32, MW-39, and MW-41. A groundwater exceedance notification acknowledging the SSLs of molybdenum was placed in the Operating Record on January 29, 2021, pursuant to § 257.95(g). A similar notification was placed in the Operating Record for the March 2021 SSL on July 30, 2021.

4.3 Delineation Data

Due to the presence of a surface water feature in the downgradient direction of MW-41, Georgia Power proactively collected surface water samples in July 2020, December 2020, and March 2021 from three locations along Cabin Creek, two of which are applicable to evaluating the surface water conditions downgradient of AP-3 (i.e., H-SCC NBR and H-SCC E41). The surface water sampling locations are shown on **Figure 2**. Sampling location H-SCC NBR is located upstream of the Site, and therefore the data are considered representative of background conditions. Sampling location H-SCC E41 is located immediately downgradient of MW-41. The surface water samples collected from both locations for the three events indicate molybdenum was not detected. Based on molybdenum results for data collected to date, no molybdenum impacts to surface water have been detected, and horizontal delineation to below the state GWPS is considered complete. The surface water analytical results from the July 2020, December 2020, and March 2021 sampling events are summarized in **Table 7**. The laboratory reports associated with the July 2020, December 2020 and March 2021 surface water sampling event are provided in **Appendix D**. Georgia Power will continue collecting the surface water samples semiannually.

In August 2020, Georgia Power installed a well (MW-46D) to vertically delineate the molybdenum SSL identified in compliance well HGWC-120. However, the current Appendix IV data set for MW-46D is limited to less than four independent sampling events which is the required minimum number to construct confidence intervals to statistically evaluate the results with respect to GWPS. Georgia Power will continue to monitor this well until an adequately sized data set is available to complete statistical analyses. Vertical delineation of molybdenum may require the installation of (an) additional vertical delineation well(s) adjacent to their respective locations and is currently under evaluation.

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-3 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 C**. The Semiannual Progress Report summarizes:

- (i) the current conceptual site model applicable to evaluating groundwater corrective measures proposed in the ACM Report (Geosyntec, 2020d);
- (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 Annual Groundwater Monitoring & Corrective Action Report* for Plant Hammond AP-3 was prepared to fulfill the requirements of Federal CCR Rule and GA EPD Rules for Solid Waste Management 391-3-4-.10. Statistical analysis of the assessment monitoring data through March 2021 for AP-3 confirmed the continued presence of an SSL of molybdenum above the state GWPS, but not the federal GWPS, in AP-3 compliance monitoring well HGWC-120. The analysis also identified new SSLs of molybdenum above the state GWPS, but not the federal GWPS, in wells MW-32, MW-39, and MW-41.

Georgia Power proactively collected surface water samples in July 2020, December 2020, and March 2021 from locations along Cabin Creek. The surface water samples collected from the two locations near AP-3 for the three events indicate molybdenum was not detected. Based on molybdenum results for data collected to date, no molybdenum impacts to surface water have been detected, and horizontal delineation to below the state GWPS is considered complete.

In August 2020, Georgia Power installed a well (MW-46D) to vertically delineate the molybdenum SSL identified in compliance well HGWC-120. However, the current Appendix IV data set for MW-46D is limited to less than four independent sampling events which is the required minimum number to construct confidence intervals to statistically evaluate the results with respect to GWPS. Georgia Power will continue to monitor this well until an adequately sized data set is available to complete statistical analyses. Vertical delineation of the SSLs in MW-32, MW-39, and MW-41 may require the installation of additional wells adjacent to their locations and is under evaluation.

Georgia Power will continue to monitor groundwater in the vicinity of AP-3 under the current assessment monitoring program and adaptively manage the Site as new data become available. Georgia Power will continue efforts to assess corrective measures as presented in the Semiannual Progress Report provided in **Appendix C**. The next routine semiannual assessment monitoring event for AP-3 is scheduled for August 2021. The August 2021 semiannual assessment monitoring event will be a combined event to meet the requirements of 40 C.F.R. §257.95(b) and (d)(1) and will include sampling and analysis of all Appendix III and IV constituents.

7.0 REFERENCES

- Geosyntec Consultants, 2020a. *2020 Annual Groundwater Monitoring and Corrective Action Report – Georgia Power Company, Plant Hammond Ash Pond 3 (AP-3)*. July 2020.
- Geosyntec Consultants, 2020b. *Hydrogeologic Assessment Report (Revision 1) - Plant Hammond Ash Pond 3 (AP-3)*. October 2020.
- Geosyntec Consultants, 2020c. *September 2020 Well Installation Addendum, Plant Hammond Ash Pond 3*. September 2020.
- Geosyntec Consultants, 2020d. *Assessment of Corrective Measures Report – Plant Hammond Ash Pond 3 (AP-3)*. December 2020.
- Geosyntec Consultants, 2021. *Groundwater Monitoring Plan – Plant Hammond Ash Pond 3 (AP-3)*. January 2021.
- Golder Associates, 2018. *Geologic and Hydrogeologic Report – Plant Hammond*. November 2018.
- Sanitas: Groundwater Statistical Software, v. 9.6.05 (2018). Sanitas Technologies©, Boulder, CO.
- USEPA, 2001. *Region 4 Environmental Investigations Standard Operating Procedures and Quality Assurance Manual*. Science and Ecosystem Support Division. Region IV. Athens, GA. November 2001.
- USEPA, 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance*. Office of Resource Conservation and Recovery – Program Implementation and Information Division. March 2009.
- USEPA, 2011. *Region 4 Data Validation Standard Operating Procedures*. Science and Ecosystem Support Division. Region IV. Athens, GA. September 2011.
- USEPA, 2016. *Region 4 Surface Water Sampling Operating Procedures*. Science and Ecosystem Support Division. Region 4. Athens, GA. December 2016.

USEPA, 2017. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. Office of Superfund Remediation and Technology Innovation. OLEM 9355.0-135 [EPA-540-R-2017-001]. Washington, DC. January 2017.

TABLES

Table 1
Monitoring Well Network Summary
Plant Hammond AP-3, Floyd County, Georgia

Well ID	Hydraulic Location	Installation Date	Northing ⁽¹⁾	Easting ⁽¹⁾	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
<i>Compliance Monitoring Well</i>									
HGWA-1	Upgradient	12/3/2014	1550423.32	1940770.00	595.21	573.12	563.12	32.49	10
HGWA-2	Upgradient	12/2/2015	1549796.87	1939845.15	587.92	570.29	560.29	27.95	10
HGWA-3	Upgradient	12/2/2015	1549794.41	1939833.39	587.74	553.23	543.23	44.51	10
HGWA-43D	Upgradient	8/26/2020	1550422.85	1940753.80	595.08	544.08	534.08	61.25	10
HGWA-44D	Upgradient	8/25/2020	1550409.13	1940756.18	594.79	491.76	481.76	113.28	10
HGWA-45D	Upgradient	8/19/2020	1551157.68	1941907.54	586.95	535.23	525.23	62.87	10
HGWA-122	Upgradient	11/20/2014	1551251.42	1941887.11	587.90	570.54	560.54	27.76	10
HGWC-120	Downgradient	6/27/2016	1551067.24	1942926.62	605.82	548.83	538.83	67.00	10
HGWC-121A	Downgradient	7/17/2017	1550607.97	1943030.44	584.69	556.71	546.71	37.98	10
HGWC-124	Downgradient	11/13/2014	1551624.93	1942781.05	582.52	557.80	547.80	35.12	10
HGWC-125	Downgradient	5/4/2020	1550821.41	1942962.87	608.89	556.03	546.03	63.19	10
HGWC-126 ⁽⁴⁾	Downgradient	11/25/2019	1550422.03	1942689.40	611.24	552.72	542.72	68.52	10
<i>Delineation Well</i>									
MW-32	Downgradient	11/22/2019	1551092.83	1943021.47	585.46	559.30	549.30	36.16	10
MW-41	Downgradient	5/18/2020	1551158.16	1943196.47	577.25	563.20	553.20	24.38	10
MW-46D	Downgradient	8/18/2020	1551056.48	1942929.10	605.72	513.92	503.92	102.05	10
<i>Piezometer</i>									
MW-21	Downgradient	12/3/2014	1550270.15	1941809.76	586.27	570.40	560.40	26.28	10
MW-23	Downgradient	11/24/2014	1551641.44	1942496.83	584.91	563.03	553.03	32.28	10
MW-39	Downgradient	3/16/2020	1551111.45	1943089.26	580.42	564.93	554.93	25.82	10

- Notes:
- ft = feet.
 - ft BTOC = feet below top of casing.
 - (1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey data certified on May 19, 2020. For HGWA-43D, HGWA-44D, HGWA-45D, and MW-46D the survey data was certified on September 10, 2020.
 - (2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey data certified on May 19, 2020. For HGWA-43D, HGWA-44D, HGWA-45D, and MW-46D the survey data was certified on September 10, 2020.
 - (3) Total well depth accounts for sump if sump depth data was provided on well construction logs.
 - (4) Well HGWC-126 was originally installed as piezometer MW-31 but reclassified as a compliance monitoring well in May 2020.

Table 2
Groundwater Sampling Event Summary
Plant Hammond AP-3, Floyd County, Georgia

Well ID	Hydraulic Location	August 24-28, 2020	September 14-28, 2020	November 11-12, 2020	December 15-16, 2020	January 19-20, 2021	March 10-15, 2021	Status of Monitoring Well
Purpose of Sampling Event:		App. IV Annual	Assessment	Supplemental ⁽¹⁾	Supplemental ⁽¹⁾	Supplemental ⁽¹⁾	Assessment	
<i>Compliance Monitoring Well</i>								
HGWA-1	Upgradient	X	X	--	--	--	X	Assessment
HGWA-2	Upgradient	X	X	--	--	--	X	Assessment
HGWA-3	Upgradient	X	X	--	--	--	X	Assessment
HGWA-43D	Upgradient	--	X	X	X	X	X	Assessment
HGWA-44D	Upgradient	--	X	X	X	X	X	Assessment
HGWA-45D	Upgradient	--	X	X	X	X	X	Assessment
HGWA-122	Upgradient	X	X	--	--	--	X	Assessment
HGWC-120	Downgradient	X	X	--	--	--	X	Assessment
HGWC-121A	Downgradient	X	X	--	--	--	X	Assessment
HGWC-124	Downgradient	X	X	--	--	--	X	Assessment
HGWC-125	Downgradient	X	X	X	X	X	X	Assessment
HGWC-126	Downgradient	X	X	X	X	X	X	Assessment
<i>Delineation Well</i>								
MW-32	Downgradient	X	X	--	--	--	X	Assessment
MW-41	Downgradient	X	X	--	--	--	X	Assessment
MW-46D	Downgradient	--	X	X	--	--	X	Assessment
<i>Piezometer</i>								
MW-39	Downgradient	X	X	--	--	--	X	Assessment

Note:

--" = Not sampled.

(1) Supplemental sampling in support of ongoing characterization of site groundwater quality.

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

Well ID	Top of Casing Elevation (ft) ^(1, 2)	August 24, 2020		September 14, 2020		March 10, 2021	
		Depth to Water (ft BTOC)	Groundwater Elevation (ft)	Depth to Water (ft BTOC)	Groundwater Elevation (ft)	Depth to Water (ft BTOC)	Groundwater Elevation (ft)
<i>Compliance Monitoring Well</i>							
HGWA-1	595.21	19.30	575.91	20.97	574.24	10.94	584.27
HGWA-2	587.92	10.12	577.80	11.14	576.78	7.08	580.84
HGWA-3	587.74	10.00	577.74	10.96	576.78	6.68	581.06
HGWA-43D	595.08	--	--	20.75	574.33	10.85	584.23
HGWA-44D	594.79	--	--	19.59	575.20	11.18	583.61
HGWA-45D	586.95	--	--	14.08	572.87	6.74	580.21
HGWA-122	587.90	14.20	573.70	15.13	572.77	7.82	580.08
HGWC-120	605.82	40.67	565.15	41.20	564.62	40.33	565.49
HGWC-121A	584.69	18.52	566.17	18.56	566.13	17.51	567.18
HGWC-124	582.52	15.81	566.71	18.16	564.36	13.67	568.85
HGWC-125	608.89	43.89	565.00	44.50	564.39	43.75	565.14
HGWC-126	611.24	41.61	569.63	41.86	569.38	40.43	570.81
<i>Delineation Well</i>							
MW-32	585.46	20.30	565.16	20.80	564.66	19.97	565.49
MW-41	577.25	12.25	565.00	12.79	564.46	11.99	565.26
MW-46D	605.72	--	--	41.05	564.67	39.91	565.81
<i>Piezometer</i>							
MW-21	586.27	9.26	577.01	10.70	575.57	5.85	580.42
MW-23	584.91	14.34	570.57	15.20	569.71	9.67	575.24
MW-39	580.42	15.30	565.12	15.84	564.58	14.99	565.43

Notes:

-- = well was not installed at the time of depth to water measurement.

ft = feet

ft BTOC = feet below top of casing

(1) Elevations referenced to the North American Vertical Datum of 1988 (ft NAVD88).

(2) Survey data certified on May 19, 2020 and September 10, 2020 for wells HGWA-43D, HGWA-44D, HGWA-45D, and MW-46D.

Table 4
Horizontal Groundwater Gradient and Flow Velocity Calculations
Plant Hammond AP-3, Floyd County, Georgia

Flow Path Direction ⁽¹⁾	August 24, 2020 ⁽³⁾				September 14, 2020 ⁽³⁾				March 10, 2021 ⁽³⁾				Average $\Delta h/\Delta l$ (ft/ft)
	h_1 (ft)	h_2 (ft)	Δl (ft)	$\Delta h/\Delta l$ (ft/ft)	h_1 (ft)	h_2 (ft)	Δl (ft)	$\Delta h/\Delta l$ (ft/ft)	h_1 (ft)	h_2 (ft)	Δl (ft)	$\Delta h/\Delta l$ (ft/ft)	
Easterly Flow Path	577.01	565.00	1,278	0.0094	575.57	564.39	1,278	0.0087	580.42	567.18	1,288	0.0103	0.0095

Flow Path Direction ⁽¹⁾	K_h (ft/d)	n	$\Delta h/\Delta l$ (ft/ft)	V (ft/d) ⁽²⁾
Easterly Flow Path	2.76	0.15	0.0095	0.17

Notes:

ft = feet

ft/d = feet per day

ft/ft = feet per foot

h_1, h_2 = point of interpreted groundwater elevation

K_h = horizontal hydraulic conductivity

$\Delta h/\Delta l$ = hydraulic gradient

Δh = change in groundwater elevation between identified wells

Δl = distance between identified wells

n = effective porosity

V = groundwater flow velocity

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

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

(3) Easterly flow path was calculated between monitoring wells MW-21 and HGWC-125 (August 24, 2020 and September 14, 2020), and between MW-21 and HGWC-121A (March 10, 2021).

Table 5
Summary of Groundwater Analytical Data
Plant Hammond AP-3, Floyd County, Georgia

Well ID:	HGWA-1	HGWA-1	HGWA-1	HGWA-2	HGWA-2	HGWA-2	HGWA-3	HGWA-3	HGWA-3	HGWA-43D ⁽⁴⁾	HGWA-43D ⁽⁴⁾	HGWA-43D ⁽⁴⁾	HGWA-43D(4)	HGWA-43D ⁽⁴⁾	
Sample Date:	8/28/2020	9/15/2020	3/10/2021	8/25/2020	9/15/2020	3/11/2021	8/25/2020	9/15/2020	3/11/2021	9/16/2020	11/10/2020	12/15/2020	1/19/2021	3/11/2021	
Parameter ^(1,2)															
APPENDIX III	Boron	--	0.017 J	0.015 J	--	0.044 J	0.056	--	0.0071 J	0.015 J	0.061 J	0.057 J	0.052 J	0.049 J	0.06
	Calcium	--	103	111	--	21.1	43.8	--	73.1	83.8	56.0	63.3	62.6	60.1	59.6
	Chloride	--	13.4	7.4	--	5.0	5.1	--	6.0	5.9	4.1	4.4	4.7	4.1	4.5
	Fluoride	0.080 J	0.082 J	0.079 J	<0.050	<0.050	0.1	<0.050	<0.050	<0.050	0.22	0.19	0.21	0.16	0.2
	pH⁽³⁾	7.02	7.15	6.95	5.17	5.22	5.8	7.14	7.29	7.33	7.52	7.27	7.39	7.39	7.46
	Sulfate	--	47.3	49.6	--	51.5	52.9	--	44.7	50.4	43.0	39.0	38.8	37.3	38.6
	TDS	--	265	348	--	124	169	--	258	267	272	307	289	270	279
APPENDIX IV	Antimony	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	0.00051 J	0.00043 J	0.00031 J	0.00029 J B	0.00057 J
	Arsenic	<0.00078	--	--	<0.00078	--	--	<0.00078	--	--	<0.00078	0.0021 J	<0.00078	0.0011 J	--
	Barium	0.036	0.035	0.030	0.11	0.12	0.07	0.11	0.12	0.13	0.26	0.25	0.29	0.32	0.30
	Beryllium	<0.000046	<0.000046	<0.000046	0.00014 J	0.00013 J	0.000086 J	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046
	Cadmium	<0.00012	--	--	<0.00012	--	--	<0.00012	--	--	<0.00012	<0.00012	<0.00012	<0.00012	--
	Chromium	<0.00055	<0.00055	<0.00055	0.00067 J	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055
	Cobalt	<0.00038	<0.00038	<0.00038	0.018	0.021	0.013	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038
	Fluoride	0.080 J	0.082 J	0.079 J	<0.050	<0.050	0.1	<0.050	<0.050	<0.050	0.22	0.19	0.21	0.16	0.2
	Lead	0.000070 J	<0.000036	<0.000036	0.000085 J	0.000080 J	0.000076 J	<0.000036	0.000042 J	<0.000036	0.000050 J	0.000069 J	0.000082 J	0.000044 J	<0.000036
	Lithium	0.00087 J	0.00087 J	0.00090 J	0.0015 J	0.0015 J	0.0011 J	0.0027 J	0.0026 J	0.0035 J	0.0018 J	0.0013 J	0.0019 J	0.0025 J	0.0022 J
	Mercury	<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	0.0044 J	0.0072 J	0.0044 J	0.0038 J	0.0064 J
	Comb. Radium 226/228	0.000 U	0.748 U	0.000 U	0.778 U	0.124 U	0.737 U	0.330 U	0.161 U	0.128 U	0.531 U	0.788 U	1.04 U	0.685 U	1.51 U
Selenium	<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	--	

Notes:

-- = Parameter was not analyzed.

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

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.

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

TDS = Total dissolved solids.

U = Indicates the parameter was not detected above the minimum detection concentration (MDC, specific to combined radium 226/228)

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

(2) Metals were analyzed by EPA Method 6010D/6020B, Mercury was analyzed by EPA Method 7470A, anions were analyzed by EPA Method 300.0, TDS was analyzed by SM2540C, and combined radium by EPA Methods 9315/9320.

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

(4) Monitoring wells HGWA-43D, HGWA-44D, HGWA-45D, HGWC-125 and HGWC-126 were analyzed for the complete list of Appendix III and Appendix IV constituents to establish groundwater quality.

Table 5
Summary of Groundwater Analytical Data
Plant Hammond AP-3, Floyd County, Georgia

Well ID:	HGWA-44D ⁽⁴⁾	HGWA-44D ⁽⁴⁾	HGWA-44D ⁽⁴⁾	HGWA-44D ⁽⁴⁾	HGWA-44D ⁽⁴⁾	HGWA-45D ⁽⁴⁾	HGWA-45D ⁽⁴⁾	HGWA-45D ⁽⁴⁾	HGWA-45D ⁽⁴⁾	HGWA-45D ⁽⁴⁾	HGWA-122	HGWA-122	HGWA-122	
Sample Date:	9/16/2020	11/10/2020	12/15/2020	1/19/2021	3/10/2021	9/25/2020	11/11/2020	12/16/2020	1/20/2021	3/12/2021	8/24/2020	9/15/2020	3/11/2021	
Parameter ^(1,2)														
APPENDIX III	Boron	0.23	0.29	0.31	<0.0052	0.39	0.16	0.17	0.16	0.19	0.19	--	0.22	0.2
	Calcium	30.0	33.6	28.7	33.0	18.3	56.8	54.9	56.4	55	56.5	--	75.8	60.4
	Chloride	4.1	7.8	9.4	9.5	12.3	3.6	3.3	3.4	3.5	3.3	--	3.6	2.3
	Fluoride	0.22	0.59	0.67	0.74	0.65	0.21	0.19	0.18	0.22	0.2	0.075 J	0.096 J	0.059 J
	pH ⁽³⁾	7.83	7.84	7.87	7.86	7.92	7.57	7.40	7.39	7.47	7.52	6.54	6.68	6.65
	Sulfate	43.0	6.3	6.7	7.4	<0.50	6.8	11.2	11.3	14.2	8.7	--	41.4	40.7
	TDS	270	287	295	278	289	263	276	294	289	260	--	267	206
APPENDIX IV	Antimony	0.00049 J	<0.00028	0.00047 J	<0.00028	0.00037 J	<0.00028	0.00057 J	<0.00028	<0.00028	0.00030 J	<0.00028	0.0010 J	<0.00028
	Arsenic	<0.00078	<0.00078	<0.00078	<0.00078	--	<0.00078	0.0011 J	<0.00078	0.0022 J	--	<0.00078	--	--
	Barium	0.24	0.38	0.39	<0.00071	0.26	0.49	0.45	0.52	0.53	0.54	0.041	0.039	0.032
	Beryllium	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046
	Cadmium	<0.00012	<0.00012	<0.00012	<0.00012	--	<0.00012	<0.00012	<0.00012	<0.00012	--	<0.00012	--	--
	Chromium	0.0012 J	0.00089 J	0.00072 J	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	0.00067 J	<0.00055	0.00093 J	0.00067 J	0.0017 J
	Cobalt	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038
	Fluoride	0.22	0.59	0.67	0.74	0.65	0.21	0.19	0.18	0.22	0.2	0.075 J	0.096 J	0.059 J
	Lead	0.00021 J	0.00020 J	0.00011 J	<0.000036	<0.000036	<0.000036	0.000040 J	0.000058 J	0.000082 J	0.000055 J	0.000077 J	0.000043 J	0.000093 J
	Lithium	0.014 J	0.025 J	0.028 J	<0.00081	0.03	0.0049 J	0.0032 J	0.0045 J	0.0025 J	0.0050 J	<0.00081	<0.00081	<0.00081
	Mercury	<0.000078	<0.000078	<0.000078	<0.000078	--	<0.000078	<0.000078	<0.000078	<0.000078	--	<0.000078	--	--
	Molybdenum	0.0019 J	0.0018 J	0.0019 J	<0.00069	0.0019 J	0.0014 J	0.0049 J	0.0024 J	0.0063 J	0.0019 J	0.0031 J	0.0045 J	0.0014 J
	Comb. Radium 226/228	0.422 U	0.293 U	0.700 U	0.79 U	0.811 U	1.07 U	0.490 U	0.963 U	0.682 U	0.967 U	0.883 U	0.375 U	0.870 U
Selenium	<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	--	--	

Table 5
Summary of Groundwater Analytical Data
Plant Hammond AP-3, Floyd County, Georgia

Well ID:		HGWC-120	HGWC-120	HGWC-120	HGWC-121A	HGWC-121A	HGWC-121A	HGWC-124	HGWC-124	HGWC-124
Sample Date:		8/26/2020	9/21/2020	3/12/2021	8/26/2020	9/28/2020	3/16/2021	8/27/2020	9/28/2020	3/15/2021
Parameter ^(1,2)										
APPENDIX III	Boron	--	0.93	1.1	--	2.3	1.9	--	0.43	0.4
	Calcium	--	152	174	--	167	167	--	107	103
	Chloride	--	2.4	2.4	--	23.2	21.8	--	2.5	2.9
	Fluoride	0.48	0.33	0.42	0.16	0.15	0.16	<0.050	<0.050	<0.050
	pH ⁽³⁾	6.96	6.98	6.95	6.73	6.93	6.87	7.15	7.27	7.22
	Sulfate	--	225.0	210	--	182.0	177	--	86	74.0
	TDS	--	272	584	--	<10.0	614	--	176	340
APPENDIX IV	Antimony	<0.00028	<0.00028	0.0018 J	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028
	Arsenic	<0.00078	--	--	<0.00078	--	--	<0.00078	--	--
	Barium	0.041	0.046	0.047	0.057	0.056	0.059	0.062	0.071	0.071
	Beryllium	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046
	Cadmium	<0.00012	--	--	<0.00012	--	--	<0.00012	--	--
	Chromium	<0.00055	0.00065 J	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055
	Cobalt	0.0023 J	0.0041 J	0.0027 J	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038
	Fluoride	0.48	0.33	0.42	0.16	0.15	0.16	<0.050	<0.050	<0.050
	Lead	<0.000036	<0.000036	<0.000036	<0.000036	<0.000036	0.00015 J	<0.000036	0.000075 J	<0.000036
	Lithium	0.023 J	0.023 J	0.023 J	0.0071 J	0.0076 J	0.0077 J	0.00091 J	0.0011 J	0.0010 J
	Mercury	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--
	Molybdenum	0.050	0.043	0.033	<0.00069	<0.00069	<0.00069	0.00091 J	0.00090 J	0.00092 J
	Comb. Radium 226/228	0.357 U	0.553 U	0.711 U	1.96	0.761 U	0.985 U	0.494 U	0.477 U	0.740 U
	Selenium	<0.0016	--	--	<0.0016	--	--	<0.0016	--	--
Thallium	<0.00014	--	--	<0.00014	--	--	<0.00014	--	--	

Table 5
Summary of Groundwater Analytical Data
Plant Hammond AP-3, Floyd County, Georgia

Well ID:	HGWC-125 ⁽⁴⁾	HGWC-125 ⁽⁴⁾	HGWC-125 ⁽⁴⁾	HGWC-125 ⁽⁴⁾	HGWC-125 ⁽⁴⁾	HGWC-125 ⁽⁴⁾	HGWC-126 ⁽⁴⁾	HGWC-126 ⁽⁴⁾	HGWC-126 ⁽⁴⁾	HGWC-126 ⁽⁴⁾	HGWC-126 ⁽⁴⁾	HGWC-126 ⁽⁴⁾	
Sample Date:	8/25/2020	9/21/2020	11/12/2020	12/16/2020	1/20/2021	3/12/2021	8/25/2020	9/18/2020	11/11/2020	12/16/2020	1/20/2021	3/12/2021	
Parameter ^(1,2)													
APPENDIX III	Boron	1.4	1.4	1.4	1.5	1.5	1.5	0.016 J	0.041 J	0.0090 J	0.011 J	<0.0052	0.016 J
	Calcium	186	155	165	194	177 M1	165	130	119	133	132	131	138
	Chloride	10.6	12.1	10.4	5.3	10.2	10.8	8.7	8.4	8.3	8.9	8.5	8.5
	Fluoride	0.16	0.11	0.12	0.2	0.13	0.12	0.52	0.43	0.45	0.49	0.44	0.46
	pH⁽³⁾	6.36	6.22	6.13	6.61	6.23	6.18	6.78	6.97	6.86	6.93	6.99	7.05
	Sulfate	353	352	300	306	335	293	62.8	62.7	62.3	68.1	66.6	69.7
	TDS	772	956	694	816	726	664	505	452	468	536	472	474
APPENDIX IV	Antimony	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	0.00061 J	<0.00028	<0.00028	0.00040 J	<0.00028	<0.00028	0.00043 J
	Arsenic	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	--	<0.00078	<0.00078	<0.00078	<0.00078	<0.00078	--
	Barium	0.045	0.042	0.042	0.041	0.045	0.043	0.23	0.21	0.23	0.24	0.25	0.27
	Beryllium	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046
	Cadmium	<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	0.00081 J	<0.00055	0.00096 J	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055
	Cobalt	0.0087	0.012	0.012	0.0055	0.012	0.014	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038	<0.00038
	Fluoride	0.16	0.11	0.12	0.2	0.13	0.12	0.52	0.43	0.45	0.49	0.44	0.46
	Lead	<0.000036	<0.000036	0.000047 J	<0.000036	0.000092 J	0.000044 J	0.000045 J	<0.000036	0.000042 J	<0.000036	<0.000036	0.000046 J
	Lithium	0.0037 J	0.0038 J	0.0038 J	0.0055 J	0.0046 J	0.0039 J	0.0037 J	0.0035 J	0.0032 J	0.0029 J	0.0038 J	0.0038 J
	Mercury	<0.000078	<0.000078	<0.000078	<0.000078	<0.000078	--	<0.000078	<0.000078	<0.000078	<0.000078	<0.000078	--
	Molybdenum	0.00099 J	<0.00069	0.0017 J	0.014	0.0013 J	0.0012 J	<0.00069	<0.00069	<0.00069	<0.00069	<0.00069	<0.00069
	Comb. Radium 226/228	1.65	1.45	0.633 U	0.818 U	1.01 U	0.828 U	1.82	0.841 U	0.837 U	1.26 U	0.985 U	1.86
	Selenium	<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	--	

Table 5
Summary of Groundwater Analytical Data
Plant Hammond AP-3, Floyd County, Georgia

Well ID:	MW-32	MW-32	MW-32	MW-39	MW-39	MW-39	MW-41	MW-41	MW-41	MW-46D	MW-46D	MW-46D	
Sample Date:	8/26/2020	9/28/2020	3/15/2021	8/26/2020	9/28/2020	3/15/2021	8/26/2020	9/28/2020	3/15/2021	9/25/2020	11/11/2020	3/12/2021	
Parameter ^(1,2)													
APPENDIX III	Boron	--	1.3	1.2	--	1.3	1.2	--	1.2	1.1	0.51	0.68	0.69
	Calcium	--	173	172	--	185	186	--	173	172	78.3	69.3	55.7
	Chloride	--	2.5	2.5	--	2.4	2.5	--	2.5	2.5	3.7	3.5	3.6
	Fluoride	0.33	0.33	0.3	0.32	0.33	0.33	0.24	0.25	0.26	0.68	1	0.9
	pH ⁽³⁾	6.75	6.9	6.98	6.74	7.00	7.04	6.74	7.00	7.06	7.56	7.52	7.7
	Sulfate	--	245.0	236	--	239	234	--	154	225	149	167	155
	TDS	--	272	630	--	272	628	--	392	582	449	472	590
APPENDIX IV	Antimony	0.00035 J	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	<0.00028	--	0.00041 J
	Arsenic	<0.00078	--	--	<0.00078	--	--	<0.00078	--	--	--	--	--
	Barium	0.055	0.053	0.057	0.059	0.058	0.059	0.066	0.071	0.063	0.040	--	0.03
	Beryllium	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	<0.000046	--	<0.000046
	Cadmium	<0.00012	--	--	<0.00012	--	--	<0.00012	--	--	--	--	--
	Chromium	<0.00055	0.00058 J	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	<0.00055	0.00090 J	0.00075 J	--	<0.00055
	Cobalt	0.0048 J	0.0047 J	0.0044 J	0.0026 J	0.0026 J	0.0024 J	0.00068 J	0.00066 J	0.00057 J	0.00041 J	--	<0.00038
	Fluoride	0.33	0.33	0.3	0.32	0.33	0.33	0.24	0.25	0.26	0.68	1.0	0.9
	Lead	<0.000036	<0.000036	<0.000036	<0.000036	<0.000036	<0.000036	<0.000036	<0.000036	<0.000036	0.000048 J	--	<0.000036
	Lithium	0.031	0.032	0.033	0.031	0.034	0.032	0.027 J	0.028 J	0.030 J	0.015 J	--	0.0084 J
	Mercury	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--	--	--	--
	Molybdenum	0.065	0.062	0.061	0.064	0.062	0.062	0.039	0.036	0.046	0.027	0.015	0.0033 J
	Comb. Radium 226/228	0.281 U	1.01 U	1.78	1.38	1.02 U	1.35 U	1.53	0.409 U	1.21 U	0.594 U	--	0.666 U
	Selenium	<0.0016	--	--	<0.0016	--	--	<0.0016	--	--	--	--	--
Thallium	<0.00014	--	--	<0.00014	--	--	<0.00014	--	--	--	--	--	

Table 6
Summary of Background Concentrations and Groundwater Protection Standards
Plant Hammond AP-3, 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	0.52, 0.54	2	2
Beryllium	mg/L	0.003, 0.0005	0.004	0.004
Cadmium	mg/L	0.0025, 0.0005	0.005	0.005
Chromium	mg/L	0.01, 0.0079	0.1	0.1
Cobalt	mg/L	0.038	0.038	0.038
Fluoride	mg/L	0.67, 0.74	4	4
Lead	mg/L	0.005, 0.001	0.015	0.005, 0.001 ⁽⁴⁾
Lithium	mg/L	0.03	0.04	0.03
Mercury	mg/L	0.0005	0.002	0.002
Molybdenum	mg/L	0.01	0.1	0.01
Selenium	mg/L	0.01, 0.005	0.05	0.05
Thallium	mg/L	0.001	0.002	0.002
Combined Radium-226/228	pCi/L	4.36	5	5

Notes:

"mg/L" = milligrams per liter

"pCi/L" = picocuries per liter

1. The background limits were used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia Environmental Protection Division (EPD) Rule 391-3-4-.10(6)(a). Where two numbers are present, they denote the different background levels for each of the two semiannual monitoring events in the order that they were determined.
2. Under 40 CFR §257.95(h)(1-3) the GWPS is: (i) the maximum contaminant level (MCL) established under 141.62 and 141.66 of this title; (ii) where an MCL has not been established a rule-specific GWPS is used; or (iii) background concentrations for constituents where the background level is higher than the MCL or rule-specified GWPS.
3. Under the existing Georgia EPD rules, the GWPS is: (i) the maximum MCL, (ii) where the MCL is not established, the background concentration, or (iii) background concentrations for constituents where the background level is higher than the MCL. Where two numbers are present, they denote the different State GWPS for each of the two semiannual monitoring events in the order that they were determined.
4. Laboratory reporting limits for lead decreased from 0.005 mg/L to 0.001 mg/L for the March 2021 sampling event, resulting in lower background limits. The state GWPS for lead is defined as the background limit.

Table 7
 Summary of Surface Water Analytical Data
 Plant Hammond AP-3, Floyd County, Georgia

Sample ID ⁽³⁾ :		H-SCC NBR	H-SCC NBR	H-SCC NBR	H-SCC E41	H-SCC E41	H-SCC E41
Sample Date:		7/17/2020	12/14/2020	3/8/2021	7/17/2020	12/14/2020	3/8/2021
Parameter ^(1,2)							
APP. III	Boron	--	0.041	0.061	--	<0.040	0.063
	Calcium	--	8.3	15.3	--	9.0	16.3
	Chloride	--	1.3	1.3	--	1.4	1.3
	Fluoride	--	<0.10	<0.10	--	<0.10	<0.10
	Sulfate	--	9.1	9.8	--	10.2	10.1
	TDS	--	76.0	51.0	--	83.0	63.0
APP. IV	Fluoride	--	<0.10	<0.10	--	<0.10	<0.10
	Molybdenum	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
GEOCHEM	Bicarbonate Alkalinity	--	22.9	42.6	--	21.8	45.2
	Magnesium	--	2.0	3.1	--	2.1	3.3
	Potassium	--	1.5	0.78	--	1.7	0.74
	Sodium	--	1.2	1.8	--	1.3	1.8

Notes:

-- = Parameter was not analyzed.

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

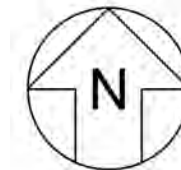
TDS = Total dissolved solids.

(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.

FIGURES



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



SITE LOCATION MAP

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

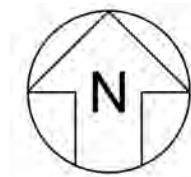
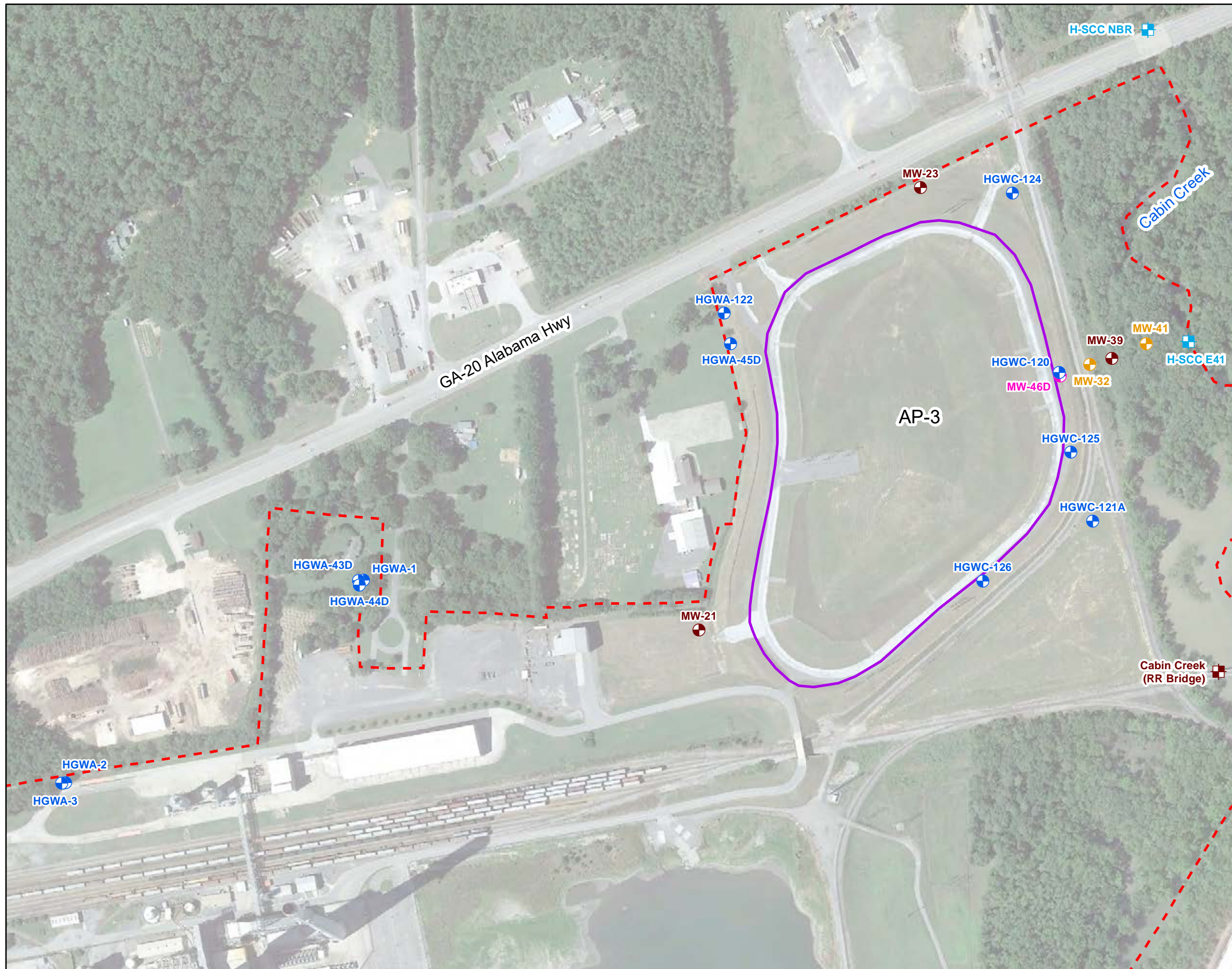
Prepared For:  Georgia Power

Prepared By:  Geosyntec
consultants

KENNESAW, GA

JULY 2021

FIGURE
1



LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well
- Piezometer
- Surface Water Sample Point
- Surface Water Level Gauge Point
- Approximate AP-3 Boundary
- Plant Hammond Property Boundary

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



**MONITORING WELL NETWORK
AND SAMPLING LOCATION MAP**

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

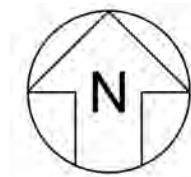
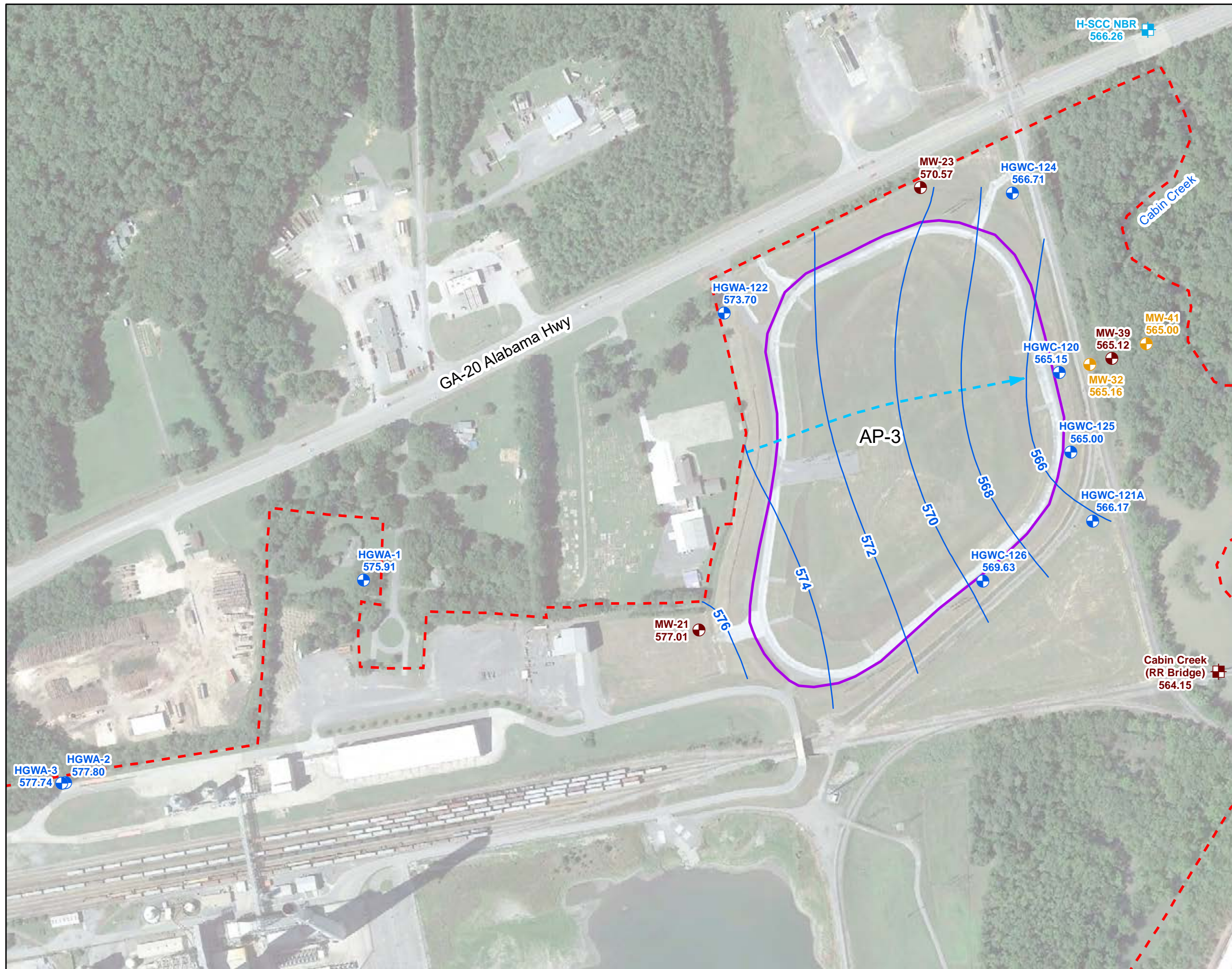
Prepared For: Georgia Power

Prepared By: Geosyntec
consultants

**FIGURE
2**

KENNESAW, GA

JULY 2021



LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Well
- Piezometer
- Surface Water Sample Point
- Surface Water Level Gauge Point
- Groundwater Elevation Iso-Contour
- Approximate Groundwater Flow Direction
- Approximate AP-3 Boundary
- Plant Hammond Property Boundary

Notes:

1. Water level elevation recorded on August 24, 2020. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
2. The map shows only the wells/piezometers installed at the time of the gauging event.
3. Aerial photograph source: Google Earth Pro, August 2019.



**POTENTIOMETRIC SURFACE
CONTOUR MAP - AUGUST 2020**

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

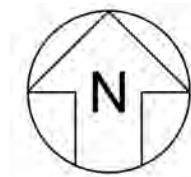
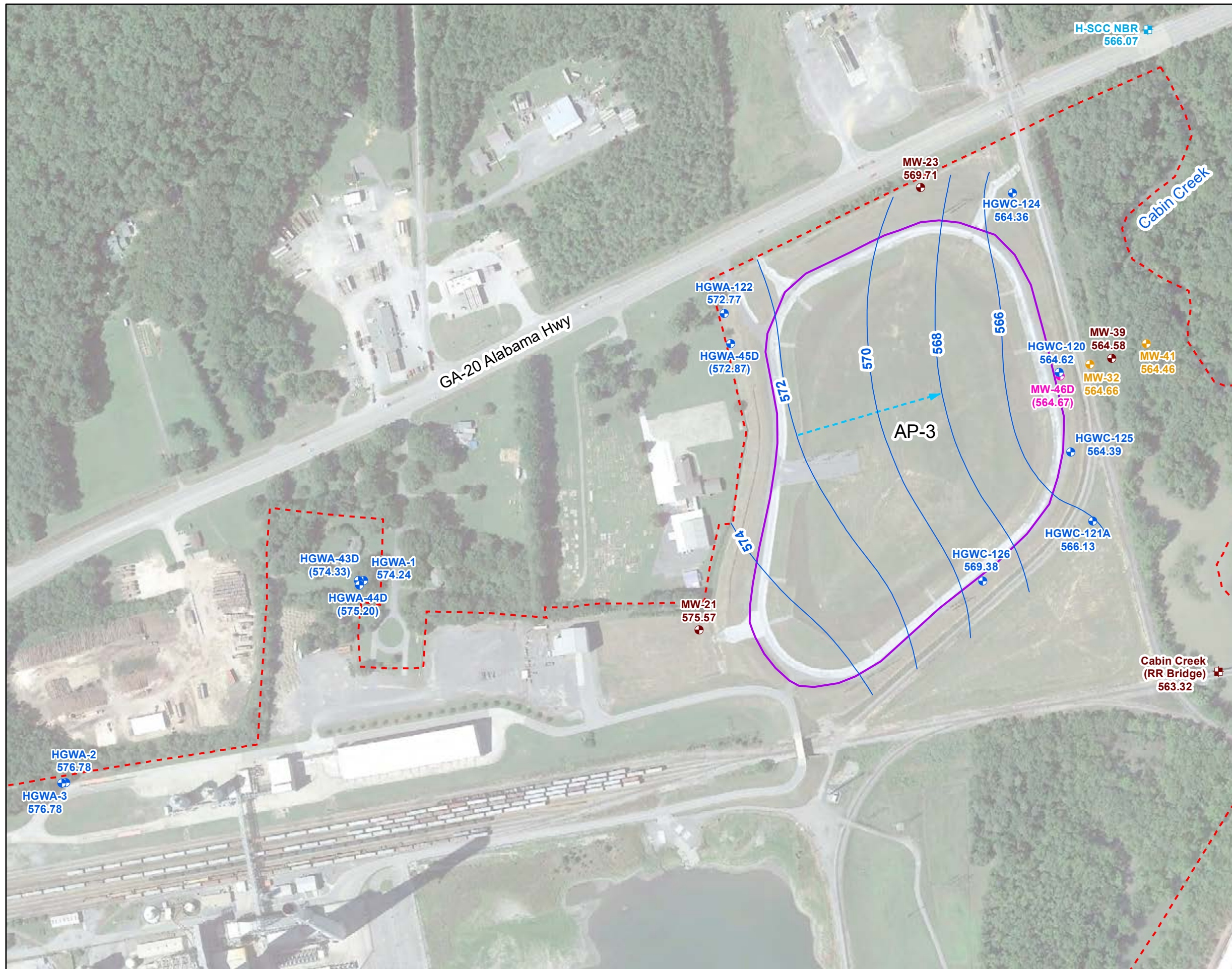
Prepared For: Georgia Power

Prepared By: Geosyntec
consultants

**FIGURE
3**

KENNESAW, GA

JULY 2021



LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well
- Piezometer
- Surface Water Sample Point
- Surface Water Level Gauge Point
- Groundwater Elevation Iso-Contour
- Approximate Groundwater Flow Direction
- Approximate AP-3 Boundary
- Plant Hammond Property Boundary

- Notes:
1. Water level elevation recorded on September 14, 2020. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
 2. Water elevation in parentheses were not used in development of groundwater contours due to wells being screened at a different elevation in the formation/aquifer.
 3. Aerial photograph source: Google Earth Pro, August 2019.



**POTENTIOMETRIC SURFACE
CONTOUR MAP – SEPTEMBER 2020**

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

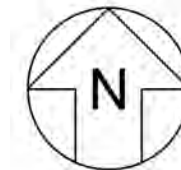
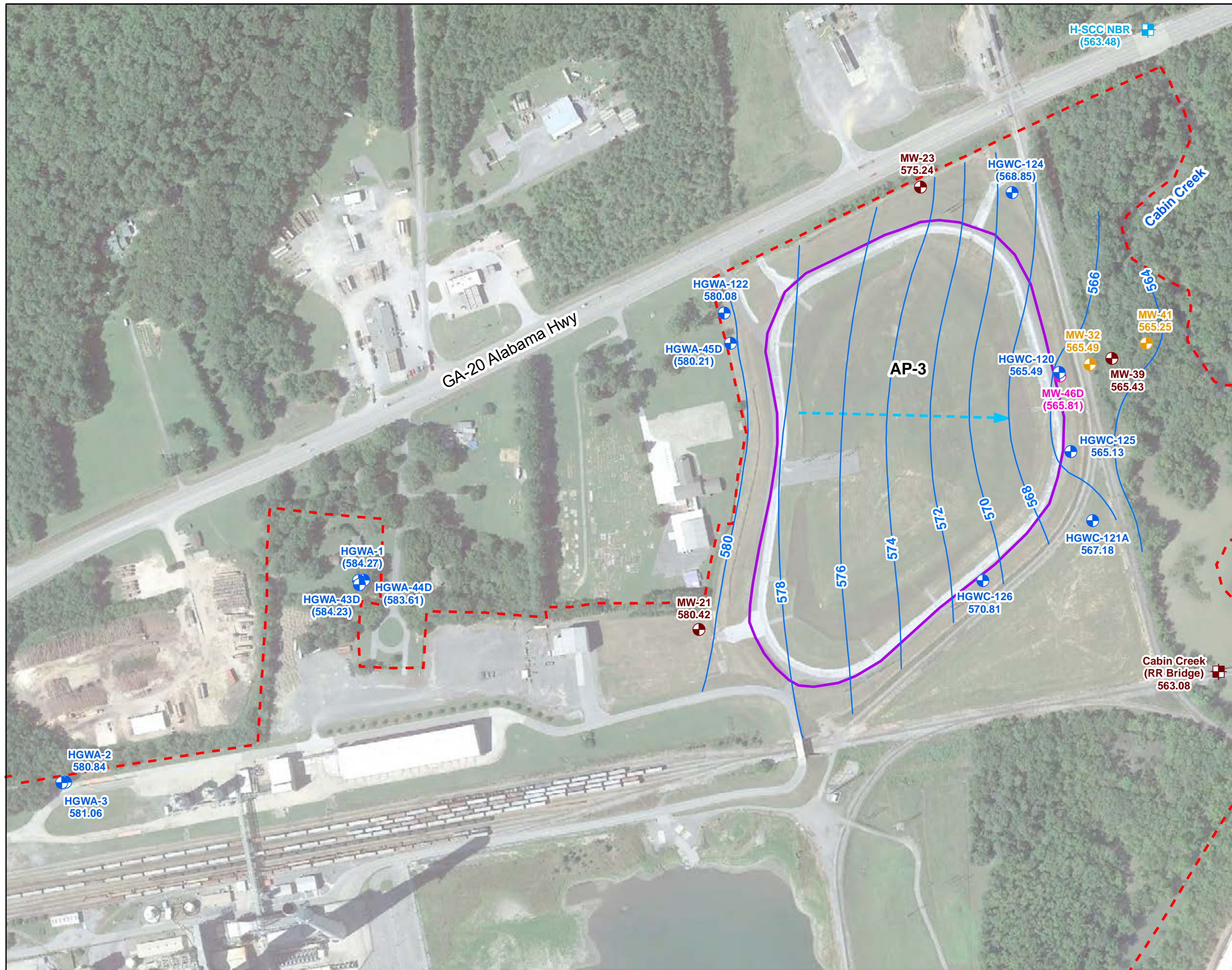
Prepared For: Georgia Power

Prepared By: Geosyntec
consultants

**FIGURE
4**

KENNESAW, GA

JULY 2021



LEGEND

- ⊕ Compliance Monitoring Well
- ⊕ Horizontal Delineation Well
- ⊕ Vertical Delineation Well
- ⊕ Piezometer
- ⊕ Surface Water Sample Point
- ⊕ Surface Water Level Gauge Point
- Groundwater Elevation Iso-Contour
- ➔ Approximate Groundwater Flow Direction
- ▭ Approximate AP-3 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 elevations in parentheses were not used in the development of groundwater contours due to wells being screened at a different elevation in the formation/aquifer.
 3. Surface water elevations in parentheses were not used in the development of groundwater contours.
 4. Aerial photograph source: Google Earth Pro, August 2019.



POTENTIOMETRIC SURFACE CONTOUR MAP - MARCH 2021

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

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA

JULY 2021

FIGURE 5

APPENDIX A

APPENDIX A -1

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

Prepared for

Georgia Power Company

241 Ralph McGill Blvd NE

Atlanta, Georgia 30308

WELL DESIGN, INSTALLATION, AND DEVELOPMENT REPORT - ADDENDUM

No. 3

**PLANT HAMMOND ASH POND 3
(AP-3)**

Prepared by

Geosyntec 
consultants

engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144

Project Number GW6581B

November 2020



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

Plant Hammond

Ash Pond 3

November 5, 2020

A handwritten signature in black ink that reads "Whitney Law".

Whitney Law, P.E.

Project Manager

Geosyntec Consultants

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LIST OF ACRONYMS

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

1. INTRODUCTION

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

Plant Hammond is located in Floyd County, approximately 10 miles west of Rome, Georgia. The current groundwater monitoring system at AP-3 includes 12 wells associated with the CCR compliance monitoring well network and a network of secondary groundwater monitoring wells and groundwater level monitoring piezometers. The locations of these wells and piezometers are shown on **Figure 1**.

2. DRILLING AND WELL INSTALLATION

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

This report presents the details for the installation and development for AP-3 area wells HGWA-43D, HGWA-44D, HGWA-45D and MW-46D. The locations of these wells are shown on **Figure 1**. Well construction details are provided in **Table 1**; boring and well construction logs are included in **Appendix B**.

2.1 Drilling Method

The boreholes were advanced using rotosonic drilling techniques with continuous core collection. A Terra Sonic full size drill rig with a 6-inch sonic drill rod was used to install the wells. Care was taken so that the drilling methods did not introduce contamination of the groundwater from surface activities. Drilling equipment was cleaned between each borehole.

2.2 Screened Interval

Details regarding the well screen intervals are provided in **Table 1**. Wells are screened in the uppermost water bearing unit of the Site. The new wells are screened from approximately 544 to 482 feet (referenced to the North American Vertical Datum of 1988). All wells are constructed with 10 feet of well screen.

2.3 Well Casings and Screens

The wells were constructed of 2-inch inner diameter Schedule 40 polyvinyl chloride (PVC) casing with flush-threaded fittings. Each well was installed with a 10-foot nominal

length pre-packed dual-wall well screen with 0.010-inch slots. The casings and pre-packed screens arrived pre-cleaned and packaged by the manufacturer. The pre-packed well screen was constructed onsite by packing sand between slotted PVC and the well screen. Well construction materials are sufficiently durable to resist chemical and physical degradation and not interfere with the quality of groundwater samples. Casing and screens are flush-threaded. Solvent or glue was not used to construct the wells. A threaded bottom cap was attached to the bottom of the screen. The PVC products used were American Society for Testing and Materials (ASTM) and National Sanitation Foundation (NSF) rated. Well screen interval details are provided in **Table 1**.

2.4 Well Intake Design

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

2.5 Filter Pack

Highly Pure Quartzite of Southern Products & Silica Co. silica sand filter pack was used as the appropriate gradation for all wells. Highly Pure Quartzite meets the ASTM D5092 uniformity coefficient specification of 2.5 or less, with a uniformity coefficient of 1.6.

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

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

2.6 Annular Seal

A minimum of two feet of bentonite chips (PelPlug time-release-coated 3/8-inch bentonite pellets) were placed immediately above the filter pack by gravity-pouring into the annular space and hydrated per manufacture's specifications. A tremie pipe was used to probe the annular space to ensure that no bridging occurred. If any new well was installed within 15 feet of an existing well, the bentonite seal was also brought above the elevation corresponding to the screen top of the nearby well. This was done to prevent grout from entering the water-bearing or screen zone. The bentonite was hydrated with potable water for a duration meeting the manufacture's specifications prior to grouting the remaining annulus.

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

2.7 Cap and Protective Casing

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

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

3. WELL DEVELOPMENT

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

All equipment and tubing placed in the well was decontaminated or disposed of between wells.

4. SURVEY

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

5. REFERENCES

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

TABLE

Table 1
 Summary of Well Construction Details
 Plant Hammond AP-3, Floyd County, Georgia

Well ID	Purpose	Installation Date	Northing ⁽¹⁾	Easting ⁽¹⁾	Ground Surface Elevation ⁽²⁾ (ft NAVD88)	Top of Casing Elevation (ft NAVD88)	Top of Screen Elevation (ft NAVD88)	Bottom of Screen Elevation (ft NAVD88)	Well Depth (ft bgs) ⁽³⁾
HGWA-43D	Background	8/26/2020	1550422.85	1940753.80	592.08	595.08	544.08	534.08	58.25
HGWA-44D	Background	8/25/2020	1550409.13	1940756.18	592.01	594.79	491.76	481.76	110.50
HGWA-45D	Background	8/19/2020	1551157.68	1941907.54	584.08	586.95	535.23	525.23	60.00
MW-46D	Piezometer	8/18/2020	1551056.48	1942929.10	603.17	605.72	513.92	503.92	99.50

Notes:

ft bgs = feet below ground surface.

(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey was completed by GEL Solutions and certified September 10, 2020.

(2) Vertical elevations are referenced to the North American Vertical Datum (NAVD) of 1988. Ground surface elevation defined at the survey nail installed within the well pad. Survey was completed by GEL Solutions and certified September 10, 2020.



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

FIGURE

\\aro-01\br11\GA Power\Plant Hammond_GW Services\GIS\mxd\Hammond\2020\Well Installation Reports\2020.06 AP-1AP2AP3\Figure 1 GW Monitoring Network AP3.mxd 9/18/2020 2:26:56 PM



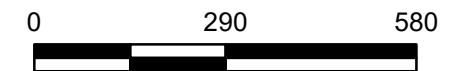
LEGEND

-  Compliance Monitoring Well
-  Piezometer



Notes:

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



SCALE IN FEET

GROUNDWATER MONITORING NETWORK MAP

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

Prepared For:  Georgia Power

Prepared By:  Geosyntec
consultants

FIGURE
1

KENNESAW, GA

NOVEMBER 2020

APPENDIX A

Well Driller Performance Bonds

CONTINUATION
CERTIFICATE

Atlantic Specialty Insurance Company

, Surety upon

a certain Bond No. 800033976

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

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

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

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

does hereby continue said bond in force for the further period

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

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

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

Description of bond Performance Bond for Water Well Contractors

Premium: \$1200.00

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

Signed and dated on March 4th, 2019
(MONTH-DAY-YEAR)

Atlantic Specialty Insurance Company

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

Parker, Smith & Feek, Inc.

Agent

2233 112th Ave NE Bellevue, WA 98004

Address of Agent

425-709-3600

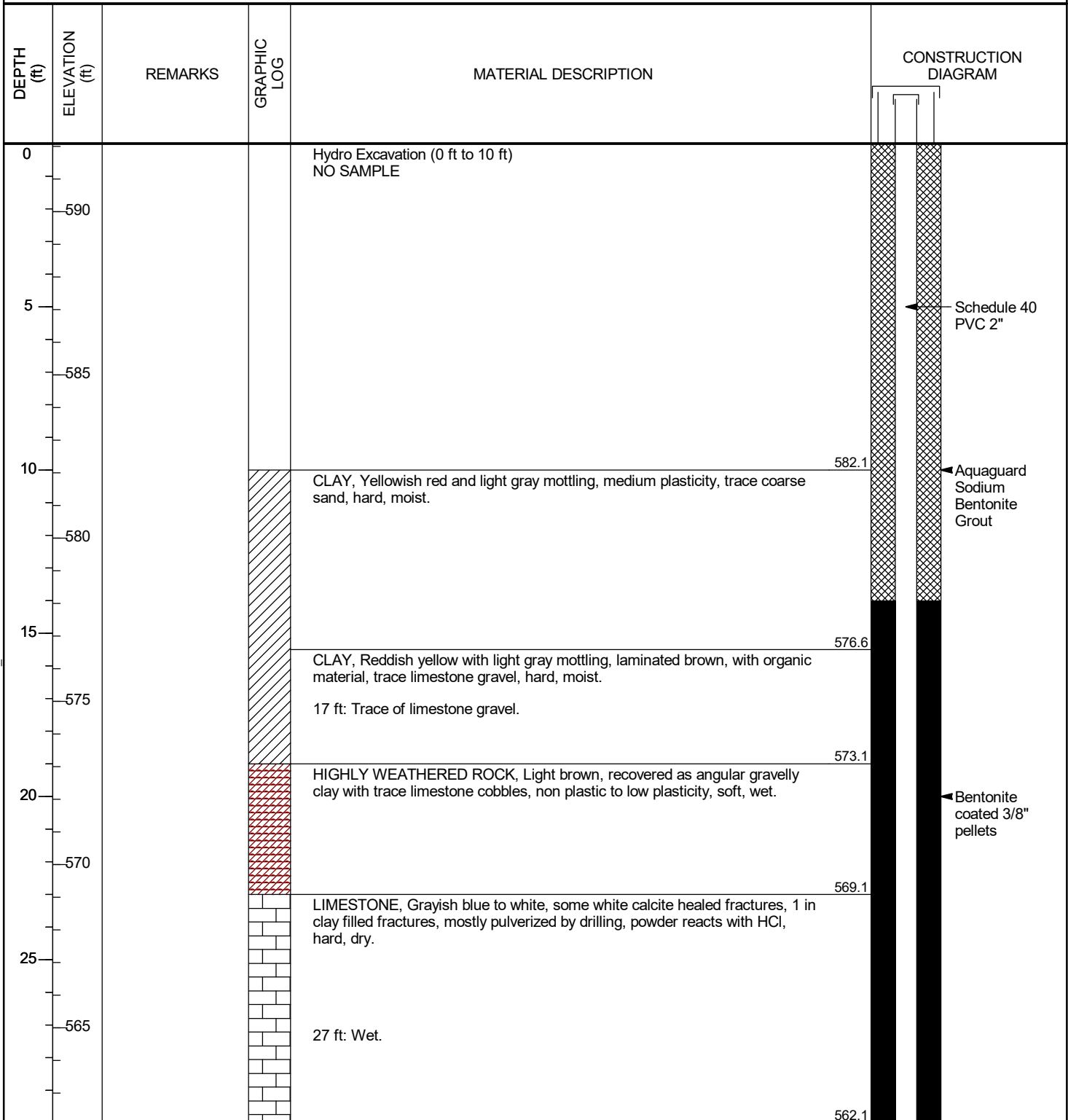
Telephone Number of Agent

APPENDIX B

Boring and Well Construction Logs

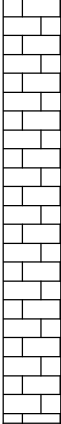
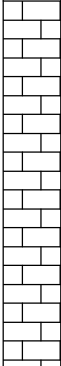
CLIENT Southern Company Services **PROJECT NAME** Plant Hammond Well Installation
PROJECT NUMBER GW6581B **PROJECT LOCATION** Plant Hammond
DATE STARTED 8/26/20 **COMPLETED** 8/26/20 **NORTHING** 1550422.85 ft **EASTING** 1940753.80 ft
DRILLER Cascade Drilling **GROUND ELEVATION** 592.08 ft **BORING DIAMETER** 6 in
DRILLING METHOD Sonic **TOP OF CASING ELEVATION** 595.08 ft
SAMPLING METHOD 4" core 6" override **GEOPHYSICAL CONTRACTOR** ---
RIG TYPE Terrasonic 1051181 **LOGGED BY** A. Ramsey **CHECKED BY** J. Ivanowski

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D_AUGUST 2020.GPJ ACP GINT LIBRARY CH GLB 9/23/20



(Continued Next Page)

CLIENT Southern Company Services **PROJECT NAME** Plant Hammond Well Installation
PROJECT NUMBER GW6581B **PROJECT LOCATION** Plant Hammond

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
30	560	30 ft to 50 ft: No voids reported.		30 ft to 34.5 ft: No recovery.	
35	555			LIMESTONE, Grayish blue to white, hard, dry, some white calcite healed fractures, 1 in clay filled fractures, 38 ft to 39 ft pulverized by drilling, powder reacts with HCl, wet.	557.6
40	550			40 ft: Up to 1 in thick calcite healed fractures.	
45	545			44 ft to 50 ft: No recovery.	548.1
50	540			LIMESTONE, Grayish blue to white, hard, dry, up to 1 in thick calcite healed fractures, trace 1 in clay filled fractures, mostly pulverized by drilling, powder reacts with HCl.	542.1
55	535				
					533.8

← Bentonite coated 3/8" pellets

← 20/40 Silica Sand

← 0.010 slot size 2" Pre Pack, U-Pack Screen

Bottom of well: 58.25 ft

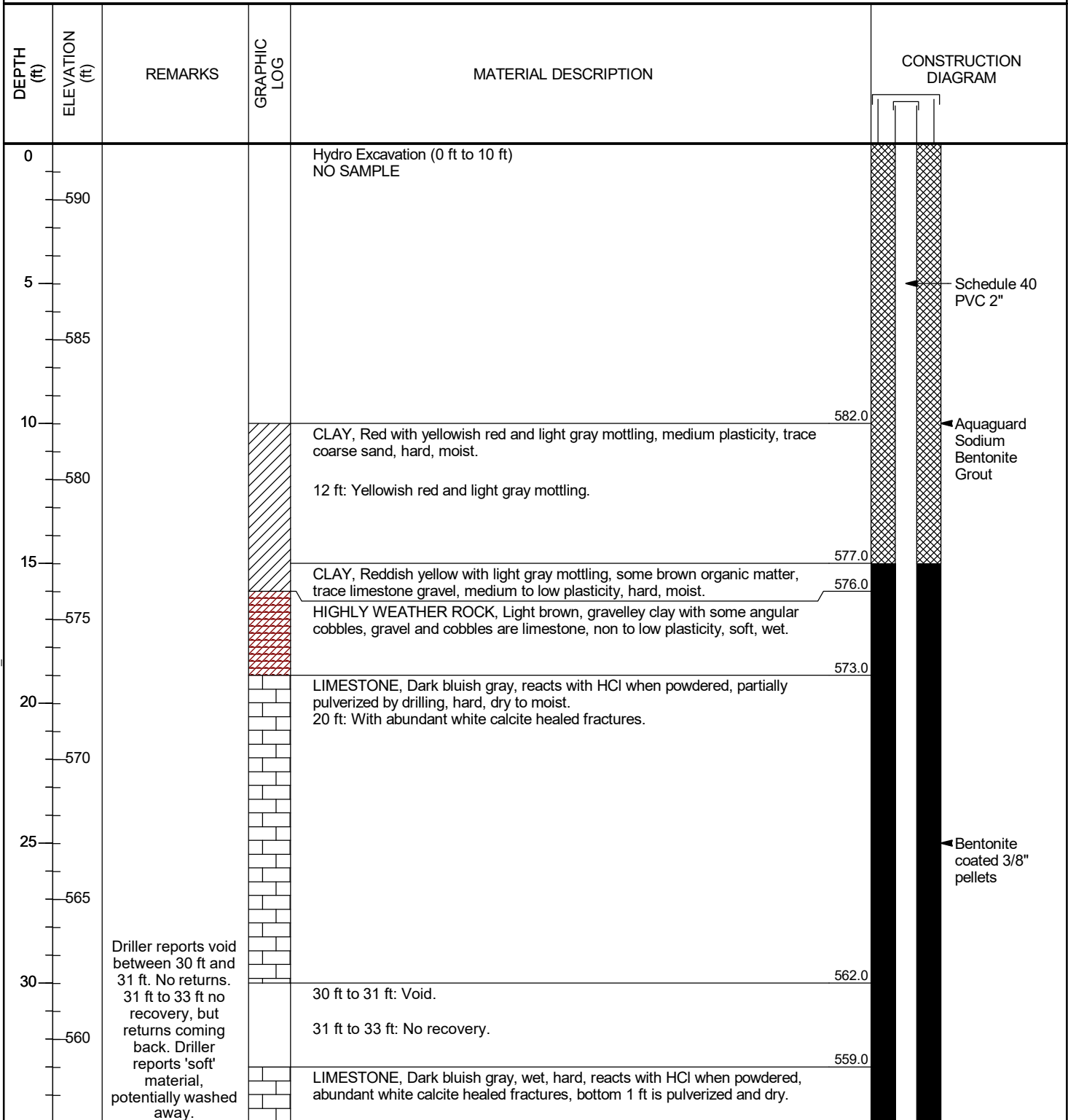
Bottom of borehole at 58.3 feet.

Easting and Northing in NAD 1983.
Elevation in NAVD 1988.

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D AUGUST 2020.GPJ ACP GINT LIBRARY CH GLB 9/23/20

CLIENT <u>Southern Company Services</u>	PROJECT NAME <u>Plant Hammond Well Installation</u>
PROJECT NUMBER <u>GW6581B</u>	PROJECT LOCATION <u>Plant Hammond</u>
DATE STARTED <u>8/24/20</u> COMPLETED <u>8/25/20</u>	NORTHING <u>1550409.13 ft</u> EASTING <u>1940756.18 ft</u>
DRILLER <u>Cascade Drilling</u>	GROUND ELEVATION <u>592.01 ft</u> BORING DIAMETER <u>6 in</u>
DRILLING METHOD <u>Sonic</u>	TOP OF CASING ELEVATION <u>594.79 ft</u>
SAMPLING METHOD <u>4" core 6" override</u>	GEOPHYSICAL CONTRACTOR <u>---</u>
RIG TYPE <u>Terrasonic 1051181</u>	LOGGED BY <u>A. Ramsey</u> CHECKED BY <u>J. Ivanowski</u>

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D_AUGUST 2020.GPJ ACP GINT LIBRARY CH GLB 9/23/20



(Continued Next Page)

CLIENT Southern Company Services **PROJECT NAME** Plant Hammond Well Installation
PROJECT NUMBER GW6581B **PROJECT LOCATION** Plant Hammond










SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D_AUGUST 2020.GPJ ACP GINT LIBRARY.CH.GLB 9/23/20

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
35	555	40 ft: Driller reports no returns.		LIMESTONE, Dark bluish gray, wet, hard, reacts with HCl when powdered, abundant white calcite healed fractures, bottom 1 ft is pulverized and dry. (continued)	
40	552.0			40 ft to 42 ft: No recovery.	
	550.0			LIMESTONE, Dark bluish gray, wet, hard, reacts with HCl when powdered, abundant white calcite healed fractures, bottom 1 ft is pulverized by drilling.	
45	545				
	542.0			50 ft to 52 ft: No recovery.	
50	540			LIMESTONE, Dark bluish gray, wet, hard, reacts with HCl when powdered, abundant white calcite healed fractures, bottom 1 ft is pulverized by drilling.	
55	535				
	532.0			60 ft to 61 ft: No recovery.	
60	531.0			LIMESTONE, Dark bluish gray, hard, wet, bottom 1 ft pulverized by drilling, reacts with HCl when powdered, abundant white 0.1 in to 2 in thick calcite healed fractures.	
65	525				
	522.0			70 ft to 71 ft: No recovery.	
70	521.0			LIMESTONE, Dark bluish gray, hard, wet, bottom 1 ft pulverized by drilling, reacts with HCl when powdered, abundant white hite 0.1 in to 2 in thick calcite healed fractures.	
	520				

← Bentonite coated 3/8" pellets

CLIENT Southern Company Services **PROJECT NAME** Plant Hammond Well Installation
PROJECT NUMBER GW6581B **PROJECT LOCATION** Plant Hammond

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D_AUGUST 2020.GPJ ACP GINT LIBRARY CH.GLB 9/23/20

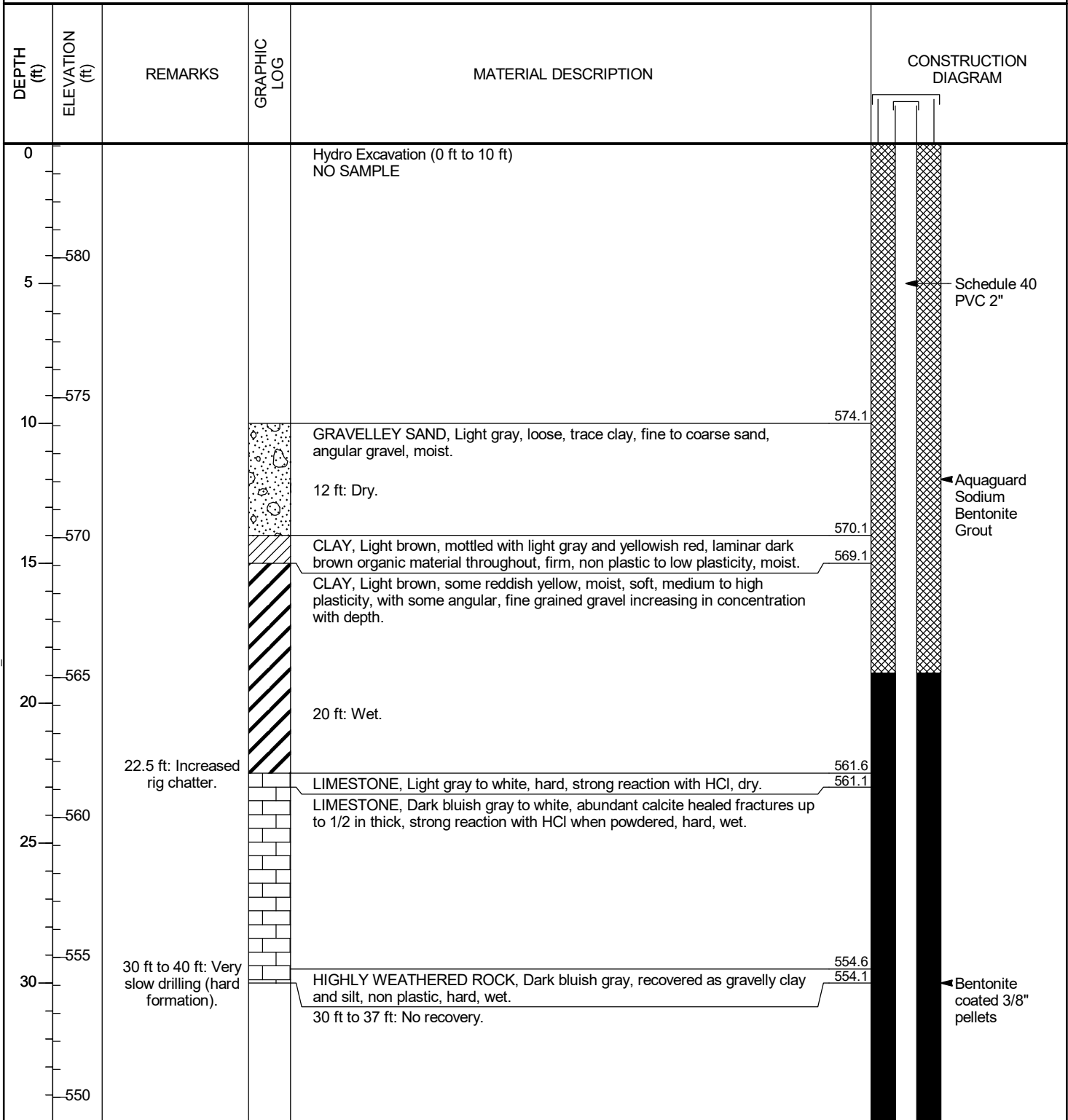
DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
75	515			LIMESTONE, Dark bluish gray, hard, wet, bottom 1 ft pulverized by drilling, reacts with HCl when powdered, abundant white hite 0.1 in to 2 in thick calcite healed fractures. (continued)	
80	510			80 ft to 84 ft: No recovery.	
85	505			LIMESTONE, Dark bluish gray, hard, wet, bottom 1 ft pulverized by drilling, reacts with HCl when powdered, abundant white 0.1 in to 2 in thick calcite healed fractures.	← Bentonite coated 3/8" pellets
90	500			90 ft to 94 ft: No recovery.	
95	495			LIMESTONE, Dark bluish gray, hard, wet, bottom 1 ft pulverized by drilling, reacts with HCl when powdered, abundant white 0.1 in to 2 in thick calcite healed fractures.	
100	490			100 ft to 102 ft: No recovery.	← 20/40 Silica Sand
105	485			LIMESTONE, Dark bluish gray, hard, wet, bottom 1 ft pulverized by drilling, reacts with HCl when powdered, abundant white 0.1 in to 2 in thick calcite healed fractures.	← 0.010 slot size 2" Pre Pack, U-Pack Screen
110	480.0				Bottom of well: 110.5 ft

Bottom of borehole at 112.0 feet.

Eastings and Northing in NAD 1983.
Elevation in NAVD 1988.

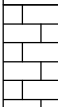

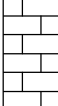
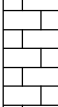

CLIENT <u>Southern Company Services</u>	PROJECT NAME <u>Plant Hammond Well Installation</u>
PROJECT NUMBER <u>GW6581B</u>	PROJECT LOCATION <u>Plant Hammond</u>
DATE STARTED <u>8/19/20</u> COMPLETED <u>8/19/20</u>	NORTHING <u>1551157.68 ft</u> EASTING <u>1941907.54 ft</u>
DRILLER <u>Cascade Drilling</u>	GROUND ELEVATION <u>584.08 ft</u> BORING DIAMETER <u>6 in</u>
DRILLING METHOD <u>Sonic</u>	TOP OF CASING ELEVATION <u>586.95 ft</u>
SAMPLING METHOD <u>4" core 6" override</u>	GEOPHYSICAL CONTRACTOR <u>---</u>
RIG TYPE <u>Terrasonic 1051181</u>	LOGGED BY <u>A. Ramsey</u> CHECKED BY <u>J. Ivanowski</u>

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D AUGUST 2020.GPJ ACP GINT LIBRARY CH GLB 9/23/20



(Continued Next Page)

CLIENT Southern Company Services **PROJECT NAME** Plant Hammond Well Installation
PROJECT NUMBER GW6581B **PROJECT LOCATION** Plant Hammond

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
35				30 ft to 37 ft: No recovery. (continued)	
					547.1
	545			LIMESTONE, Dark bluish gray to white, abundant calcite healed fractures up to 1/2 in thick, strong reaction with HCl when powdered, hard, wet.	
40				40 ft to 43 ft: No recovery.	544.1
					541.1
	540			LIMESTONE, Dark bluish gray to white, abundant calcite healed fractures up to 1/2 in thick, strong reaction with HCl when powdered, hard, wet.	
45					
	535				
50					
	530				
55					
	525				
60					524.1

← Bentonite coated 3/8" pellets

← 20/40 Silica Sand

← 0.010 slot size 2" Pre Pack, U-Pack Screen

Bottom of well: 60 ft

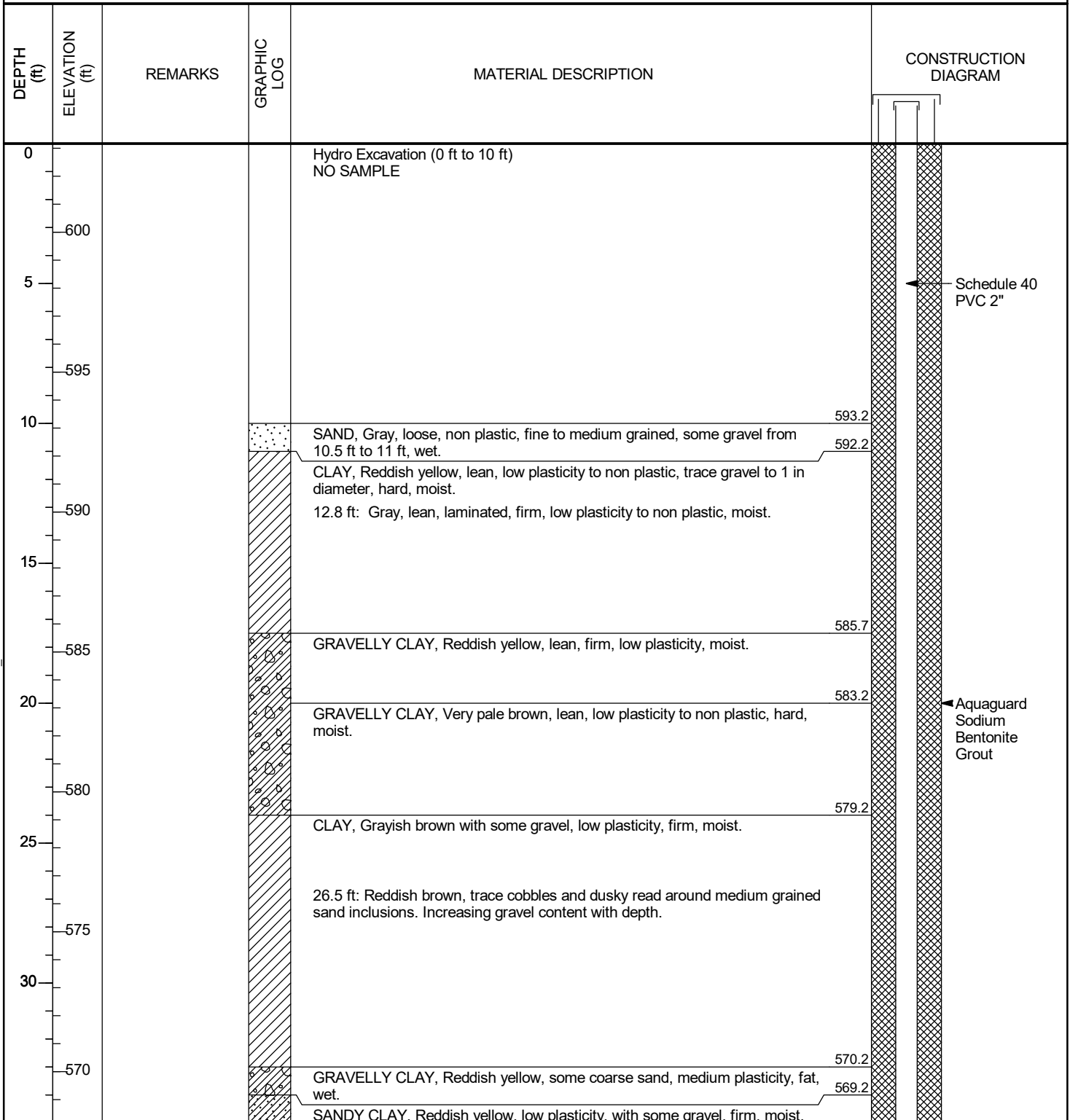
Bottom of borehole at 60.0 feet.

Easting and Northing in NAD 1983.
Elevation in NAVD 1988.

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D_AUGUST 2020.GPJ ACP GINT LIBRARY CH GLB 9/23/20

CLIENT Southern Company Services **PROJECT NAME** Plant Hammond Well Installation
PROJECT NUMBER GW6581B **PROJECT LOCATION** Plant Hammond
DATE STARTED 8/18/20 **COMPLETED** 8/18/20 **NORTHING** 1551056.48 ft **EASTING** 1942929.10 ft
DRILLER Cascade Drilling **GROUND ELEVATION** 603.17 ft **BORING DIAMETER** 6 in
DRILLING METHOD Sonic **TOP OF CASING ELEVATION** 605.72 ft
SAMPLING METHOD 4" core 6" override **GEOPHYSICAL CONTRACTOR** ---
RIG TYPE Terrasonic 1051181 **LOGGED BY** A. Ramsey **CHECKED BY** J. Ivanowski

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D AUGUST 2020.GPJ ACP GINT LIBRARY CH GLB 9/23/20



(Continued Next Page)

CLIENT Southern Company Services

PROJECT NAME Plant Hammond Well Installation

PROJECT NUMBER GW6581B

PROJECT LOCATION Plant Hammond

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D_AUGUST 2020.GPJ ACP GINT LIBRARY CH.GLB 9/23/20

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
35				CLAY, Reddish yellow, high plasticity, very thin laminations, soft to very soft.	
	565				
40				43 ft: Brown.	
	560				
45				PARTIALLY WEATHERED ROCK, Brown, recovered as CLAY with gravelly limestone, medium plasticity, no HCl reaction, soft, wet.	
	559.2				
	556.9			LIMESTONE, Dark bluish gray, thin laminations, dolomitic, HCl reaction when powdered, very hard, some calcite healed fractures.	
	555				
50		50 ft to 58 ft: 1-2 ft voids about every foot, no returns reported.		50 to 58.5 ft: No recovery.	
	550				
55					
	545				
60				LIMESTONE, Dark bluish gray, thin laminations, HCl reaction when powdered, dolomitic, very hard, some calcite healed fractures. Recovered as gravel and cobbles with coarse sand.	
	543.2			60 to 65 ft: No recovery.	
	540				
65				LIMESTONE, Dark bluish gray, thin laminations, HCl reaction when powdered, dolomitic, very hard, some calcite healed fractures. Recovered as gravel and cobbles with coarse sand.	
	538.2				
	535				
70				70 to 77 ft: No recovery.	
	533.2				
	530				
		From 73 ft: Significantly increased rig chatter indicating hard drilling. No voids reported.			

← Aquaguard Sodium Bentonite Grout




← Bentonite coated 3/8" pellets

CLIENT Southern Company Services

PROJECT NAME Plant Hammond Well Installation

PROJECT NUMBER GW6581B

PROJECT LOCATION Plant Hammond

DEPTH (ft)	ELEVATION (ft)	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	CONSTRUCTION DIAGRAM
75				70 to 77 ft: No recovery. (continued)	
					526.2
	525			LIMESTONE, Dark bluish gray, thin laminations, HCl reaction when powdered, dolomitic, very hard, some calcite healed fractures. Moderate to thin bedding.	
80		80 ft: No voids reported.		80 to 88 ft: No recovery.	523.2
	520				
	85				
	515			LIMESTONE, Dark bluish gray, thin laminations, HCl reaction when powdered, dolomitic, very hard, some calcite healed fractures, some coarse sand to gravel sized fragments.	515.2
90				90 to 92 ft: No recovery.	513.2
	510			LIMESTONE, Dark bluish gray, thin laminations, HCl reaction when powdered, very hard, some calcite healed fractures, some coarse sand to gravel sized fragments.	511.2
	95				
	505				
100					503.2

← Bentonite coated 3/8" pellets

← 20/40 Silica Sand

← 0.010 slot size 2" Pre Pack, U-Pack Screen

Bottom of well: 99.5 ft

Bottom of borehole at 100.0 feet.

Easting and Northing in NAD 1983.
Elevation in NAVD 1988.

SCS MONITORING WELLS PLANT HAMMOND HGWA7 TO HGWA114 AND MW46D AUGUST 2020.GPJ ACP GINT LIBRARY CH GLB 9/23/20

APPENDIX C

Well Development Forms

WELL DEVELOPMENT LOG SHEET

Client: SCS/Georgia Power Company

Project No.: GW6581B

Development Date: 8/30/20

Site: Plant Hammond

Location: 59 ft btoc

Field Personnel Name: A. Ramsey

Well ID: AR MW-43D HGWA-43D

Pump Type/Model: Mega Monsoon

Total Depth (ft) (after purge): 18.67 ft btoc

Tubing Material: High Density Polyethylene (HDPE)

Depth to Water (ft): 18.67 ft btoc

Pump Intake Depth (ft): N of AP-1 outside gate

Well Diameter (in): 2 in

Start/Stop Purge Time: 0900/1100, 1555/

Well Volume (gal) = $0.041d^2h$: 7.02 gal

Purge Rate (mL/min): 400 mL/min

Well Volume (L) = gal * 3.785: 26.57 L

Total Purge Volume (L): 75.5 L

3# 14L purge until
1030 @ 350 mL/min
avg. allowed to
recharge. pump
2 ft at bottom.

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

Well Type: Flush Sock Up

1# 28 Ltr purged from 9000-9020 @ 1.4 L/min
to remove basal accumulations. well nearing
purge dry and allowed to recharge

4# resume @ 1059

Well Lock: Yes No

Well Cap Condition: Good Replace

Well Tag Present: Yes No

2# resume at 0930, recharge water is white

5# small PVC shreds
clogging pump. clean
out and return to
35L 43D at later time.

Time	pH (SU)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Temp. (°C)	Turbidity (NTU/s)	DTW (ft btoc)	Purge Rate (mL/min)	Purged Volume (L)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1610	7.09	374.5	61.1	-	19.6	Overrange	28.27	400	(455.6) 31.5	
1640	7.04	370.5	56.5	-	19.2	22.4	40.80	400	(12) 63.5	
1655	7.06	378.5	60.2	-	19.9	15.2	48.92	400	(6) 69.5	
1810	7.09	384.4	58.6	-	20.5	7.93	52.46	400	(6) 75.5	
Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs				

DO probe failure

AR

WELL DEVELOPMENT LOG SHEET

Client: SCS/Georgia Power Company

Project No.: GW6581B

Development Date: 8/28/20

Site: Plant Hammond

Location: north of AP-1

Field Personnel Name: A. Ramsey

Well ID: ~~HPM-44D~~ HGWA-44D

Pump Type/Model: Mega Monsoon

Total Depth (ft) (after purge): 113.25 ft btoc

Tubing Material: High Density Polyethylene (HDPE)

Depth to Water (ft): 18.95 ft btoc

Pump Intake Depth (ft): 112

Well Diameter (in): 2

Start/Stop Purge Time: 1345 / 1732

Well Volume (gal) = 0.041 d² h: 15.01 gal

Purge Rate (mL/min): ~~500~~ 1000

Well Volume (L) = gal * 3.785: 57.11 L

Total Purge Volume (L): 167

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

Well Type: Flush ~~Stick Up~~

* purg stopped at 1525 due to pump failure. 1602 purge resumed.

Well Lock: Yes No

Well Cap Condition: Good Replace

Well Tag Present: Yes No

Time	pH (SU)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Temp. (°C)	Turbidity (NTUs)	DTW (ft btoc)	Purge Rate (mL/min)	Purged Volume (L)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1404	7.55	236.0	-3.8	0.17	20.1	51.7	81.27	5000	95	
1434	7.11	247.7	-53.5	0.16	21.5	51.9	99.30	1000	(50) 125	
1504	7.48	527.7	-149.5	0.21	22.9	31.6	100.17	300	(9) 134	
1602	7.46	400.5	-133.5	0.21	20.6	50.7	95.16	300	(6) 140	
1632	7.47	415.0	-182.1	0.00	22.4	21.7	99.98	300	(9) 149	
1702	7.52	422.1	-186.4	0.00	23.3	14.4	102.90	300	(9) 158	
1732	7.57	419.7	-196.2	0.00	22.9	8.32	102.92	300	(9) 167	
								total		

Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs				
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WELL DEVELOPMENT LOG SHEET

Client: SCS/Georgia Power Company

Project No.: GW6581B

Development Date: 8/28/20

Site: Plant Hammond

Location: AP-3

Field Personnel Name: A. Ramsey

Well ID: ~~HP-1110-45D~~ HGWA-45D

Pump Type/Model: Mega Monsoon

Total Depth (ft) (after purge): 62.87 ft bTOC

Tubing Material: High Density Polyethylene (HDPE)

Depth to Water (ft): 12.38 ft bTOC

Pump Intake Depth (ft): 62 ft bTOC

Well Diameter (in): 2

Start/Stop Purge Time: 10:10 / 11:28

Well Volume (gal) = 0.041d₂h: 8.29 gal

Purge Rate (mL/min): 1000

Well Volume (L) = gal * 3.785: 31.38 L

Total Purge Volume (L): 78

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

Well Type: Flush Stick Up

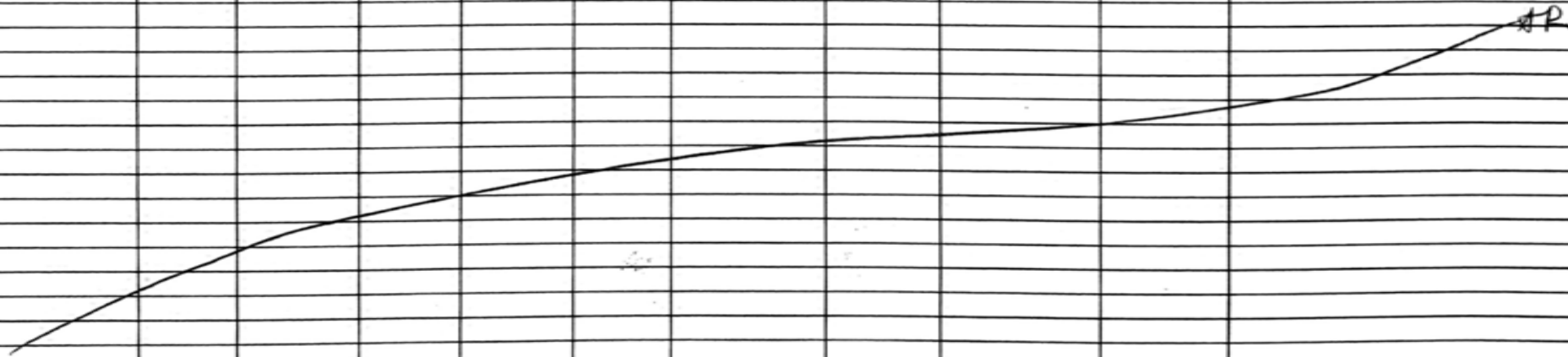
Well Lock: Yes No

Well Cap Condition: Good Replace

Well Tag Present: Yes No

Time	pH (SU)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Temp. (°C)	Turbidity (NTUs)	DTW (ft bTOC)	Purge Rate (mL/min)	Purged Volume (L)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
10:57	7.06	4.6	311.6	.01	19.2	5.39	14.10	1000	47	began measurements w/ clear water
11:13	6.90	377.5	-181.3	.51	19.0	2.38	19.10	1000	(4) 63	
11:28	6.89	378.6	-211.8	0.00	19.2	1.97	18.45	1000	(5) 78	

total



Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs				
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WELL DEVELOPMENT LOG SHEET

Client: SCS/Georgia Power Company
 Site: Plant Hammond
 Well ID: WW-46D
 Total Depth (ft) (after purge): 102.05 ft bTOC
 Depth to Water (ft): 39.80 ft bTOC
 Well Diameter (in): 2
 Well Volume (gal) = 0.041d₂h: 10.42 gal
 Well Volume (L) = gal * 3.785: 39.45 L

Project No.: GW6581B
 Location: AP-3
 Pump Type/Model: Mega Monsoon
 Tubing Material: High Density Polyethylene (HDPE)
 Pump Intake Depth (ft): 102 ft bTOC
 Start/Stop Purge Time: 1150/1320
 Purge Rate (mL/min): 1000
 Total Purge Volume (L): 100

Development Date: 8/28/20
 Field Personnel Name: A. Ramsey

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

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

Time	pH (SU)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Temp. (°C)	Turbidity (NTUs)	DTW (ft bTOC)	Purge Rate (mL/min)	Purged Volume (L)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1205	7.50	278.4	22.2	4.15	19.1	78.9	49.50	1000	15	
1220	7.31	339.5	-17.9	3.57	19.4	62.4	53.42	1000	(15) 30	
1235	7.31	469.0	-63.3	2.08	20.0	55.1	57.16	1000	(18) 45	
1305	7.12	605	-103.3	20.54 ← 1.19	20.0	28.8	56.05	1000	(30) 75	
1320	6.96	715	-141.3	0.36	20.0	6.83	59.21	1000	(15) 100	
AR										
Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs				

APPENDIX D

Certified Well Survey Data

Well ID	Casing Northing	Casing Easting	Top of Casing Elevation	Nail on Pad Northing	Nail on Pad Easting	Nail on Pad Elevation
HGWA-42D	1549363.7180	1938443.8590	586.17	1549362.3140	1938444.3210	583.39
HGWA-43D	1550422.8480	1940753.8050	595.08	1550422.8120	1940754.9980	592.08
HGWA-44D	1550409.1260	1940756.1850	594.79	1550409.2230	1940757.6150	592.01
HGWA-45D	1551157.6780	1941907.5370	586.95	1551159.2250	1941907.4670	584.08
MW-46D	1551056.4780	1942929.1010	605.72	1551055.9530	1942927.8210	603.17
HGWA-47	1548990.9600	1934171.8440	580.33	1548989.2780	1934171.6440	577.39
HGWA-48D	1548989.3900	1934178.1460	580.26	1548988.1150	1934177.8070	577.29

Benchmark	Northing	Easting	Elevation
BM H-1	1547964.9650	1937219.0690	579.02
BM H-2	1548149.4490	1938960.2220	590.68
BM H-4	1549952.4470	1941611.3640	585.71

SURVEY DATA CERTIFICATION FOR SOUTHERN COMPANY TO DETERMINE NORTHING, EASTING, AND VERTICAL ELEVATION OF THE NAIL IN THE CONCRETE PAD & THE PVC WELL CASING. DATE OF FIELD SURVEY & INSPECTION: 09/01/2020-09/02/2020. FIELD SURVEY POSITIONAL TOLERANCE=0.5 FEET HORIZONTAL-NAD'83, 0.01 VERTICAL-NAVD'88. EQUIPMENT USED FOR HORIZONTAL LOCATION: TRIMBLE R10 RTK GPS & TRIMBLE S5 ROBOTIC TOTAL STATION. THE VERTICAL LOCATION OF EACH SURVEYED POINT WAS ESTABLISHED BASED UPON LEVEL RUNS WITH A DIGITAL LEVEL LOOP FROM VERTICAL CONTROL ESTABLISHED BY ON-SITE BENCHMARKS BM H-1, BM-H2 & BM-H4 SET BY GEL SOLUTIONS DURING PREVIOUS SURVEYS USING A TRIMBLE DINI LEVEL



[Handwritten signature]

9/10/2020

APPENDIX A-2

Certified Well Survey Reports

Certified Well Survey Report May 2020

Certified Well Survey Report September 2020

Well ID	Casing Northing	Casing Easting	Top of Casing Elevation	Nail on Pad Northing	Nail on Pad Easting	Nail on Pad Elevation
HGWA-122	1551251.4160	1941887.1090	587.90	1551251.7520	1941888.4640	585.04
HGWC-120	1551067.2410	1942926.6150	605.82	1551066.9570	1942925.1140	602.83
HGWC-121A	1550607.9660	1943030.4370	584.69	1550606.4290	1943030.8200	582.31
HGWC-124	1551624.9330	1942781.0450	582.52	1551624.4970	1942779.7590	579.80
HGWC-125	1550821.4090	1942962.8700	608.89	1550821.3950	1942961.7570	605.70
HGWC-126	1550422.0250	1942689.3960	611.24	1550422.8480	1942688.6340	608.72
MW-21	1550270.1530	1941809.7590	586.27	1550268.6820	1941809.7320	583.60
MW-23	1551641.4430	1942496.8320	584.91	1551642.7910	1942496.2560	582.13
MW-32	1551092.8320	1943021.4650	585.46	1551094.5220	1943021.1080	583.10
MW-39	1551111.4510	1943089.2570	580.42	1551110.6190	1943087.9290	577.60
MW-41	1551158.1600	1943196.4740	577.25	1551157.3150	1943195.3930	574.87

Benchmark	Northing	Easting	Elevation
BM H-4	1549952.4470	1941611.3640	585.71

SURVEY DATA CERTIFICATION FOR SOUTHERN COMPANY TO DETERMINE NORTHING, EASTING, AND VERTICAL ELEVATION OF THE NAIL IN THE CONCRETE PAD & THE PVC WELL CASING.
DATE OF FIELD SURVEY & INSPECTION: 05/11/2020-05/14/2020.
FIELD SURVEY POSITIONAL TOLERANCE=0.5 FEET HORIZONTAL-NAD'83, 0.01 VERTICAL-NAVD'88
EQUIPMENT USED FOR HORIZONTAL LOCATION: TRIMBLE R10 RTK GPS & TRIMBLE S5 ROBOTIC TOTAL STATION. THE VERTICAL LOCATION OF EACH SURVEYED POINT WAS ESTABLISHED BASED UPON LEVEL RUNS WITH A DIGITAL LEVEL LOOP FROM VERTICAL CONTROL ESTABLISHED BY ON-SITE BENCHMARK BM H-4 SET BY GEL SOLUTIONS USING A TRIMBLE DINI LEVEL.



Jimmy R. Toole

5/19/2020

Well ID	Casing Northing	Casing Easting	Top of Casing Elevation	Nail on Pad Northing	Nail on Pad Easting	Nail on Pad Elevation
HGWA-42D	1549363.7180	1938443.8590	586.17	1549362.3140	1938444.3210	583.39
HGWA-43D	1550422.8480	1940753.8050	595.08	1550422.8120	1940754.9980	592.08
HGWA-44D	1550409.1260	1940756.1850	594.79	1550409.2230	1940757.6150	592.01
HGWA-45D	1551157.6780	1941907.5370	586.95	1551159.2250	1941907.4670	584.08
MW-46D	1551056.4780	1942929.1010	605.72	1551055.9530	1942927.8210	603.17
HGWA-47	1548990.9600	1934171.8440	580.33	1548989.2780	1934171.6440	577.39
HGWA-48D	1548989.3900	1934178.1460	580.26	1548988.1150	1934177.8070	577.29

Benchmark	Northing	Easting	Elevation
BM H-1	1547964.9650	1937219.0690	579.02
BM H-2	1548149.4490	1938960.2220	590.68
BM H-4	1549952.4470	1941611.3640	585.71

SURVEY DATA CERTIFICATION FOR SOUTHERN COMPANY TO DETERMINE NORTHING, EASTING, AND VERTICAL ELEVATION OF THE NAIL IN THE CONCRETE PAD & THE PVC WELL CASING. DATE OF FIELD SURVEY & INSPECTION: 09/01/2020-09/02/2020. FIELD SURVEY POSITIONAL TOLERANCE=0.5 FEET HORIZONTAL-NAD'83, 0.01 VERTICAL-NAVD'88. EQUIPMENT USED FOR HORIZONTAL LOCATION: TRIMBLE R10 RTK GPS & TRIMBLE S5 ROBOTIC TOTAL STATION. THE VERTICAL LOCATION OF EACH SURVEYED POINT WAS ESTABLISHED BASED UPON LEVEL RUNS WITH A DIGITAL LEVEL LOOP FROM VERTICAL CONTROL ESTABLISHED BY ON-SITE BENCHMARKS BM H-1, BM-H2 & BM-H4 SET BY GEL SOLUTIONS DURING PREVIOUS SURVEYS USING A TRIMBLE DINI LEVEL



Jimmy R. Toole

9/10/2020

APPENDIX B

Well Inspection Forms

August 2020

Groundwater Monitoring Well Integrity Form

Site Name Hammond AP3
 Permit Number _____
 Well ID HGWA-1
 Date, field conditions 8/28/2020, overcast

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

7 Corrective actions as needed, by date:
well has fire ants, well was very hard to open, hinge rusted. well cap replaced

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond AFB
 Permit Number _____
 Well ID H/GW 4-2
 Date, field conditions 8/22/2020, sunny

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammobd AP-3
 Permit Number _____
 Well ID NCWA-3
 Date, field conditions 8/25/2020 raining

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP 3
 Permit Number _____
 Well ID HGWA-122
 Date, field conditions 8-24-2020

		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:
Pad is covered in weeds needs moved. Well depth is different than original log.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond AP3
 Permit Number _____
 Well ID HGNWC-12D
 Date, field conditions 8/16/20 cloudy

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP-3
 Permit Number _____
 Well ID HEVC-121A
 Date, field conditions 8-25-2020

		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)	✓		
6 Sampling: Groundwater Wells Only:				
a	Does well recharge adequately when purged?	✓		
b	If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility?	✓		
c	Does the well require redevelopment (low flow, turbid)?		✓	
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
				✓

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Harmond AP3
 Permit Number _____
 Well ID HGWC-129
 Date, field conditions 8/27/20 Sunny

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond AP-3
 Permit Number _____
 Well ID HLWJC-125
 Date, field conditions 8/25/2020

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

fixing this event

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond AP-3
 Permit Number _____
 Well ID NGWC-126
 Date, field conditions 8/20/2020 raining

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP3
 Permit Number _____
 Well ID MW-21
 Date, field conditions 8-24-2020 Damp

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

7 Corrective actions as needed, by date:
Pad covered in weeds, weeds mowed.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP3
 Permit Number _____
 Well ID MW-23
 Date, field conditions 8-24-2020 Damp

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	✓		
b	Is the well properly identified with the correct well ID?	✓		
c	Is the well in a high traffic area and does the well require protection from traffic?		✓	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	✓		
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	✓		
b	Is the casing free of degradation or deterioration?	✓		
c	Does the casing have a functioning weep hole?	✓		
d	Is the annular space between casings clear of debris and water, or filled with pea gravel/sand?	✓		
e	Is the well locked and is the lock in good condition?	✓		
3 Surface pad				
a	Is the well pad in good condition (not cracked or broken)?	✓		
b	Is the well pad sloped away from the protective casing?	✓		
c	Is the well pad in complete contact with the protective casing?			
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not move when stepped on)	✓		
e	Is the pad surface clean (not covered with sediment or debris)?		✓	
4 Internal casing				
a	Does the cap prevent entry of foreign material into the well?	✓		
b	Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)?	✓		
c	Is the well properly vented for equilibration of air pressure?	✓		
d	Is the survey point clearly marked on the inner casing?	✓		
e	Is the depth of the well consistent with the original well log?	✓		
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:
Pad covered in weeds needs mowed.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP-3
 Permit Number _____
 Well ID MV 32
 Date, field conditions B-25-2020 Damp

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

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP3
 Permit Number _____
 Well ID MW-39
 Date, field conditions 8-24-2020

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

7 Corrective actions as needed, by date:
Over grown need mowed. Needs VTI labels
AP placed labels on 8-26-20

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP3
 Permit Number _____
 Well ID MW-41
 Date, field conditions 8-24-2020 DAMP

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

7 Corrective actions as needed, by date:
Has small well tag, needs label.

Signature and Seal of PE/PG responsible for inspection

September 2020

Groundwater Monitoring Well Integrity Form

Site Name HAMMOND AP 11213
 Permit Number _____
 Well ID HGW1-1
 Date, field conditions 09-15-2020, 85°F OVERCAST

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

TIGHT - MAY NEED HAMMER TO OPEN

7 Corrective actions as needed, by date:
CHANGE COVER OF PROTECTIVE CASING (LESS TIGHT)

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name HAMMOND AD 11213
 Permit Number _____
 Well ID HGWA-2
 Date, field conditions 09-15-20, 80°F OVERCAST

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Harmond AP-1/2-13
 Permit Number _____
 Well ID HGWA-3
 Date, field conditions 9/15/2020 cloudy

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond AP-1/2/3
 Permit Number _____
 Well ID MW-43D HGWA-43D
 Date, field conditions 7/16/2020 overcast

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond AP-1/2/3
 Permit Number _____
 Well ID HW-44D HGLWA-44D
 Date, field conditions 9/16/2020 rmpg

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

being fixed

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Aluminum AP 3
 Permit Number _____
 Well ID HGW 4SD / MW 4SD
 Date, field conditions 9/25 ~~75~~ 70° Rainy

		yes	no	n/a
1 Location/Identification				
a	Is the well visible and accessible?	_____	<input checked="" type="checkbox"/>	_____
b	Is the well properly identified with the correct well ID?	<input checked="" type="checkbox"/>	_____	_____
c	Is the well in a high traffic area and does the well require protection from traffic?	_____	<input checked="" type="checkbox"/>	_____
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<input checked="" type="checkbox"/>	_____	_____
2 Protective Casing				
a	Is the protective casing free from apparent damage and able to be secured?	<input checked="" type="checkbox"/>	_____	_____
b	Is the casing free of degradation or deterioration?	_____	_____	_____
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)?	_____	<input checked="" type="checkbox"/>	_____
6 Based on your professional judgement, is the well construction / location appropriate to 1) achieve the objectives of the Groundwater Monitoring Program and 2) comply with the applicable regulatory requirements?				
		<input checked="" type="checkbox"/>	_____	_____
7 Corrective actions as needed, by date:				

No tags visible from the well access w/truck

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name

Hammond AP-3

Permit Number

Well ID

HGWA-122

Date, field conditions

9/15/20 overcast

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Highland AP-3
 Permit Number _____
 Well ID UGWC-120
 Date, field conditions 9/21/2020 sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP-3
 Permit Number _____
 Well ID HGVC-121A
 Date, field conditions 9-28-2020 DRY

		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: None

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP-3
 Permit Number _____
 Well ID HGVC-124
 Date, field conditions 9-28-2020 Dry

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

7 Corrective actions as needed, by date:
Big Hole to the Right of the Well Needs Filled

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond AP-3
 Permit Number _____
 Well ID HGWC-135
 Date, field conditions 9/21/2016 sunny

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hummond AP 3
 Permit Number _____
 Well ID HGW-126
 Date, field conditions 9/14 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 Hansen et al AP-3
 Permit Number _____
 Well ID MW-21
 Date, field conditions 9/14/2022 partly cloudy

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond, AP3
 Permit Number _____
 Well ID MW-23
 Date, field conditions 9/14/20 sunny, warm

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond / UP3
 Permit Number _____
 Well ID MW-32
 Date, field conditions 9/28, overcast

		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 Immune/AP3
 Permit Number _____
 Well ID MW-39
 Date, field conditions 9/28/20 overcast

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

7 Corrective actions as needed, by date: _____
m/c

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond LAP3
 Permit Number _____
 Well ID MW-41
 Date, field conditions 9/28, Raining

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

7 Corrective actions as needed, by date: n/a

Signature and Seal of PE/PG responsible for inspection _____

Groundwater Monitoring Well Integrity Form

Site Name Hammond AP3
 Permit Number _____
 Well ID MW-460
 Date, field conditions 9-25-20, 65°F RAINY

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

TAG NOT VISIBLE FROM AFBP

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

March 2021

Groundwater Monitoring Well Integrity Form

Site Name Hamman A
 Permit Number _____
 Well ID HGW-1
 Date, field conditions 3/10/20 650P SUNNY

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name 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

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID 11GWA-43D
 Date, field conditions 3/10/2024 65°F cloudy

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Harmony
 Permit Number _____
 Well ID HGWA-49D
 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 HCWA-45D
 Date, field conditions 5/10/2021 CSOF SUNDAY

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID HCWA-122
 Date, field conditions 2/10/2024 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 HGNC-126
 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 116W6-121A
 Date, field conditions 7/10/2021 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 WGW-124
 Date, field conditions 3/10/2021

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID 716WC-125
 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 NL GW 126
 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 MW-21
 Date, field conditions 3/12/02 WSPF SUNNY

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-23
 Date, field conditions 3/10/2024

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-32
 Date, field conditions 3/10/2021 650F 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 MW-39
 Date, field conditions 3/10/2011 0500F 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 MW-41
 Date, field conditions 3/10/2021 65°F Windy

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-46D
 Date, field conditions 3/10/2011 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

APPENDIX C

Semiannual Remedy Selection and Design Progress Report



Prepared for

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

**SEMIANNUAL REMEDY SELECTION AND
DESIGN PROGRESS REPORT
PLANT HAMMOND ASH POND 3 (AP-3)**

Prepared by



engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200
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Project Number GW6581

July 2021

SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT

GEORGIA POWER COMPANY - PLANT HAMMOND

ASH POND 3 (AP-3)

This Semiannual Remedy Selection and Design Progress Report, Georgia Power Company - Plant Hammond, Ash Pond 3 (AP-3), 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 in selecting and designing a remedy as previously documented in the Assessment of Corrective Measures Report – Plant Hammond Ash Pond 3 (AP-3).

Report Prepared by:



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July 30, 2021

Date

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LIST OF ACRONYMS

ACM	Assessment of Corrective Measures
AEM	advanced engineering method
Al	aluminum
AP	ash pond
As	arsenic
CCR	coal combustion residuals
Cd	cadmium
CFR	Code of Federal Regulations
Co	cobalt
CSM	conceptual site model
Cu	copper
DPT	direct push technology
Fe	iron
ft bgs	feet below ground surface
GA EPD	Georgia Environmental Protection Division
GWPS	Groundwater Protection Standard
HDPE	high density polyethylene
Li	lithium
Mn	manganese
MNA	monitored natural attenuation
Mo	molybdenum
Pb	lead
PRB	permeable reactive barriers
Se	selenium
SSI	statistically significant increase
SSL	statistically significant level
TOC	total organic carbon
USEPA	United States Environmental Protection Agency
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 3 (AP-3 or Site) in accordance with the United States Environmental Protection Agency (USEPA) coal combustion residual rule (CCR Rule) (40 Code of Federal Regulations [CFR] 257 Subpart D), specifically 40 CFR 257.97(a), and the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10(6)(a). This semiannual progress report describes the progress made in selecting and designing a remedy since the issuance of the *Assessment of Corrective Measures Report – Plant Hammond Ash Pond 3 (AP-3)* (Geosyntec, 2020a) (ACM Report). Pursuant to § 257.97(a) and Rule 391-3-4-.10(6)(a), semiannual progress reports will be regularly submitted to document the efforts of evaluating and progressing towards selecting a groundwater corrective measure.

The purpose of the ACM Report (and subsequent semiannual progress reports) is to document the process of evaluating and selecting corrective measure(s) for groundwater. This process is typically iterative and may be composed of multiple steps to analyze the effectiveness of corrective measures to improve groundwater quality. Once potential corrective measures are identified, they are further evaluated using the criteria outlined in § 257.96(c) and Rule 391-3-4-.10(6)(a). The selected corrective measure must meet the additional protection criteria outlined in § 257.97(b) and corresponding Rule 391-3-4-.10(6)(a). Additional details are provided within the ACM Report and the cited federal and state regulations. This is the second semiannual progress report prepared, with the first submitted in February 2021 (Geosyntec, 2021a).

1.2 Site Background and Overview of AP-3 Pond Closure

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

AP-3 is a 25-acre former ash pond that was constructed in 1973 and 1974. Ash sluicing and placement operations at AP-3 commenced in June 1977. In the early 1980s, AP-3

was converted into a dry ash stacking area and, in the early 1990s, the pond stopped receiving CCR materials (i.e., AP-3 ceased receiving waste prior to the effective date of the CCR rule promulgated in April 2015).

Georgia Power commenced closure of AP-3 in 2016 via closure in place and capping. A notification of intent to close AP-3 was placed in the Operating Record on December 7, 2015 and posted to Plant Hammond's CCR website within 30 days. The Closure Plan was submitted to the GA EPD as part of the closure permit application package, which described the closure activities and requirements in accordance with § 257.102. The Closure Plan and notification of closure completion are posted on Plant Hammond's publicly available website.

Because AP-3 was converted to a dry stacking operation in the early 1980s and operated as such until the early 1990s when the unit ceased receiving CCR material, AP-3 did not contain standing water and minimal liquid removal was required to prepare the subgrade for final cover system construction. The CCR material remaining in AP-3 was graded and a final cover system was installed in the second quarter of 2018. The final cover system consists of a 60-mil high density polyethylene (HDPE) liner, geocomposite drainage media, a minimum 18-inch thick protective soil cover, and a 6-inch thick vegetative layer. The final cover system was designed to limit infiltration of precipitation with low permeability materials and is graded to promote positive drainage and shed stormwater away from AP-3 via riprap drainage ditches toward three outfall locations around AP-3. Final capping of the unit was completed in the second quarter of 2018.

The closure of AP-3 in the manner described minimizes the potential for migration of CCR constituents to groundwater. Corrective measures discussed in this progress report are being evaluated to address statistically significant levels (SSLs) in groundwater at the waste boundary.

1.3 Regulatory Program Status and Nature and Extent

CCR compliance groundwater monitoring-related activities have been performed for AP-3 since August 2016 pursuant to the CCR Rule. Georgia Power initiated an assessment monitoring program in August 2019 after identifying statistically significant increases (SSIs) of Appendix III parameters in groundwater. Statistical analyses of Appendix IV assessment monitoring groundwater data collected in October 2019 identified SSLs of molybdenum (Mo) and lithium (Li) at concentrations exceeding the state groundwater protection standards (GWPS), but not the associated federal GWPS, in compliance

monitoring well HGWC-120. Since October 2019, concentrations of Li in HGWC-120 have declined, and Li is no longer an SSL at AP-3.

Pursuant to § 257.96, Georgia Power initiated an ACM for AP-3 in July 2020. The ACM Report was subsequently prepared for AP-3 and submitted to GA EPD in December 2020 and posted to the CCR compliance website. Statistical analysis of assessment monitoring groundwater data through March 2021 identified GA EPD CCR Rule Mo SSLs in HGWC-120, MW-32, MW-39, and MW-41. Details are provided in the *2021 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2021b).

The current groundwater monitoring well network consists of seven upgradient compliance monitoring wells (HGWA-1, HGWA-2, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, and HGWA-122) and five downgradient compliance monitoring wells (HGWC-120, HGWC-121A, HGWC-124, HGWC-125, and HGWC-126). In addition, three delineation wells (MW-32, MW-41, and MW-46D) and three piezometers (MW-21, MW-23, and MW-39) are used to characterize groundwater conditions upgradient and downgradient of AP-3. The locations of the monitoring wells, delineation wells, and piezometers associated with AP-3 are shown on **Figure 2**; well construction details are listed in **Table 1**.

Due to the presence of a surface water feature in the downgradient direction of MW-41, installation of an additional well to horizontally characterize this area is infeasible. Georgia Power proactively collected surface water samples in July and December 2020 and March 2021 from three locations along Cabin Creek, two of which are applicable to evaluating the surface water conditions in the vicinity of MW-41 (i.e., H-SCC NBR and H-SCC E41). The surface water locations are shown on **Figure 2**. Sample location H-SCC NBR is located upstream of the Site, and therefore the data are considered representative of background conditions. Sample location H-SCC E41 is located immediately downgradient of MW-41. The surface water sample collected from both locations for the three events indicate Mo was not detected. Based on Mo results for data collected to date, no Mo impacts to surface water have been detected, and horizontal delineation is complete.

The laboratory reports associated with the July 2020, December 2020, and March 2021 surface water sampling events are provided in Appendix D of the *2021 Annual Groundwater Monitoring and Corrective Action Report*. Georgia Power will continue collecting the surface water samples semiannually. The groundwater data from the March 2021 semiannual assessment monitoring event and the March 2021 surface water data were used to generate the Mo iso-concentration map presented on **Figure 3**.

In August 2020, Georgia Power installed a well (MW-46D) to vertically delineate the Mo SSL identified in compliance well HGWC-120. The current Appendix IV data set for MW-46D is limited to less than four independent sampling events which is the minimum required number to statistically evaluate the results (USEPA, 2009). Georgia Power will continue to monitor this well until an adequately sized data set is available to complete statistical analyses. Vertical delineation of Mo may require the installation of (an) additional well(s) adjacent to their respective locations and is currently under evaluation. The *TreeWell* system can access deeper groundwater zones than traditional phytoremediation systems because vertical casings are used to drive root growth downward. The process of final design and installation of that *TreeWell* system is underway following a recent pre-design investigation conducted at the Site. While the purpose of the AEM is different than corrective measures, Georgia Power plans to evaluate the effectiveness of the AEM before determining if additional *TreeWell* or enhancements to the *TreeWell* system should be incorporated into this ACM.

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, 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 of groundwater data reported between August 2016 and March 2020 to evaluate Mo SSLs in groundwater at AP-3. The evaluation provides one of many lines of evidence that will be evaluated and factored into the remedy selection process which will be completed in accordance with § 257.97. Based upon this evaluation, concentrations of Mo detected in groundwater at AP-3 between August 2016 and March 2020 are not expected to pose a risk to human health or the environment (Geosyntec, 2020c). Data collected since March 2020 are consistent with data used in the risk evaluation; therefore, the conclusions provided in the *2020 Risk Evaluation Report* are supported by current conditions.

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 February 2021 (Geosyntec, 2021a). The routine assessment monitoring event conducted in March 2021 is discussed in the *2021 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2021b).

2.1 Field Activities

2.1.1 Supplemental Hydrogeologic Assessment

As briefly described in Section 1.4, a pre-design investigation (PDI) was conducted in parallel to the ACM efforts to develop a design for the implementation of the AEM *TreeWell* system. Some relevant components of the PDI are used herein to refine the CSM, including the advancement of five borings (i.e., TWB-01 through TWB-05) that were completed as temporary piezometers for water level readings as well as the slug testing of these five new piezometers and three existing wells (i.e., MW-32, MW-39, and MW-41). **Figure 4** depicts the locations of these five borings together with the monitoring well network.

2.1.2 Collection of Aquifer Solids

As discussed during the first semiannual progress report submitted in February 2021 (Geosyntec, 2021a), a direct-push technology (DPT) rig was used to collect aquifer matrix samples from the saturated unconsolidated zone at four locations in the vicinity of AP-3 on January 29 and February 1, 2021. The approximate locations of the boreholes are illustrated on **Figure 4**, and boring logs were submitted in the previous semiannual progress report. 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.

2.1.3 Analytical Program for Aquifer Solids

2.1.3.1 *Chemical and Mineralogical Characterization*

The aquifer matrix samples from borings DPT-01 (background location) and DPT-02 through DPT-04 (downgradient locations) were submitted to SiREM analytical laboratory (Guelph, Ontario) to evaluate attenuation mechanisms and rates and aquifer

capacity for attenuation, as well as the mineralogical characterization by application of the following analytical/testing methods.

- *Cation and Anion Exchange Capacity:* 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 lead [Pb], zinc [Zn], aluminum [Al], cadmium [Cd], iron [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, iron (Fe), aluminum (Al), and manganese (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).

2.1.3.2 Sequential Extraction Procedure

In addition to the chemical and mineralogical characterization described above, samples DPT-01 through DPT-03 were submitted for a sequential extraction procedure (SEP) at the Eurofins/TestAmerica laboratory in Knoxville, TN, 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., iron/manganese/aluminum 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 iron, manganese, and/or aluminum 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-HNO₃-H₂O] 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], HNO₃, HCl and boric acid [H₃BO₃]. 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.

3.0 SUMMARY OF RESULTS

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

3.1 Summary of Supplemental Hydrogeologic Assessment

Field observations during the advancement of the five borings (i.e., TWB-01 through TWB-05) confirmed the general lithology described in previous investigations for this area. Boring logs are included in **Appendix A**. The upper strata consisted of alluvial material of predominantly clays and silty clays with some gravel. A soft stratum, containing silty clay, ranging from 2 to 10 ft bgs was encountered at all boring locations. Below this unit, strata consisted of primarily clays and fragmented rock.

Water levels in the new temporary and existing piezometers within the area east (i.e., downgradient) of AP-3 were consistent with previous observations and ranged from 12 to 20 ft bgs. Hydraulic gradients become relatively flat in the study area between the eastern boundary of AP-3 and Cabin Creek.

At least two slug tests were performed at each of the eight piezometers to verify consistency of the results due to the rapid recharge observed during the tests. The calculated geometric mean K_h for the slug tests ranged from 2.57 ft/day (9.1×10^{-4} cm/sec) in piezometer TWB-04 to 50.56 ft/day (1.8×10^{-2} cm/sec) in piezometer MW-32. The overall geometric mean of the resulting K_h data in this area is 11.61 ft/day (4.1×10^{-3} cm/sec), which is consistent with and confirms previous observations within the highly fractured limestone in the vicinity of AP-3.

3.2 Summary of Unconsolidated Aquifer Solids Analysis

Aquifer materials collected from one background location (DPT-01) and three downgradient locations (DPT-02 through DPT-04) were shipped to SiREM laboratories for the specialized analyses introduced in Section 2.1.3. A brief summary of the results is provided below, and the complete SiREM report is included in **Appendix B¹** of this report.

¹ Portions of the provided laboratory report also contain results for Hammond AP-1 and AP-2 in addition to the results from AP-3.

3.2.1 Anion and Cation Exchange Capacity

The CEC of soils is dependent on the amount and type of clay minerals, organic matter, and amorphous materials, 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 B** lists the CEC ranging from 13.47 milliequivalents per 100 grams (meq/100 g) in the background boring (DPT-01) to 41.80 meq/100 g in downgradient boring DPT-04. The variability of the AEC is much lower, and values range from 6.76 meq/100 g in DPT-01 to 7.65 meq/ 100 g in DPT-04. These results will be further evaluated in upcoming reports as additional data regarding sorption and desorption processes become available.

3.2.2 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 B**, the total sulfur content is low and ranges from 0.005% in DPT-02 to 0.023% in background location DPT-01. Total sulfide was non-detect (<0.04%) in all four borings.

The total organic carbon (TOC) content of these materials ranges from 0.174% in DPT-01 to 0.601% in DPT-02. 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. However, the downgradient locations are somewhat higher in TOC, likely as a result of being collected within a wooded area and potentially affected by alluvial materials above the residuum. Therefore, organic carbon may contribute somewhat to the attenuation of site-specific constituents.

3.2.3 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 B**. The metals include the site-specific constituents of interest Mo and Li. Note that Li concentrations no longer constitute an SSL at the Site, while Mo continues to exhibit SSLs in certain wells. In addition, cobalt (Co) and As were included in the analysis to supplement (by comparison) results from nearby units AP-1 and AP-2 where As and Mo and Co are SSLs, respectively. Cobalt and As data are provided in **Appendix B** but are not part of the analysis for AP-3. 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 appreciable concentrations of site-specific constituents of interest. Molybdenum detections ranged from 0.60 microgram per gram ($\mu\text{g/g}$), which is equivalent to milligram per kilogram (mg/kg), in background boring DPT-01 and downgradient boring DPT-03 to 3.6 mg/kg in downgradient boring DPT-02. This variation indicates that weathering processes across the Site provide a variable supply of naturally occurring Mo and/or that the aquifer matrix has attenuated these constituents along the groundwater flow-path, especially at location DPT-02.

Concentrations of Li are also quite variable and range from 55 mg/kg in background boring DPT-01 to 280 mg/kg in downgradient boring DPT-03. This clearly indicates a substantial natural source of Li in the aquifer matrix, especially in downgradient locations. Note that Li is poorly sorbed and/or attenuated and the elevated concentrations in downgradient locations cannot be explained by sorption processes. This is further discussed in the SEP section below.

As expected for residuum and highly weathered bedrock materials, the Fe and Al contents are substantial, with Fe concentrations ranging from 31,000 mg/kg (3.1%) in borings DPT-02 to 42,000 mg/kg (4.2%) in DPT-04, and Al concentrations ranging from 47,000 mg/kg (4.7%) in DPT-03 to 71,000 mg/kg (7.1%) in DPT-04. 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 531 mg/kg in boring DPT-04 to 780 mg/kg in boring DPT-01, 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 B**) confirm the presence of major mineral phases. Quartz was the most abundant mineral phase detected in these borings ranging from 60.9% to 66.9%, with Al-oxide and Fe-oxide concentrations coming in as the second most abundant mineral phases ranging from 11.4% to 14.4%, and 5.01% to 6.63%, respectively. Similarly, magnesium and potassium oxides are present up to

approximately 5%, while other mineral phases are also present, albeit at lower concentrations of generally less than 1%.

3.2.4 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 orthoclase, 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 B**) indicated that the largest percentage of the aquifer matrix is made up of quartz, ranging from 36.6% (by weight) in downgradient boring DPT-02 to 46.1% (by weight) in background boring DPT-01. The second-highest percentage of the mineralogy was characterized by the feldspar mineral orthoclase at weight percentages between 16.5% and 20.4%. Note that orthoclase was only detected in the downgradient borings, which might be due to alluvial deposits in these locations. On the other hand, the 2:1 clay mineral muscovite was detected at 26.9% (by weight) in background boring DPT-01, while only ranging from 8.0% (by weight) to 9.0% (by weight) in downgradient borings. The 1:1 clay mineral kaolinite was detected in similar concentrations in upgradient and downgradient borings ranging between 16.2% (by weight) and 21.8% (by weight). Clay minerals are major contributors to the CEC of soil and aquifer solid materials.

Other important minerals consistently detected at substantial weight percentages include the feldspar mineral albite and the mica mineral biotite, as well as the pyroxene mineral diopside, the titanium oxide (TiO₂) minerals anatase and rutile, and the 2:1 clay mineral montmorillonite. The mineral calcite (CaCO₃) was also identified in downgradient borings. There are substantial mineralogical differences between the background and downgradient borings, most likely attributable to the influence of the alluvium in the downgradient locations.

The SEM/EDXA images and results are included as pages 35 through 62 in the SiREM report (**Appendix B**). 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 four 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. Occasionally, other minerals such as calcite, dolomite, pyrite, apatite, or barite were identified in relatively lower amounts and fewer samples. The abundance of Fe-oxides and oxyhydroxides suggests that ample attenuation sites are potentially available within the aquifer matrix for site-specific constituents.

3.2.5 Sequential Extraction Procedure

As described in Section 2.1.1, a 7-step SEP analysis was conducted by Eurofins/TestAmerica in Knoxville, TN, to evaluate the fractionation of Li and Mo. The results are summarized in a table found on page 8 of the SiREM report (**Appendix B**).

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 B**, the totals analyses for Li and Mo and the sum of Li and Mo from extraction steps 1 through 7 match very well, indicating good metal recovery in the SEP steps and data quality.

Total Li concentrations in these samples ranged from 55 mg/kg in background boring DPT-01 to 280 mg/kg in boring DPT-03, indicating substantial concentrations of naturally occurring Li in these aquifer materials. These results are almost identical with the independent analysis of these samples presented in Section 3.2.3 above, which was conducted by a different analytical laboratory. Little to no Li was recovered in the first three extraction steps, which include the Exchangeable Phase (Step 1), the Carbonate Phase (Step 2), and the Non-Crystalline Phase (Step 3). This is not surprising given that Li does not readily sorb to these solid phases. Extraction Step 4 (Metal Hydroxide Phase) was the first step to liberate substantial levels of Li, suggesting that some naturally occurring Li can go into solution through weathering/dissolution of hydroxides of iron, manganese, and/or aluminum. Extraction Step 5 (Organic Phase) yielded some detectable concentrations of Li, but generally at lower levels compared to Step 4. This suggests that relatively little Li is associated with organic phases in these samples. The bulk of the total Li was leached in Steps 6 (Acid/Sulfide Fraction) and 7 (Residual Fraction), indicating a fairly recalcitrant fraction of Li that can only be liberated through weathering of the rock/mineral matrix containing the Li.

The SEP results suggest that Li in these aquifer materials is mostly associated with hydroxides of iron, manganese and/or aluminum as well as the refractory fractions that

will liberate Li through mineral weathering. The association of Li in these fractions strongly suggests a natural occurrence of Li in the mineral fraction of the aquifer solids.

Total Mo concentrations were either non-detect (i.e., in background boring DPT-01) or low (i.e., up to an estimated concentration of 3.2 mg/kg in downgradient boring DPT-02) in these aquifer samples. Within boring DPT-02, Mo was mostly associated with the Exchangeable Phase (Step 1), the Non-Crystalline Phase (Step 3) and the Metal Hydroxide Phase (Step 4). Note that sample DPT-02 was collected between locations MW-32 and MW-39, both of which report Mo SSLs. The presence of detectable concentrations of Mo within the first few extraction steps of the SEP (as opposed to non-detect results from the other two locations) indicates that the aquifer matrix within this area is attenuating Mo, even though Mo groundwater concentrations in this area remain above background concentrations.

4.0 UPDATED CONCEPTUAL SITE MODEL

AP-3 was closed by capping the unit with a 60-mil HDPE liner, geocomposite drainage media, a minimum 18-inch thick protective soil cover, and a 6-inch thick vegetative layer. This final cover reduces the potential for migration of CCR-related constituents to groundwater. The CSM indicates that groundwater exceedances are limited to Mo above the state GWPS, but below the federal GWPS, along a narrow path between compliance well HGWC-120 and delineation well MW-41. The additional data collected since the issuance of the previous semiannual progress report in February 2021 (Geosyntec, 2021a) 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-3.

- Statistical analyses and recent iso-concentration maps indicate that Mo SSLs in the compliance and delineation monitoring well network (HGWC-120, MW-32, MW-39, and MW-41) are horizontally delineated to below the state (and federal) GWPS by Cabin Creek. Vertical delineation of Mo in excess of the state GWPS is currently ongoing.
- 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. Attenuation of Mo is also evident through the SEP results of boring DPT-02; however, the site-specific attenuation of Mo does not appear to result in concentrations consistent with background conditions; it does appear to be sufficient to attenuate Mo concentrations to below the federal GWPS.
- A previously reported SSL for Li is no longer present and Li detections are likely associated with naturally elevated levels of Li in the aquifer matrix.

5.0 UPDATED EVALUATION OF CORRECTIVE MEASURES

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

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

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

PRB walls are typically keyed into the bedrock. While the shallow groundwater in the alluvium/residuum and fractured bedrock is connected to the groundwater in more competent bedrock, the PRB media are designed to be more hydraulically conductive than the saturated media surrounding the PRB so that groundwater will flow through the PRB and will not impede groundwater flow. PRBs can also be constructed as “funnel and gate” systems, where a barrier wall directs groundwater to a smaller “treatment gate” filled with reactive media.

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

Vertical Barrier Wall (*Corrective Measure Not Retained*)

This corrective measure involves placing a barrier to groundwater flow, frequently around or upgradient of a source area, to physically control groundwater flow through isolation or redirection. In general, barrier walls are designed to provide containment; localized treatment achieved through the sorption or chemical precipitation reactions from construction of the walls are incidental to the design objective. A variety of barrier materials can be used, including cement and/or bentonite slurries, geomembrane composite materials, or driven materials such as steel or vinyl sheet pile. Groundwater extraction from upgradient of the barrier may be required to avoid groundwater mounding behind the barrier.

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

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

Geochemical Injections (Corrective Measure Retained)

Use of an injection well network, or other means of introducing reagents or air into the subsurface, to provide suitable reagents for either anaerobic or aerobic attenuation of Mo. Under anaerobic conditions, Mo may 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 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 Mo. This potential corrective measure may be feasible along a narrow groundwater flow path downgradient of well HGWC-120.

Hydraulic Containment (Corrective Measure Retained)

Hydraulic containment refers to the use of groundwater extraction to induce a hydraulic gradient for hydraulic capture or control the migration of impacted groundwater downgradient of the permitted unit. This approach considers the application of interceptor trenches to capture a continuous linear cross-section of the groundwater flow, which may subsequently require above-ground treatment and permitted discharge to a receiving water feature, reinjection into the groundwater, or reuse. It is applicable to a variable mix of inorganic constituents, including dissolved Mo. This potential corrective measure may still be feasible through targeted extraction of impacted groundwater.

Monitored Natural Attenuation (Corrective Measure Retained)

MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable time frame relative to more active methods. Under certain conditions (e.g., through sorption, mineral precipitation or oxidation-reduction (redox) reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. Attenuation mechanisms for Mo at AP-3 are physical (e.g. dilution, dispersion, flushing, and related processes) and chemical (sorption or oxidation reduction reactions). In its most recent guidance, USEPA discourages using dilution and dispersion as primary MNA mechanisms because these mechanisms disperse contaminant mass rather than immobilize it (USEPA 2015). However, USEPA advises that dilution and dispersion may be appropriate as a polishing step (e.g., at the boundaries of a plume, when source control is complete, an active remedy is being used at the site, and/or appropriate land use and groundwater controls are in place). Chemical attenuation processes include precipitation, sorption reactions such as adsorption on the surfaces of soil minerals, absorption into the matrix of soil minerals, or partitioning into organic matter. Further, redox reactions, via abiotic or biotic processes, can transform the valence states of some inorganic constituents to less soluble and thus less mobile forms. For Mo, the main attenuation processes include sorption to iron and manganese oxides and formation of sparingly soluble sulfide minerals under anaerobic conditions. This potential corrective measure may either be a stand-alone corrective measure or be part of a combination of corrective measures to address groundwater impacts, depending on the outcome of upcoming data collections and statistical analyses.

Given that groundwater conditions continue to change, an adaptive site management approach will be used to address groundwater impacts. The data collection efforts outlined in this report will further refine the CSM and allow a more detailed evaluation of the three potential groundwater corrective measures retained for further consideration.

6.0 PLANNED ACTIVITIES & ANTICIPATED SCHEDULE

Source control at AP-3 is considered addressed, as a result of the closure and capping described in Section 1.2. Specifically, closure of AP-3 was completed in 2018 via closure in place with the construction of a final engineered cover system, including a geomembrane component, to cap the unit. The closure of AP-3 in this manner minimizes the potential for migration of CCR constituents to groundwater. In addition, an AEM has been selected to enhance the closure of AP-3. The selected *TreeWell* approach downgradient of AP-3 is currently being designed and is expected to be implemented in two phases in the fall of 2021 and the spring of 2022.

Georgia Power proactively initiated adaptive site management as outlined in the ACM Report 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 evaluation. Once sufficient data are available to support decision making regarding the ability to implement one or more specific corrective measures, necessary steps will be taken to select, design, and implement a remedy for AP-3 in accordance with § 257.98.

The supplemental data collection and evaluation activities proposed to be completed during the next semiannual reporting period are presented in **Table 3** and summarized below.

- *Conduct sorption and desorption batch studies on unconsolidated aquifer solids to evaluate the attenuation capacity of the aquifer solids for Mo.*
- *Evaluate conceptual layouts for hydraulic containment corrective measures to evaluate hydraulic capture zones.*
- *Evaluate vertical delineation of the Mo SSLs in delineation wells to determine if additional vertical delineation wells are necessary.*

Georgia Power will continue to prepare semiannual progress reports to document AP-3 groundwater conditions, results associated with additional data collection, and the progress in selecting and designing a groundwater remedy in accordance with § 257.97(a). Georgia Power will include future semiannual progress reports in routine

groundwater monitoring and corrective action reports. Record keeping, notifications, and publicly accessible internet site requirements for the semiannual progress reports will be provided in accordance with § 257.105(h)(12), § 257.106(h)(9), and § 257.107(h)(9), respectively.

7.0 REFERENCES

- Geosyntec Consultants, 2020a. *Assessment of Corrective Measures Report – Plant Hammond Ash Pond 3 (AP-3)*. December 2020.
- Geosyntec Consultants. 2020b. *2020 Annual Groundwater Monitoring and Corrective Action Report - Plant Hammond Ash Pond 3 (AP-3)*. July 2020.
- Geosyntec Consultants. 2020c. *Risk Evaluation Report – Plant Hammond Ash Pond 3, Rome, Floyd County, Georgia*. December 2020.
- Geosyntec Consultants. 2021a. *2020 Semiannual Groundwater Monitoring and Corrective Action Report - Plant Hammond Ash Pond 3 (AP-3)*. February 2021.
- Geosyntec Consultants. 2021b. *2021 Annual Groundwater Monitoring and Corrective Action Report - Plant Hammond Ash Pond 3 (AP-3)*. July 2021.
- Gruebel, K. A., J. A. Davies and J. O. Leckie (1988). The Feasibility of Using Sequential Extraction Techniques for Arsenic and Selenium in Soils and Sediments. *Soil Sci. Soc. Am. J.* 52: 390-397.
- Hickey, M. G. and J.A. Kittrick (1984). Chemical Partitioning of Cadmium, Copper, Nickel, and Zinc in Soils and Sediments Containing High Levels of Heavy Metals. *J. Environ. Qual.* 13: 372-376.
- Kuo, S., P.E Heilman, and A.S. Baker (1983). Distribution and Forms of Copper, Zinc, Cadmium, Iron, and Manganese in Soils Near a Copper Smelter. *Soil Sci.* 135: 101-109.
- Sparks D.L. 1995. *Environmental Soil Chemistry*. Academic Press, Inc.
- Sposito, G., C. S. LeVesque, J. P. LeClaire and N. Senesi (1984). *Methodologies to Predict the Mobility and Availability of Hazardous Metals in Sludge-Amended Soils*. California Water Resource Center. University of California, Davis, CA.
- Tessier A., P.G.C. Campbell, and M. Bisson (1979). Sequential Extraction Procedures for the Speciation of Particulate Trace Metals. *Anal. Chem.* 51(7): 844-851.
- USEPA (1999). *Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites*. Office of Solid Waste and Emergency Response; Directive 9200.4-17P. April 1999.

- USEPA (2007). *Monitored Natural Attenuation of Inorganic Contaminants in Ground Water. Volume 1 – Technical Basis for Assessment*. National Risk Management Laboratory. EPA/600/R-07/139. October 2007.
- USEPA, 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance*. Office of Resource Conservation and Recovery – Program Implementation and Information Division. March 2009.
- USEPA. 2015. *Use of Monitored Natural Attenuation for Inorganic Contaminants in Groundwater at Superfund Sites*. Office of Solid Waste and Emergency Response Directive 9283.1-36. August 2015.

TABLES

Table 1
Monitoring Well Network Summary
Plant Hammond AP-3, Floyd County, Georgia

Well ID	Hydraulic Location	Installation Date	Northing ⁽¹⁾	Easting ⁽¹⁾	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
Compliance Monitoring Well									
HGWA-1	Upgradient	12/3/2014	1550423.32	1940770.00	595.21	573.12	563.12	32.49	10
HGWA-2	Upgradient	12/2/2015	1549796.87	1939845.15	587.92	570.29	560.29	27.95	10
HGWA-3	Upgradient	12/2/2015	1549794.41	1939833.39	587.74	553.23	543.23	44.51	10
HGWA-43D	Upgradient	8/26/2020	1550422.85	1940753.80	595.08	544.08	534.08	61.25	10
HGWA-44D	Upgradient	8/25/2020	1550409.13	1940756.18	594.79	491.76	481.76	113.28	10
HGWA-45D	Upgradient	8/19/2020	1551157.68	1941907.54	586.95	535.23	525.23	62.87	10
HGWA-122	Upgradient	11/20/2014	1551251.42	1941887.11	587.90	570.54	560.54	27.76	10
HGWC-120	Downgradient	6/27/2016	1551067.24	1942926.62	605.82	548.83	538.83	67.00	10
HGWC-121A	Downgradient	7/17/2017	1550607.97	1943030.44	584.69	556.71	546.71	37.98	10
HGWC-124	Downgradient	11/13/2014	1551624.93	1942781.05	582.52	557.80	547.80	35.12	10
HGWC-125	Downgradient	5/4/2020	1550821.41	1942962.87	608.89	556.03	546.03	63.19	10
HGWC-126 ⁽⁴⁾	Downgradient	11/25/2019	1550422.03	1942689.40	611.24	552.72	542.72	68.52	10
Delineation Well									
MW-32	Downgradient	11/22/2019	1551092.83	1943021.47	585.46	559.30	549.30	36.16	10
MW-41	Downgradient	5/18/2020	1551158.16	1943196.47	577.25	563.20	553.20	24.38	10
MW-46D	Downgradient	8/18/2020	1551056.48	1942929.10	605.72	513.92	503.92	102.05	10
Piezometer									
MW-21	Downgradient	12/3/2014	1550270.15	1941809.76	586.27	570.40	560.40	26.28	10
MW-23	Downgradient	11/24/2014	1551641.44	1942496.83	584.91	563.03	553.03	32.28	10
MW-39	Downgradient	3/16/2020	1551111.45	1943089.26	580.42	564.93	554.93	25.82	10

- Notes:
- ft = feet.
 - ft BTOC = feet below top of casing.
 - (1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey data certified on May 19, 2020. For HGWA-43D, HGWA-44D, HGWA-45D, and MW-46D the survey data was certified on September 10, 2020.
 - (2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey data certified on May 19, 2020. For HGWA-43D, HGWA-44D, HGWA-45D, and MW-46D the survey data was certified on September 10, 2020.
 - (3) Total well depth accounts for sump if sump depth data was provided on well construction logs.
 - (4) Well HGWC-126 was originally installed as piezometer MW-31 but reclassified as a compliance monitoring well in May 2020.

Table 2
Evaluation of Remedial Technologies
Plant Hammond AP-3, Floyd County, Georgia

Corrective Measure	Regulatory Citation for Criteria:		40 CFR 257.96(C)(1)	
	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 molybdenum (Mo). Under anaerobic conditions, Mo may 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 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 Mo.	The effective immobilization of Mo under promoted anaerobic condition (involving the injection of an electron donor together with iron or manganese and sulfur) requires careful study and testing. While aerobic approaches are somewhat less complex, additional aquifer characterization is needed to further evaluate these options. It is currently not well understood whether Mo can be efficiently attenuated using in-situ redox manipulations due to slow reaction kinetics. Mo attenuation under both aerobic and anaerobic conditions needs to be further evaluated but is expected to occur. Mo is more strongly sorbed to aluminum oxides than other metal oxides, and it is generally less sorptive and more mobile compared to other inorganics [e.g., arsenic (As)].	Reliability dependent on permeability of the subsurface and the amount and distribution of secondary iron or manganese (oxy-) hydroxides (for aerobic approach), or electron donors and soluble iron or manganese and sulfur that can be consistently distributed (for anaerobic approach). Reliable technology if injected materials can be distributed throughout the impacted aquifer. Bench- and/or pilot-scale treatability testing programs are needed to understand the biogeochemical processes that would effectively reduce migration of 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 (Pump and Treat)	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 interceptor 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 Mo.	Hydraulic containment is effective, but it is unclear whether full groundwater remediation can be achieved without further understanding attenuation mechanisms at the Site. At AP-3, 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. Proximity of the extraction system to Cabin Creek needs to be considered to avoid capturing surface water.	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 interceptor trenches are 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 Mo. Operation and maintenance (O&M) requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals.
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 Mo, 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 Mo, the main attenuation process includes sorption to iron and manganese oxides and formation of insoluble minerals under sulfate-reducing conditions.	Physical and chemical MNA mechanisms for Mo, including dilution, dispersion sorption, and oxidation reduction reactions can be effective at achieving groundwater protection standards (GWPS) within a reasonable time frame.	Reliable as long as the aquifer conditions that result in Mo attenuation remain favorable and/or are being enhanced and sufficient attenuation capacity is present. MNA may be used as a stand-alone corrective measure for groundwater impacted by dissolved Mo, but is frequently used 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 removal of Mo. The carbon could be composed of peat moss, mulch or another carbon source. Exact placement of the PRB is determined by site-specific characterization. PRB walls are typically keyed into the bedrock. While the shallow groundwater in the residuum and fractured bedrock is connected to the groundwater in more competent bedrock, the higher permeability/conductivity of the PRB is not expected to impede groundwater flow. PRBs can also be constructed as "funnel and gate" systems, where a barrier wall directs groundwater to a smaller "treatment gate" filled with reactive media.	PRBs have been tested to address Mo in groundwater, but additional testing is required to select the appropriate reactive media. The approach is expected to achieve GWPS for Mo as impacted groundwater passes through the reactive barrier. Mo redox kinetics may be slow and hence a thicker wall might be needed relative to the treatment of other inorganics (e.g., arsenic).	Reliable groundwater corrective measure technology for select inorganics, but loss of reactivity over time may require re-installation depending on the duration of the remedy. Additional data collection, including conducting a bench and/or pilot study, is needed to better characterize current attenuation mechanisms and/or select the appropriate reactive media mix for a PRB wall.	Moderate to difficult. Trenching would be required to install a mix of reactive materials in the subsurface. Continuous trenching may be the most feasible construction method. Installation methods and materials are readily available. Once installed, treatment will be passive and O&M requirements are minimal if replacement of the PRB is not necessary. Depth to competent bedrock varies on a small-scale (feet to tens of feet) spatially depending on the weathering characteristics of the fractured bedrock, limiting the feasibility of constructing a PRB along the entire length and depth of the affected areas.
Subsurface Vertical Barrier Walls	This approach involves placing a barrier to groundwater flow in the subsurface, frequently around a source area, to prevent future migration of dissolved constituents in groundwater from beneath the source to downgradient areas. In general, barrier walls are designed to provide containment; localized treatment achieved through the sorption or chemical precipitation reactions from construction of the walls are incidental to the design objective. Barrier walls can also be used in downgradient applications to limit discharge to a surface water feature or to reduce aquifer recharge from an adjacent surface water feature when groundwater extraction wells are placed near one. A variety of barrier materials can be used, including cement and/or bentonite slurries, geomembrane composite materials, or driven materials such as steel or vinyl sheet pile. Groundwater extraction from upgradient of the barrier is required to avoid groundwater mounding behind the barrier.	Barrier walls are a proven technology for seepage control and/or groundwater cutoff at impoundments. Slurry walls are limited by the depth of installation; sheet piling and trenching are typically limited to depths of approximately 50 feet belowground surface (ft bgs); specialty drilling/installation techniques can achieve depths greater up to approximately 90 ft bgs. However, site-specific geologic and technology-specific considerations may limit this depth to shallower installations. Within the context of AP-3, 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 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. Depth to competent bedrock varies on a small-scale (feet to tens of feet) spatially depending on the weathering characteristics of the fractured bedrock, limiting the feasibility of constructing a barrier wall along the entire length and depth of the affected areas.

Table 2
Evaluation of Remedial Technologies
Plant Hammond AP-3, Floyd County, Georgia

Corrective Measure	40 CFR 257.96(C)(1) Potential Impacts	40 CFR 257.96(C)(2) Time Requirement to Begin/Complete	40 CFR 257.96(C)(3) Institutional Requirements
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 (Pump and Treat)	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. Proximity of the extraction system to Cabin Creek needs to be considered to avoid capturing surface water.	Installation of intercept 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 Mo.	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 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-3, Floyd County, Georgia

Corrective Measure	40 CFR 257.96(C)(3) Other Env or Public Health Requirements	Relative Costs	Retention Evaluation
Geochemical Approaches (In-Situ Injection)	Based on the results of the Risk Evaluation Report (Geosyntec, 2020b), the SSL-related constituent (Mo) evaluated from AP-3 is 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 anaerobic 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. Mo is the primary constituent of concern, yet immobilization of Mo with in-situ injections is less established and may prove less effective than other viable options. Further evaluation pending receipt of results from the sorption/desorption study.
Hydraulic Containment (Pump and Treat)	Based on the results of the Risk Evaluation Report (Geosyntec, 2020b), the SSL-related constituent (Mo) evaluated from AP-3 is 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; may need to be used in conjunction with other potential groundwater corrective measures; could be considered an effective measure to maintain hydraulic control along Cabin Creek as an interim groundwater treatment measure, if warranted. Further evaluation pending receipt of results from the hydraulic capture zone study.
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, 2020b), the SSL-related constituent (Mo) evaluated from AP-3 is 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. Further evaluation pending receipt of results from the sorption/desorption study.
Permeable Reactive Barrier	Based on the results of the Risk Evaluation Report (Geosyntec, 2020b), the SSL-related constituent (Mo) evaluated from AP-3 is 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; complex geology to key a PRB into bedrock, and uncertainty related to effectiveness of reactive media testing; does not address downgradient groundwater when installed along the compliance boundary; 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, 2020b), the SSL-related constituent (Mo) evaluated from AP-3 is 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; complex geology to key a barrier wall into bedrock; does not address downgradient groundwater when installed along the compliance boundary.

Table 3
Proposed ACM Supplementary Data Analyses and Collection Tasks for Second Semiannual Period 2021
Plant Hammond AP-3, Floyd County, Georgia

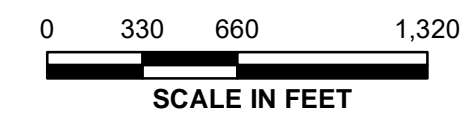
Data Collection Event	Applicable CMs ⁽¹⁾	Applicability/Rationale	Field Component	Parameters of Interest (POI)	Analytical Lab Performing Analysis
Complete sorption and desorption studies using saturated unconsolidated aquifer matrix samples	1, 3	Evaluation of aquifer matrix for attenuation mechanisms and rates, and aquifer capacity for attenuation.	Samples of unconsolidated aquifer materials have already been collected and are stored at SiREM laboratories.	Site-specific constituent (Mo) as well as pH and oxidation-reduction (redox) potential.	SiREM and subcontracted labs
Perform a conceptual-level feasibility study of applied corrective measures	2	Evaluate potential hydraulic capture zones using groundwater extraction systems (extraction well gallery); determine conceptual layouts to achieve hydraulic capture.	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

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

FIGURES



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



SITE LOCATION MAP

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

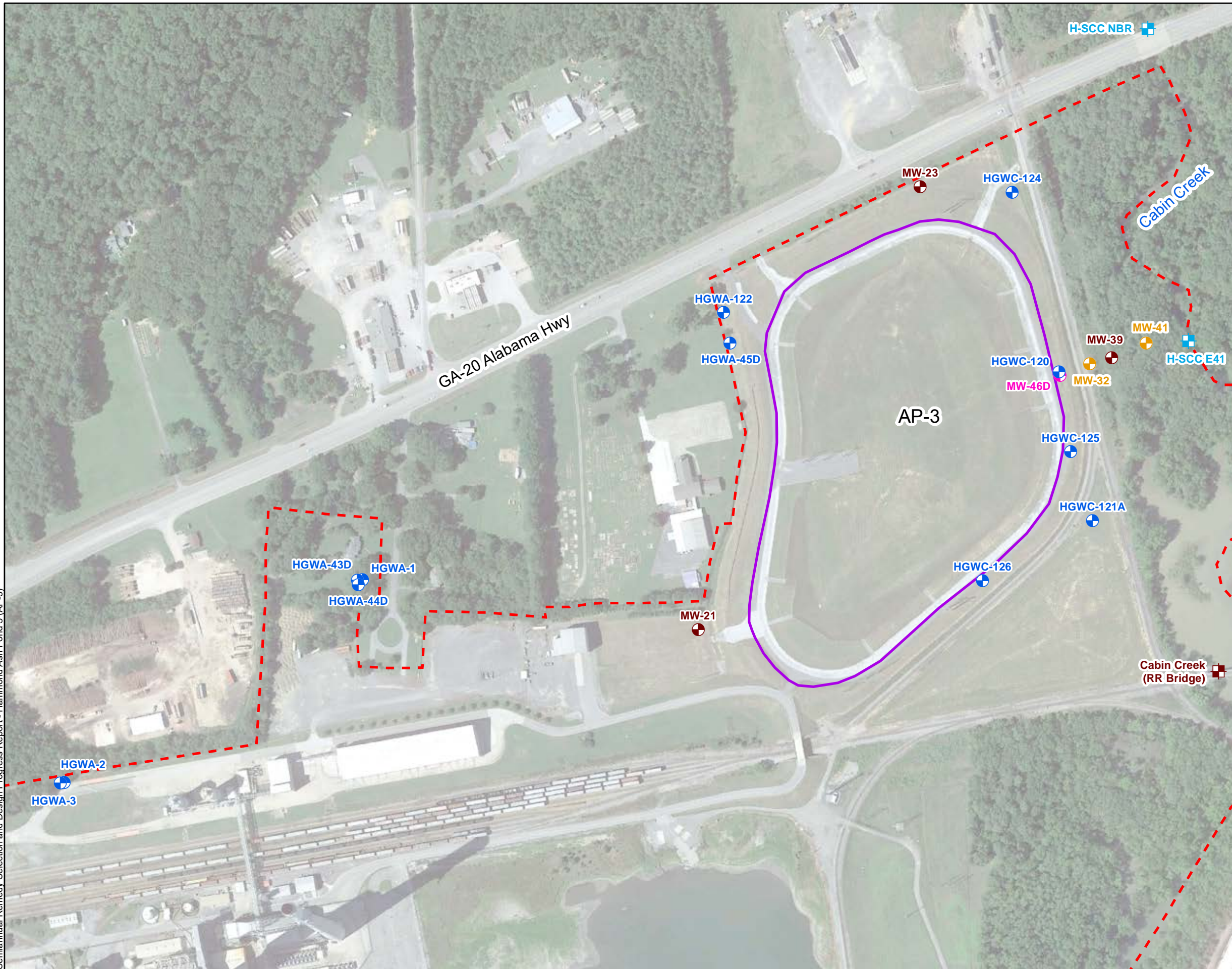
Prepared For:  Georgia Power

Prepared By:  Geosyntec
consultants

KENNESAW, GA

JULY 2021

FIGURE
1



- LEGEND**
- Compliance Monitoring Well
 - Horizontal Delineation Well
 - Vertical Delineation Well
 - Piezometer
 - Surface Water Sample Point
 - Surface Water Level Gauge Point
 - Approximate AP-3 Boundary
 - Plant Hammond Property Boundary

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



MONITORING WELL NETWORK AND SAMPLING LOCATION MAP

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

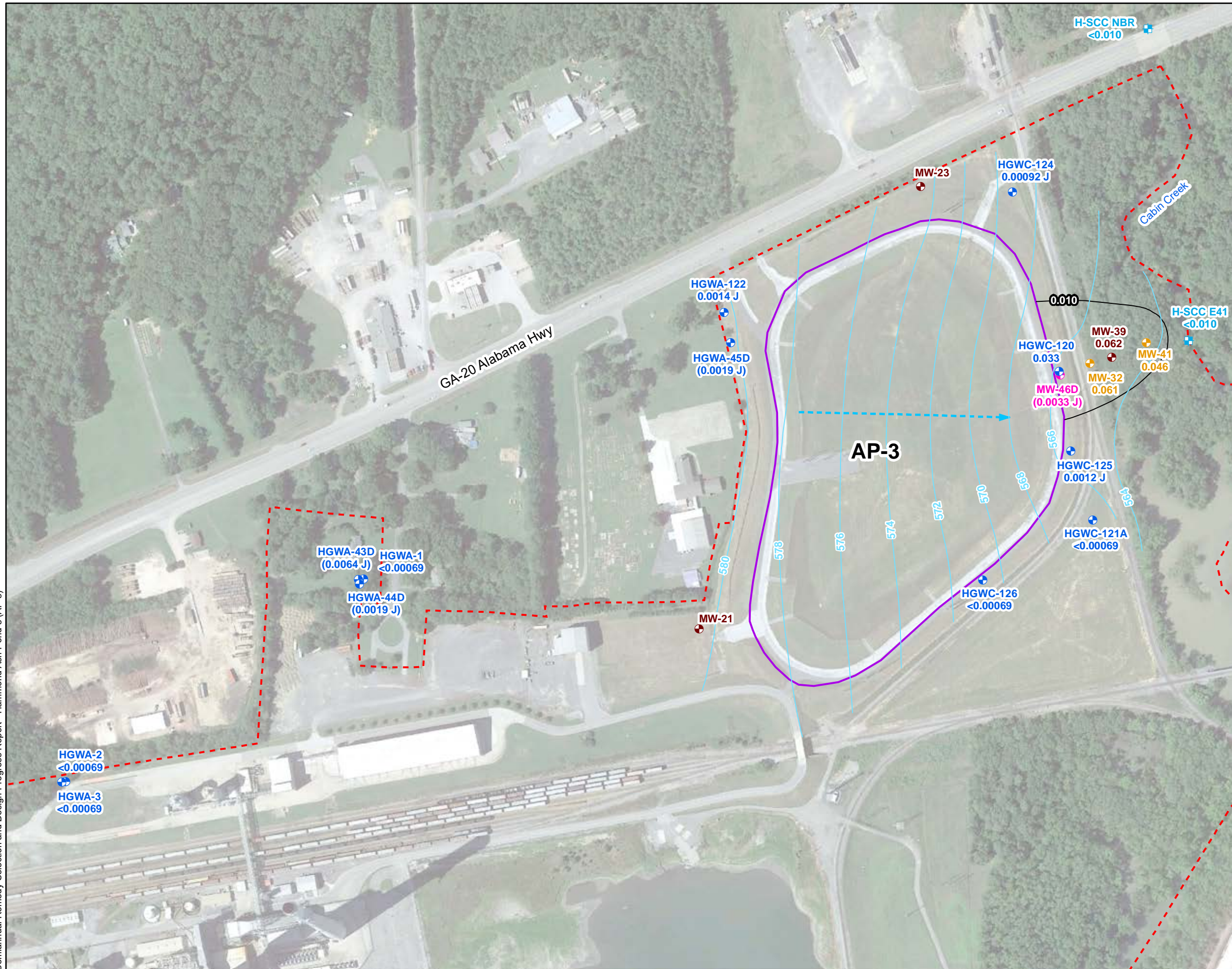
Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA

JULY 2021

FIGURE 2



LEGEND

- ⊕ Compliance Monitoring Well
- ⊕ Horizontal Delineation Well
- ⊕ Vertical Delineation Well (Not Used for Contouring)
- ⊕ Piezometer
- ⊕ Surface Water Sample Point
- State GWPS Molybdenum Iso-Concentration Contour (mg/L)
- Groundwater Elevation Iso-Contour
- ➔ Approximate Groundwater Flow Direction
- ▭ Approximate AP-3 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-43D, HGWA-44D, HGWA-45D, MW-46D). Concentrations are reported in mg/L.
2. Groundwater Elevation Iso Contour represents water level elevation based on data recorded March 10, 2021. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
3. EPD Groundwater Protection Standard (GWPS) for molybdenum is 0.010 mg/L.
4. Aerial photograph source: Google Earth Pro, August 2019.



**ISO-CONCENTRATION MAP,
MOLYBDENUM - MARCH 2021**

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

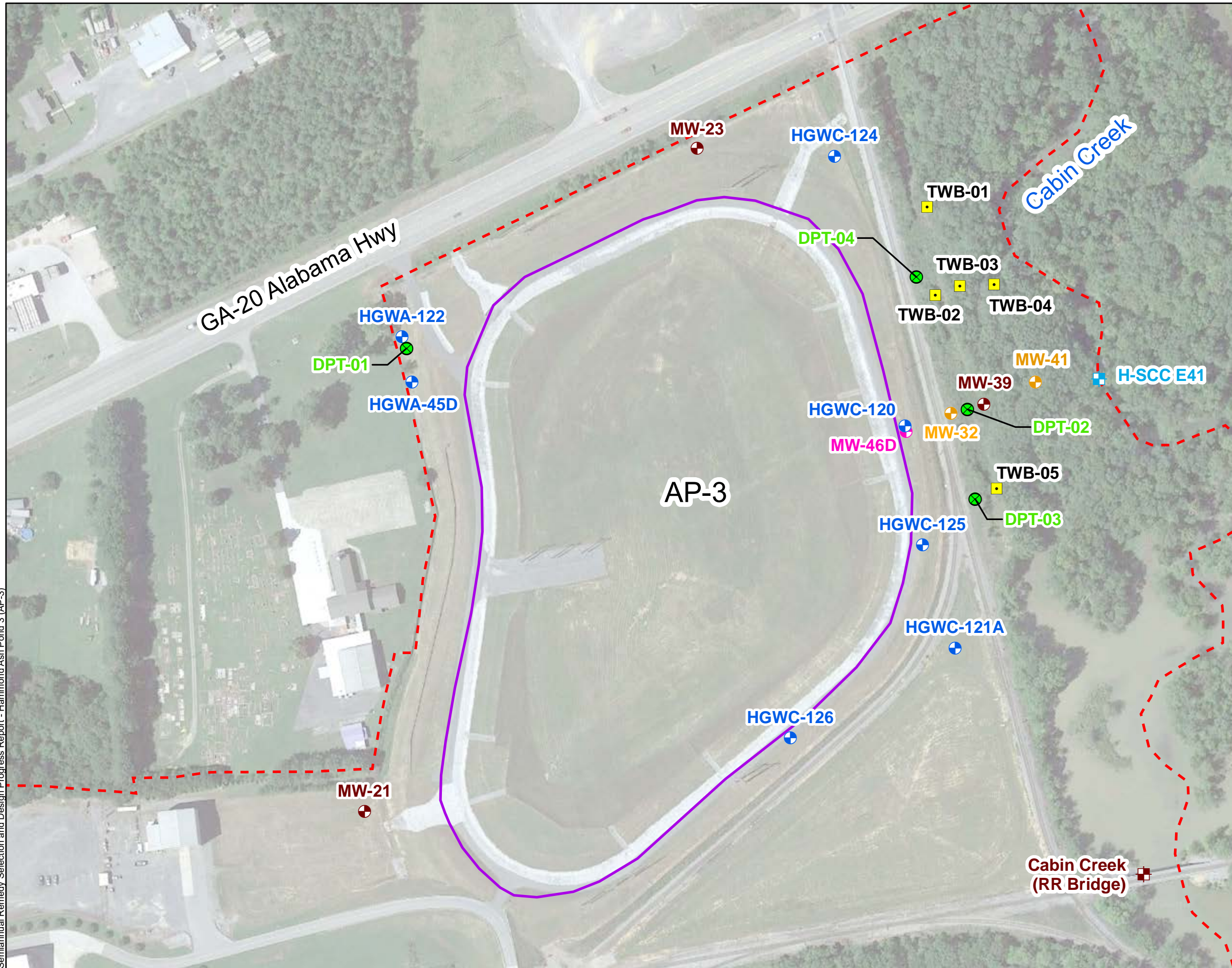
Prepared For: Georgia Power

Prepared By: Geosyntec
consultants

KENNESAW, GA

JULY 2021

**FIGURE
3**



LEGEND

- Temporary Piezometer (AEM Related)
- DPT Borehole
- ⊕ Compliance Monitoring Well
- ⊕ Horizontal Delineation Well
- ⊕ Vertical Delineation Well
- ⊕ Piezometer
- ⊕ Surface Water Sample Point
- ⊕ Surface Water Level Gauge Point
- Approximate AP-3 Boundary
- Plant Hammond Property Boundary

Notes:
 1. Aerial photograph source: Google Earth Pro, August 2019.
 2. The DPT and temporary piezometer (AEM related) locations are approximate pending final survey.



DPT AND TEMPORARY PIEZOMETER (AEM RELATED) LOCATIONS

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

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA

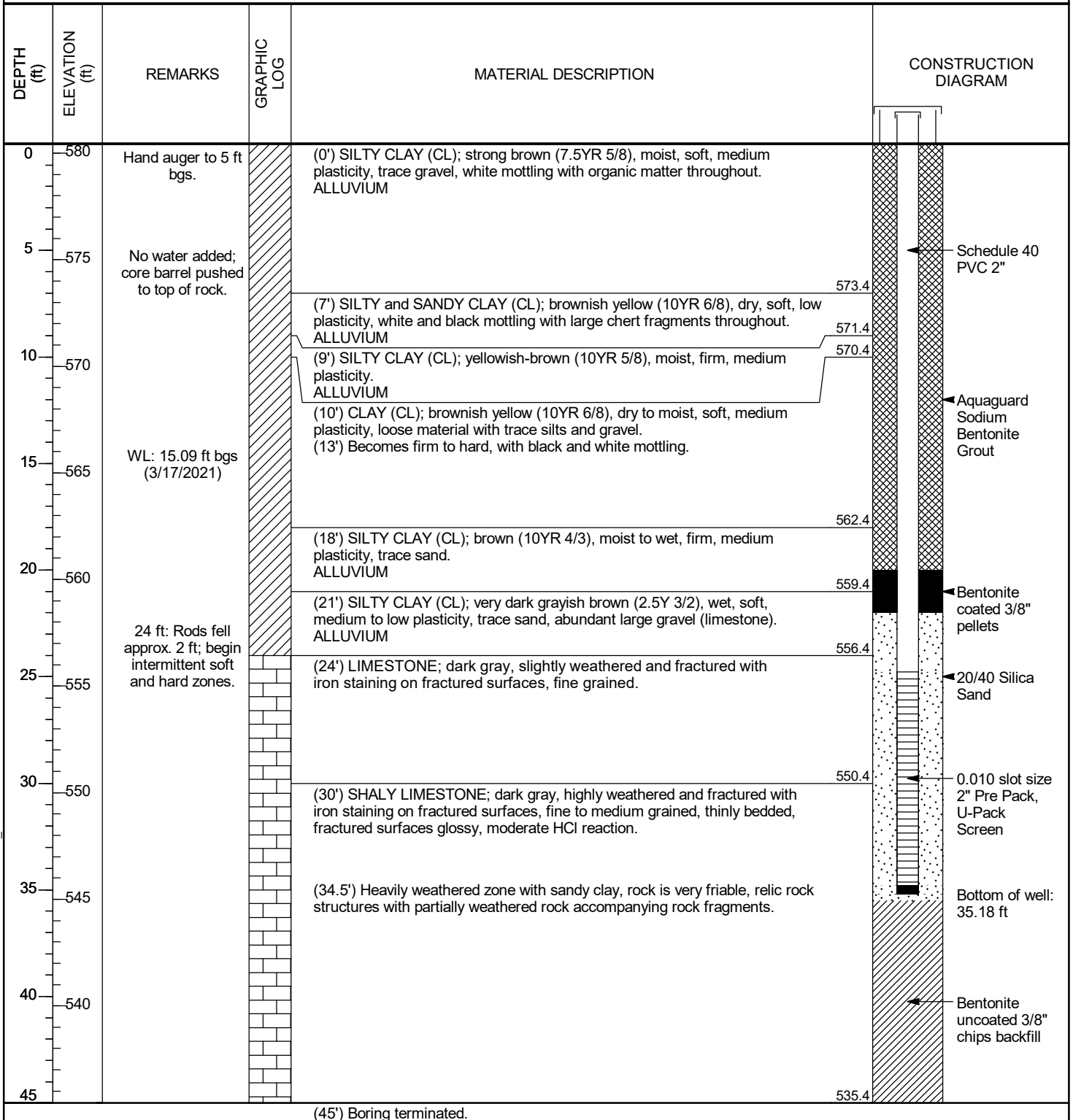
JULY 2021

FIGURE 4

APPENDIX A

Boring Logs for Temporary Piezometers

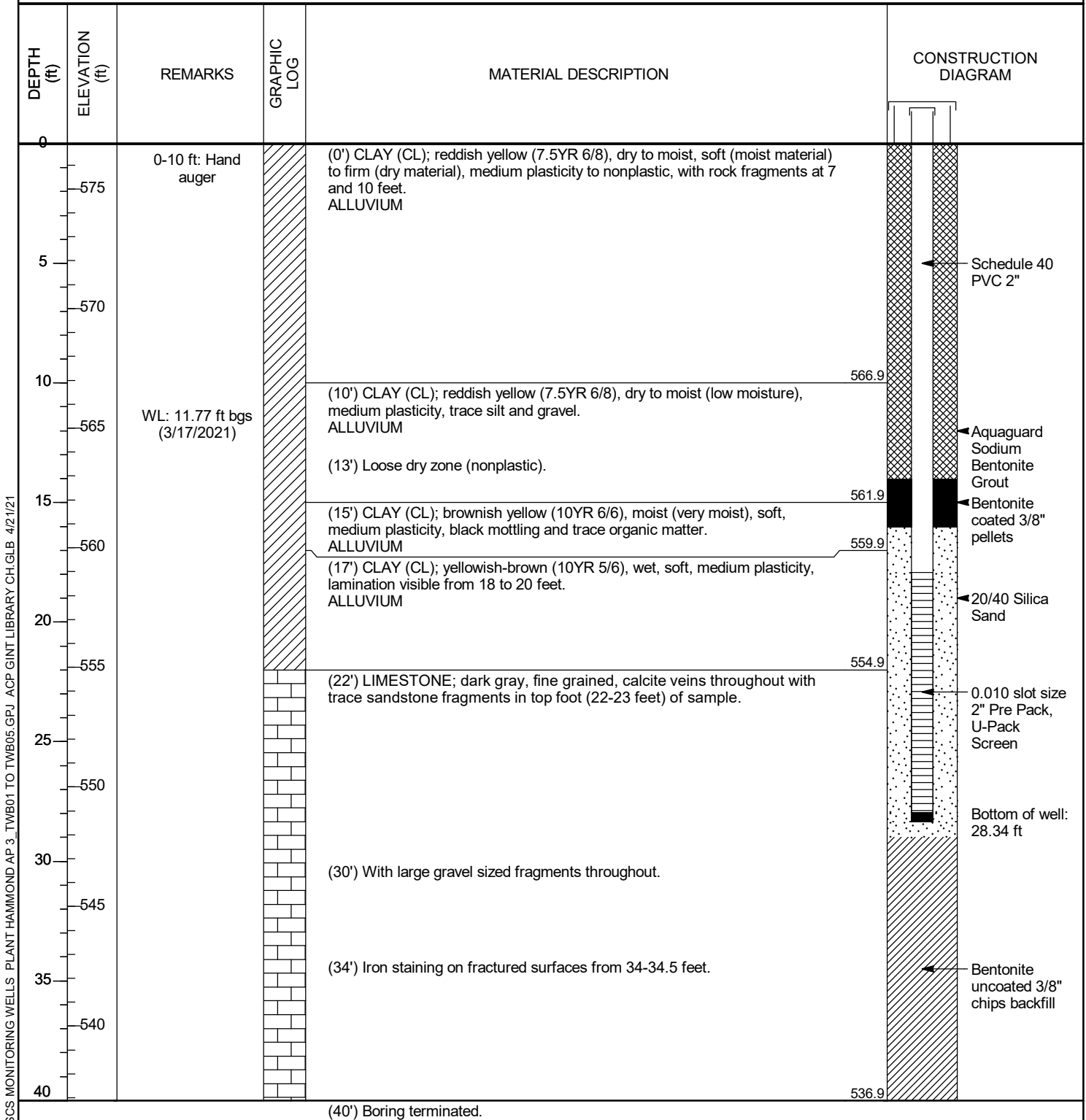
CLIENT Southern Company Services	PROJECT NAME Hammond AP-3 Tree Wells
PROJECT NUMBER GR7735	PROJECT LOCATION Plant Hammond
DATE STARTED 2/21/21 COMPLETED 2/21/21	NORTHING 1551519.26 ft EASTING 1942971.85 ft
DRILLER Tom Ardito, Cascade Drilling	GROUND ELEVATION 580.44 ft BORING DIAMETER 6 in
DRILLING METHOD Sonic	TOP OF CASING ELEVATION 583.06 ft
SAMPLING METHOD 4 in core 6 in override	GEOPHYSICAL CONTRACTOR ---
RIG TYPE Terrasonic 1051181	LOGGED BY T. Kessler CHECKED BY D.Yifru



SCS MONITORING WELLS PLANT HAMMOND AP 3 TWB01 TO TWB05.GPJ ACP GINT LIBRARY CH.GLB 4/21/21

Bottom of borehole at 45.0 feet.

CLIENT Southern Company Services	PROJECT NAME Hammond AP-3 Tree Wells
PROJECT NUMBER GR7735	PROJECT LOCATION Plant Hammond
DATE STARTED 2/24/21 COMPLETED 2/24/21	NORTHING 1551337.70 ft EASTING 1942989.30 ft
DRILLER Tom Ardito, Cascade Drilling	GROUND ELEVATION 576.89 ft BORING DIAMETER 6 in
DRILLING METHOD Sonic	TOP OF CASING ELEVATION 579.77 ft
SAMPLING METHOD 4 in core 6 in override	GEOPHYSICAL CONTRACTOR ---
RIG TYPE Terrasonic 1051181	LOGGED BY T. Kessler CHECKED BY D.Yifru

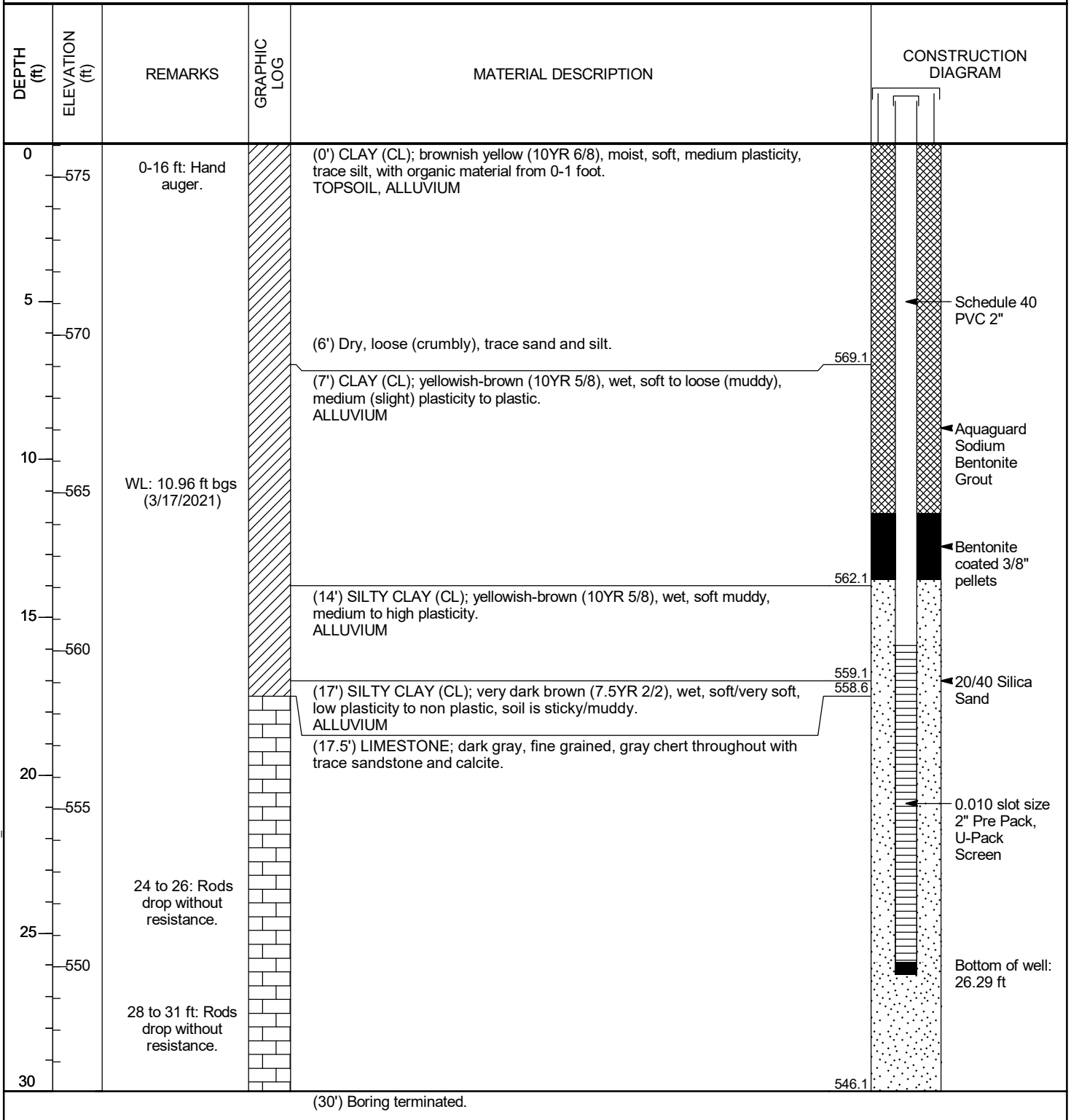


SCS MONITORING WELLS PLANT HAMMOND AP 3_TW01 TO TW05.GPJ ACP GINT LIBRARY CH.GLB 4/21/21

Bottom of borehole at 40.0 feet.

CLIENT Southern Company Services	PROJECT NAME Hammond AP-3 Tree Wells
PROJECT NUMBER GR7735	PROJECT LOCATION Plant Hammond
DATE STARTED 3/2/21 COMPLETED 3/2/21	NORTHING 1551356.74 ft EASTING 1943039.91 ft
DRILLER Tom Ardito, Cascade Drilling	GROUND ELEVATION 576.06 ft BORING DIAMETER 6 in
DRILLING METHOD Sonic	TOP OF CASING ELEVATION 578.52 ft
SAMPLING METHOD 4 in core 6 in override	GEOPHYSICAL CONTRACTOR ---
RIG TYPE Terrasonic 1051181	LOGGED BY T. Kessler CHECKED BY D.Yifru

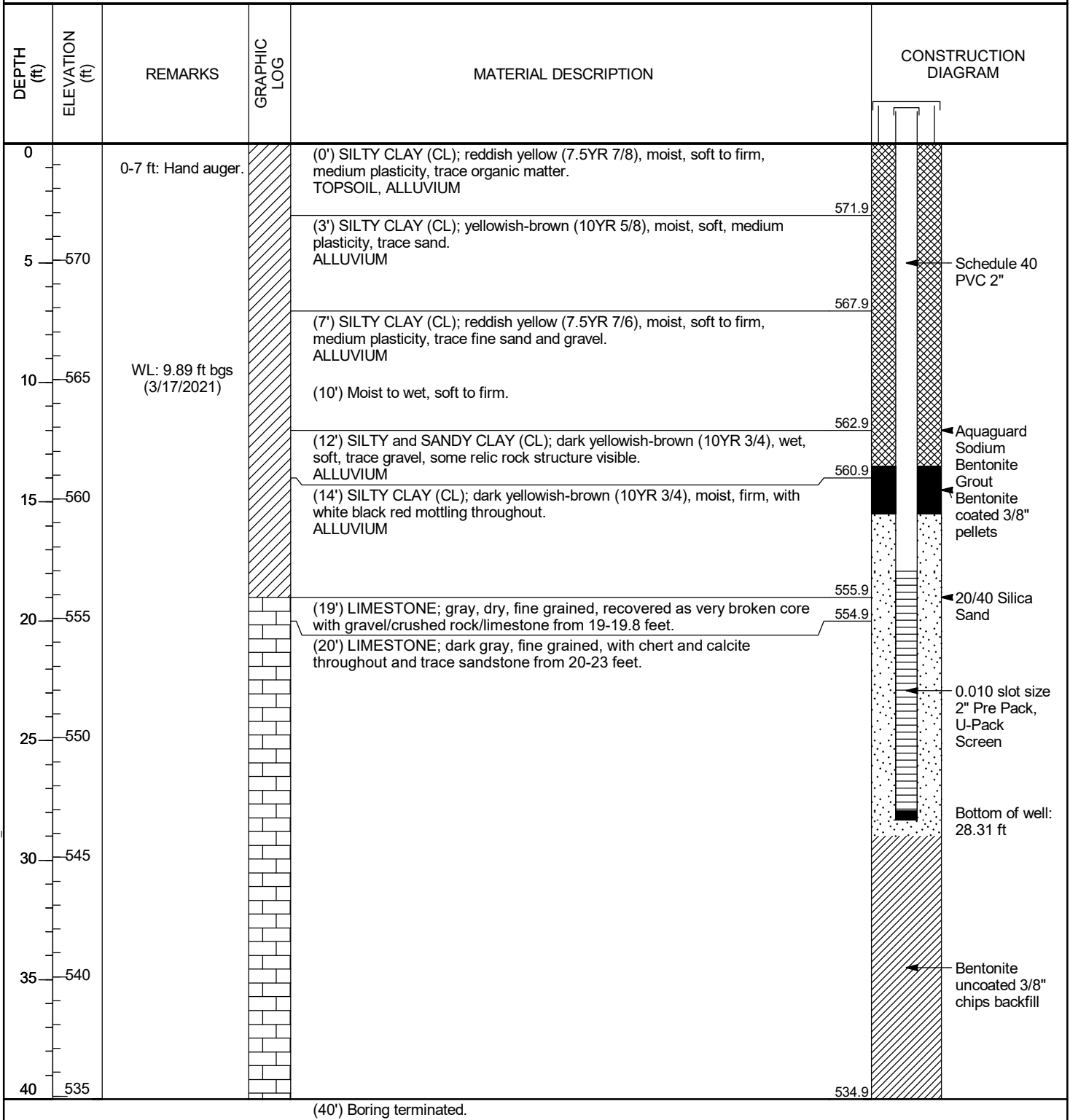
SCS MONITORING WELLS PLANT HAMMOND AP 3_TWB01 TO TWB05.GPJ ACP GINT LIBRARY CH.GLB 4/21/21



Bottom of borehole at 30.0 feet.

CLIENT Southern Company Services	PROJECT NAME Hammond AP-3 Tree Wells
PROJECT NUMBER GR7735	PROJECT LOCATION Plant Hammond
DATE STARTED 2/23/21 COMPLETED 2/23/21	NORTHING 1551359.29 ft EASTING 1943111.05 ft
DRILLER Tom Ardito, Cascade Drilling	GROUND ELEVATION 574.88 ft BORING DIAMETER 6 in
DRILLING METHOD Sonic	TOP OF CASING ELEVATION 577.63 ft
SAMPLING METHOD 4 in core 6 in override	GEOPHYSICAL CONTRACTOR ---
RIG TYPE Terrasonic 1051181	LOGGED BY T. Kessler CHECKED BY D.Yifru

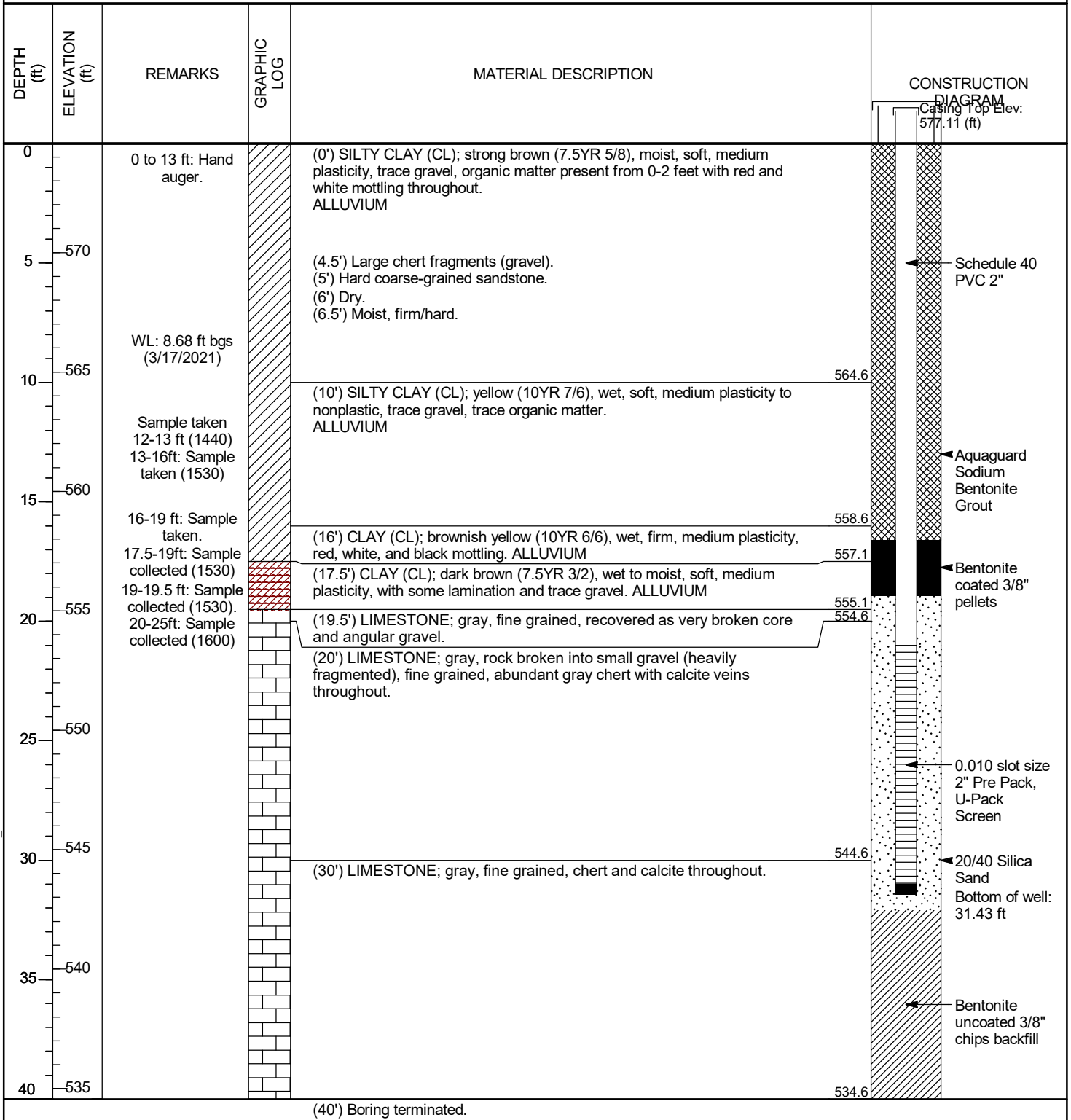
SCS MONITORING WELLS PLANT HAMMOND AP 3_TWB01 TO TWB05.GPJ ACP GINT LIBRARY CH.GLB 4/21/21



Bottom of borehole at 40.0 feet.

CLIENT Southern Company Services	PROJECT NAME Hammond AP-3 Tree Wells
PROJECT NUMBER GR7735	PROJECT LOCATION Plant Hammond
DATE STARTED 3/2/21 COMPLETED 3/2/21	NORTHING 1550938.20 ft EASTING 1943116.21 ft
DRILLER Tom Ardito, Cascade Drilling	GROUND ELEVATION 574.56 ft BORING DIAMETER 6 in
DRILLING METHOD Sonic	TOP OF CASING ELEVATION 577.11 ft
SAMPLING METHOD 4 in core 6 in override	GEOPHYSICAL CONTRACTOR ---
RIG TYPE Terrasonic 1051181	LOGGED BY T. Kessler CHECKED BY D.Yifru

SCS MONITORING WELLS PLANT HAMMOND AP 3_TWB01 TO TWB05.GPJ ACP GINT LIBRARY CH.GLB 4/21/21



Bottom of borehole at 40.0 feet.

APPENDIX B

SiREM Report

Certificate of Analysis
SiREMNA™ Parameters

Customer: Geosyntec Consultants Inc.

SiREM Reference: S-7677

Customer Project ID: Hammond AP-3 ACP
Evaluation

Final Report Issued: 29 July 2021

Site Sampling Date: 29 January 2021 and
1 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-3 ACP Site (the Site).

Site geologic materials were collected on 29 January 2021 and 1 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-NO₃-F.

Customer: Geosyntec Consultants Inc.
Report Issue Date: 29 July 2021
SiREM Reference: S-7677



TABLES

Analytical Results

SiREM File Reference: S-7677

Client: Geosyntec Consultants Inc.
Client Project Number: GW6581B/14;GW6581/22
Date Samples Received: March 23, 2021
Date Samples Analyzed: April 4, 12, 13 and 29, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	Anion Exchange Capacity	Cation Exchange Capacity	Total Sulfur	Total Sulfide	Total Organic Carbon
			meq/100g	meq/100g	%	%	%
DPT01_AP3_012921_10-18	21-3170	29-Jan-21	6.76	13.47	0.023	< 0.04	0.17
DPT03_AP3_020121_13-18	21-3171	1-Feb-21	7.16	18.13	0.008	< 0.04	0.29
DPT02_AP3_020121_13-18	21-3172	1-Feb-21	7.18	23.97	0.005	< 0.04	0.60
DPT04 AP3 020121 13-21	21-3173	1-Feb-21	7.65	41.80	0.006	< 0.04	0.19

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:

29-Jul-21

Analytical Results - Total Metals

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 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
DPT01_AP3_012921_10-18	21-3170	29-Jan-21	0.6	55	21	6.7	37,000	67,000	780
DPT03_AP3_020121_13-18	21-3171	1-Feb-21	0.6	280	14	6.7	33,000	47,000	430
DPT02_AP3_020121_13-18	21-3172	1-Feb-21	3.6	210	12	7.3	31,000	57,000	640
DPT04 AP3 020121 13-21	21-3173	1-Feb-21	2.0	110	18	8.7	42,000	71,000	510

Comments:

µg/g - microgram per gram

Analyst:

Kela Ashworth

Kela Ashworth, B.Sc.
Senior Laboratory Technician

Results approved:

Michael Healey

Michael Healey, B.Sc.
Laboratory Supervisor I

Date:

29-Jul-21

Analytical Results - Whole Rock Analysis

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 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
			%	%	%	%	%	%	%	%	%	%	%	%	%
DPT01_AP3_012921_10-18	21-3170	29-Jan-21	66.9	14.1	5.98	1.54	0.30	0.07	2.43	0.64	0.20	0.10	< 0.01	0.02	7.35
DPT03_AP3_020121_13-18	21-3171	1-Feb-21	63.5	11.4	5.42	4.94	1.94	0.09	3.76	0.50	0.25	0.05	0.02	0.02	7.89
DPT02_AP3_020121_13-18	21-3172	1-Feb-21	60.9	11.9	5.01	4.49	2.96	0.27	4.39	0.57	0.28	0.09	0.02	< 0.01	8.73
DPT04_AP3_020121_13-21	21-3173	1-Feb-21	62.7	14.4	6.63	2.28	0.52	0.25	4.53	0.54	0.31	0.06	0.02	0.01	6.97

Comments:

% - percent
< - compound not detected, the associated value is the detection limit

Analyst:

Kela Ashworth

Kela Ashworth, B.Sc.
Senior Laboratory Technician

Results approved:

Michael Healey

Michael Healey, B.Sc.
Laboratory Supervisor I

Date:

29-Jul-21

Analytical Results - Rietveld Quantitative X-Ray Diffraction

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 16, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	Quartz	Kaolinite	Muscovite	Microcline	Rutile	Albite	Anatase	Pyrite	Orthoclase	Calcite	Montmorillonite	Diopside	Biotite
			wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %
DPT01_AP3_012921_10-18	21-3170	29-Jan-21	46.1	17.1	26.9	5.1	1.1	2.4	1.2	-	-	-	-	-	-
DPT03_AP3_020121_13-18	21-3171	1-Feb-21	45.0	16.2	9.0	-	0.6	2.1	0.7	-	16.5	3.8	6.2	-	-
DPT02_AP3_020121_13-18	21-3172	1-Feb-21	36.6	17.7	8.0	-	0.9	3.8	0.7	-	20.4	2.8	0.5	3.8	4.7
DPT04_AP3_020121_13-21	21-3173	1-Feb-21	37.2	21.8	8.7	-	0.9	3.9	0.9	-	20.4	0.3	0.7	3.2	2.0

Comments:
-- not identified by analyst
wt % - weight percent

Analyst:

Kela Ashworth

Kela Ashworth, B.Sc.
Senior Laboratory Technician

Results approved:

Michael Healey

Michael Healey, B.Sc.
Laboratory Supervisor I

Date:

29-Jul-21

Analytical Results - Sequential Extraction Procedure

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 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	
			Lithium	Molybdenum	Lithium	Molybdenum	Lithium	Molybdenum	Lithium	Molybdenum	Lithium	Molybdenum	Lithium	Molybdenum	Lithium	Molybdenum	Lithium	Molybdenum	Lithium	Molybdenum
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
DPT01_AP3_012921_10-18	21-3170	29-Jan-21	<14	<12	<11	<8.7	0.58 J	< 2.9	6.4	<2.9	<54	<43	11	<2.9	24	<2.9	42	<2.0	58	<14
DPT03_AP3_020121_13-18	21-3171	1-Feb-21	<15	<12	0.88 J	<9.1	0.7 J	0.14 J	24	<3	6.6 J	<46	230	<3	41	<3	300	0.14 J	280	0.31 J
DPT02_AP3_020121_13-18	21-3172	1-Feb-21	<15	0.73 J	0.93 J	<9	0.55 J	1.3 J	17	0.81 J	5.6 J	<45	170	0.19 J	34	<3	230	3.1	190	3.2 J

Comments:
 < - compound not detected, the associated value is the reporting 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

Kela Ashworth, B.Sc.
Senior Laboratory Technician

Results approved:

Michael Healey

Michael Healey, B.Sc.
Laboratory Supervisor I

Date:

29-Jul-21

Customer: Geosyntec Consultants Inc.
Report Issue Date: 29 July 2021
SiREM Reference: S-7677



ATTACHMENT A: Chain of Custody Documentation



Chain-of-Custody Form

siremlab.com

130 Stone Road West
Guelph ON, Canada N1G 3Z2
(519) 822-2265

Lab #
5-7677

*Project Name Hammond AP1 AP2 AP3 ACM evaluation		*Project # GW6581B/14; GW6581/22		Analysis												Preservative Key 0. None 1. HCL 2. Other ICE 3. Other 4. Other 5. Other 6. Other		
*Project Manager Whitney Law		*Company Geosyntec Consultants																
*Email Address wlaw@geosyntec.com				Anion exchange capacity (AEC)	Cation exchange capacity (CEC)	Total sulfur	Total sulfide	Organic carbon content	X-ray diff. SEM, EDXA	Total metal conc (see notes)	w/c 3/18/21							
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																
Client Sample ID		Sampling		Matrix	# of Containers													Other Information
		Date	Time															
DPT07_AP1_012821_32-42		1/28/21		S	2	X	X	X	X	X	X	X	X	X	X		Rept total conc for: Mo, Li, F, As, Fe, Al, Mg	
DPT11_AP2_012721_30-40		01/27/21		S	2	X	X	X	X	X	X	X	X	X	X		Rept total conc for: Mo, Co, Li, Fe, Al, Mg	
DPT08_AP2_012621_10-20		1/26/21		S	2	X	X	X	X	X	X	X	X	X	X		Rept total conc for: Mo, Co, Li, Fe, Al, Mg	
DPT07_AP2_020221_10-20		2/2/21		S	2	X	X	X	X	X	X	X	X	X	X		Rept total conc for: Mo, Co, Li, Fe, Al, Mg	
DPT01_AP3_012921_10-18		1/29/21		S	2	X	X	X	X	X	X	X	X	X	X		Rept total conc for: Mo, Li, Fe, Al, Mn	
DPT03_AP3_020121_13-18		2/1/21		S	1	X	X	X	X	X	X	X	X	X	X		Rept total conc for: Mo, Li, Fe, Al, Mn	
DPT02_AP3_020121_13-18		2/1/21		S	1	X	X	X	X	X	X	X	X	X	X		Rept total conc for: Mo, Li, Fe, Al, Mn	
DPT04_AP3_020121_13-21		2/1/21		S	2	X	X	X	X	X	X	X	X	X	X		Rept total conc for: Mo, Li, Fe, Al, Mn	
DPT09_AP2_012621_20-30		1/26/21		S	2	X	X	X	X	X	X	X	X	X	X		Rept total conc for: Mo, Co, Li, Fe, Al, Mg	
DPT10_AP2_012721_25-35		1/27/21		S	2	X	X	X	X	X	X	X	X	X	X		Rept total conc for: Mo, Co, Li, Fe, Al, Mg	

P.O. #		Turnaround Time Requested Normal <input checked="" type="checkbox"/> Rush <input type="checkbox"/>		For Lab Use Only Cooler Condition: <u>Good</u>						For Lab Use Only					
*Bill To: Speak with PM on how to partition invoice				Cooler Temperature: <u>14°C</u>						Custody Seals: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
				Proposal #: _____											

Relinquished By:		Received By:		Relinquished By:		Received By:		Relinquished By:		Received By:	
Signature <i>Whitney Law</i>		Signature <i>Natasha Brent</i>		Signature		Signature		Signature		Signature	
Printed Name Whitney Law		Printed Name Natasha Brent		Printed Name		Printed Name		Printed Name		Printed Name	
Firm Geosyntec Consultants		Firm 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

Customer: Geosyntec Consultants Inc.
Report Issue Date: 29 July 2021
SiREM Reference: S-7677



ATTACHMENT B: External Laboratory Reports



Specialty Analytical

9011 SE Janssen 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

Specialty Analytical

WO#: 2103288

Date Reported: 4/6/2021

CLIENT: SiREM Lab
Project: S-7677

Lab ID: 2103288-001
Client Sample ID S-7677_1_DPT07AP1

Matrix: SOIL
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
Client Sample ID S-7677_2_DPT11AP2

Matrix: SOIL
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
Client Sample ID S-7677_3_DPT08AP2

Matrix: SOIL
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
Client Sample ID S-7677_4_DPT07AP2

Matrix: SOIL
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
Client Sample ID S-7677_5_DPT01AP3

Matrix: SOIL
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

Specialty Analytical

WO#: 2103288

Date Reported: 4/6/2021

CLIENT: SiREM Lab
Project: S-7677

Lab ID: 2103288-006
Client Sample ID S-7677_6_DPT03AP3

Matrix: SOIL
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
Client Sample ID S-7677_7_DPT02AP3

Matrix: SOIL
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
Client Sample ID S-7677_8_DPT04AP3

Matrix: SOIL
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
Client Sample ID S-7677_9_DPT09AP2

Matrix: SOIL
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
Client Sample ID S-7677_10_DPT10AP2

Matrix: SOIL
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 Number 2103288

RcptNo: 1

Date and Time Receive 3/29/2021 9:11:17 AM

Received by Katheri ne 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 <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present | <input type="checkbox"/> |
| Are matrices correctly identified on Chain of custody? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Is it clear what analyses were requested? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present | <input checked="" type="checkbox"/> |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Were correct preservatives used and noted? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA | <input checked="" type="checkbox"/> |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Were container labels complete (ID, Pres, Date)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Was an attempt made to cool the samples? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA | <input type="checkbox"/> |
| All samples received at a temp. of > 0° C to 6.0° C? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | NA | <input type="checkbox"/> |
| Response when temperature is outside of range:
Preservative added to bottles: | | | | |
| Sample Temp. taken and recorded upon receipt? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | To 10.1° | |
| Water - Were bubbles absent in VOC vials? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | No Vials | <input checked="" type="checkbox"/> |
| Water - Was there Chlorine Present? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA | <input checked="" type="checkbox"/> |
| Water - pH acceptable upon receipt? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA | <input checked="" type="checkbox"/> |
| Are Samples considered acceptable? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Custody Seals present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | |
| Traffic Report or Packing Lists present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | |
| Airbill or Sticker? | Air Bill <input type="checkbox"/> | Sticker <input type="checkbox"/> | Not Present | <input checked="" type="checkbox"/> |
| Airbill No: | | | | |
| Sample Tags Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | |
| Sample Tags Listed on COC? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | |
| Tag Numbers: | | | | |
| Sample Condition? | Intact <input checked="" type="checkbox"/> | Broken <input type="checkbox"/> | Leaking | <input type="checkbox"/> |

Case Number:

SDG:

SAS:

Adjusted? _____ Checked b

Any No and/or NA (not applicable) response must be detailed in the comments section be

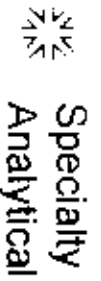


Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Sample Receipt Checklist

Client Contacted? Yes No NA Person Contacted:
Contact Mode: Phone: Fax: Email: In Person:
Client Instructions:
Date Contacted: 3/29/2021 Contacted By: Katherine Lynch
Regarding: Temp of samples upon receipt
CorrectiveAction:

Comments:
Samples received in cooler with ice packs. Client contacted.



9011 SE Jamison Rd
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Chain of Custody Record

Date: 10/1 Page 1 of 1
Laboratory Project No (Internal) 2103288

Project Name: S-7677 PO No:
Temperature on Receipt: 10.1 °C

Collected by: Kela Ashworth
Cooling: Yes (Cooler) Shipped Via: FedEx

State Collected: OR WA OTHER
Custody Seal: Intact / Broken Cooler / Bottle

Report To (PM): Kela Ashworth
MDL: TIER IV: EDD:

AP Email: accounts payablecan@siremlab.com
Sarge System: Printed by: Requested by the lab: 5/12/2021

Address: 130 Stone Road West
City, State, Zip: Guelph, Ontario, N1G 3Z2

Telephone: 519-822-2265

Sample Name	Sample Date	Sample Time	Sample Matrix	# of Containers	Am or Exchange Capacity	Requested Tests	Am or Exchange Capacity	Comments
S-7677_1_DPT07AP1	25-Mar-21		S	1	✓			
S-7677_2_DPT11AP2	25-Mar-21		S	1	✓			
S-7677_3_DPT08AP2	25-Mar-21		S	1	✓			
S-7677_4_DPT07AP2	25-Mar-21		S	1	✓			
S-7677_5_DPT01AP3	25-Mar-21		S	1	✓			
S-7677_6_DPT03AP3	25-Mar-21		S	1	✓			
S-7677_7_DPT02AP3	25-Mar-21		S	1	✓			
S-7677_8_DPT04AP3	25-Mar-21		S	1	✓			
S-7677_9_DPT09AP2	25-Mar-21		S	1	✓			
S-7677_10_DPT10AP2	25-Mar-21		S	1	✓			

Turn-around Time: Standard (5-7 Business): 3 Day: 2 Day: Next Day: Same Day:
Expedited turn-around requests should be coordinated in advance

Requested by: Kelashworth Date Time: 25 March 21 10:30
Received by: [Signature] Date Time: 3-29-2021 9:10

Technical: Date Time:
Received: Date Time:



Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
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
-



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.

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: Client Sample #: Description:	GS21-00731.001 S-7677-1 S-7677_1_DPT07AP1	GS21-00731.002 S-7677-2 S-7677_2_DPT11AP2	GS21-00731.003 S-7677-3 S-7677_3_DPT08AP2	GS21-00731.004 S-7677-4 S-7677_4_DPT07AP2	GS21-00731.005 S-7677-5 S-7677_5_DPT01AP3	GS21-00731.006 S-7677-6 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.

For and on behalf of SGS Canada Inc., Agriculture and Food



Jack Legg, CCA-ON, 4R NMS
 Branch Manager, Agronomist

**Signed and dated in Guelph, ON
 On 29-Apr-2021**

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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: Client Sample #: Description:	GS21-00731.007 S-7677-7 S-7677_7_DPT02AP3	GS21-00731.008 S-7677-8 S-7677_8_DPT04AP3	GS21-00731.009 S-7677-9 S-7677_9_DPT09AP2	GS21-00731.010 S-7677-10 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.

For and on behalf of SGS Canada Inc., Agriculture and Food



Jack Legg, CCA-ON, 4R NMS
 Branch Manager, Agronomist

Signed and dated in Guelph, ON
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SGS Canada Inc.

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Phone: 705-652-2000 FAX: 705-652-6365

Project : S-7677

16-April-2021

SiREM Laboratory

Attn : Kela Ashworth

Date Rec. : 26 March 2021
LR Report: CA14601-MAR21

130 Stone Rd. W
Guelph, ON
N1G 3Z2, Canada

Copy: #1

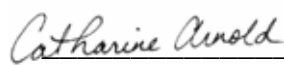

Phone: 519-822-2265
Fax:519-822-3151

CERTIFICATE OF ANALYSIS

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

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, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



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Project : S-7677

06-April-2021

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.

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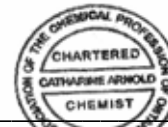
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Phone: 705-652-2000 FAX: 705-652-6365

Project : S-7677

LR Report : CA14602-MAR21

Catharine Arnold



Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



Quantitative X-Ray Diffraction by Rietveld Refinement

Report Prepared for: Environmental Services

Project Number/ LIMS No. Custom MIN/MI5060-MAR21

Sample Receipt: March 30, 2021

Sample Analysis: April 12, 2021

Reporting Date: May 5, 2021

Instrument: BRUKER AXS D8 Advance Diffractometer

Test Conditions: Co radiation, 35 kV, 40 mA
Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°

Interpretations : PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.

Detection Limit : 0.5-2%. Strongly dependent on crystallinity.

Contents:

- 1) Method Summary
- 2) Quantitative XRD Results
- 3) XRD Pattern(s)

Kim Gibbs, H.B.Sc., P.Geol.
Senior Mineralogist

Huyun Zhou, Ph.D., P.Geol.
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.

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WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

Mineral/Compound	S-7677_1_DPT07AP1	S-7677_2_DPT11AP2	S-7677_3_DPT08AP2	S-7677_4_DPT07AP2	S-7677_5_DPT01AP3
	MAR5060-01	MAR5060-02	MAR5060-03	MAR5060-04	MAR5060-05
	(wt %)	(wt %)	(wt %)	(wt %)	(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 ₂ Si ₂ O ₅ (OH) ₄
Muscovite	KAl ₂ (AlSi ₃ O ₁₀)(OH) ₂
Microcline	KAlSi ₃ O ₈
Rutile	TiO ₂
Albite	NaAlSi ₃ O ₈
Anatase	TiO ₂
Pyrite	FeS ₂
Orthoclase	KAlSi ₃ O ₈
Calcite	CaCO ₃
Montmorillonite	(Ca,Na) _{0.3} (Al,Fe) ₂ (OH) ₂
Diopside	CaMgSi ₂ O ₆
Biotite	(Mg,Fe,Ca) ₃ (Al,Fe) ₃ (OH) ₂

Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

Mineral/Compound	S-7677_6_DPT03AP3	S-7677_7_DPT02AP3	S-7677_8_DPT04AP3	S-7677_9_DPT09AP2	S-7677_10_DPT10AP2
	MAR5060-06 (wt %)	MAR5060-07 (wt %)	MAR5060-08 (wt %)	MAR5060-09 (wt %)	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

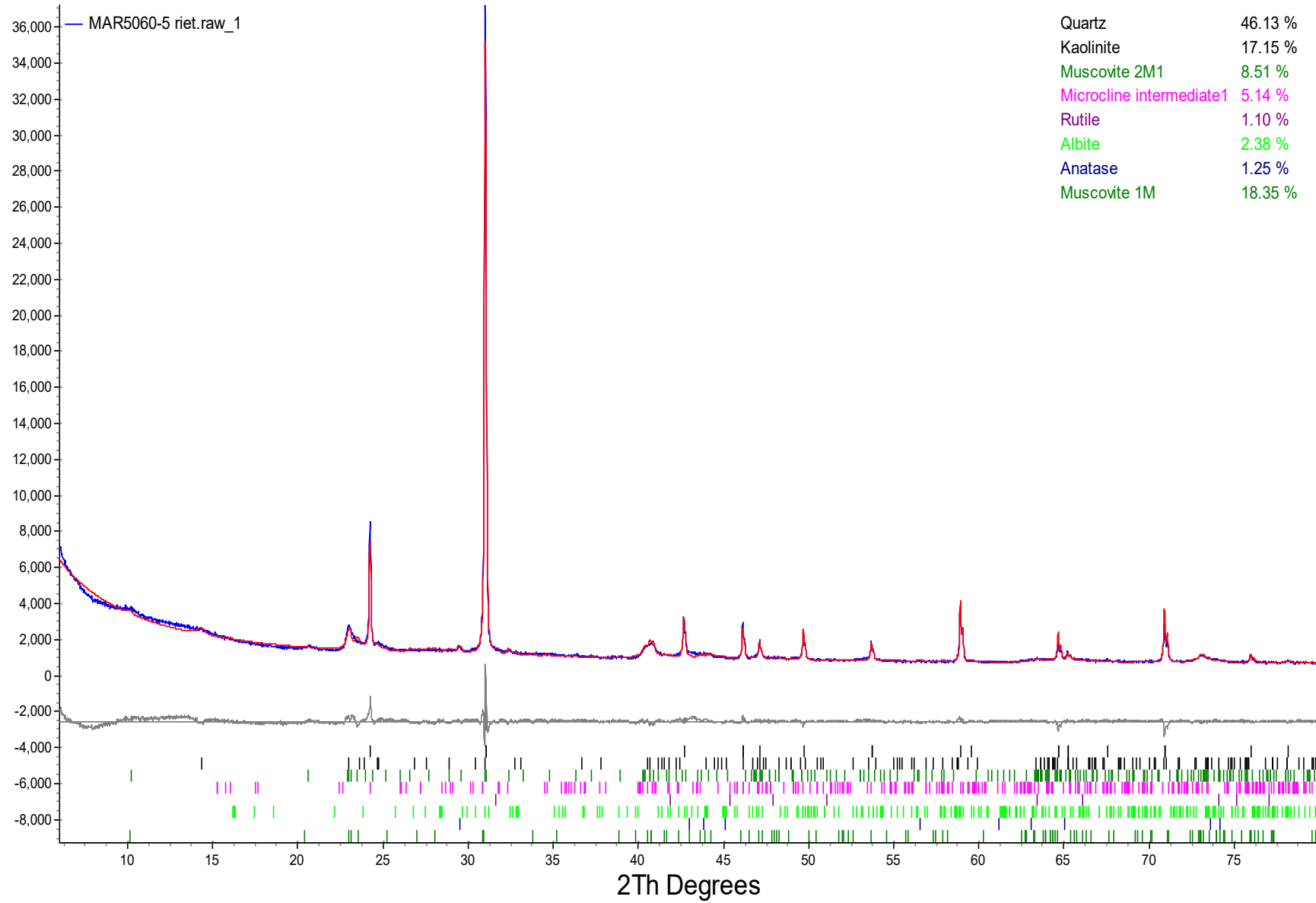
Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

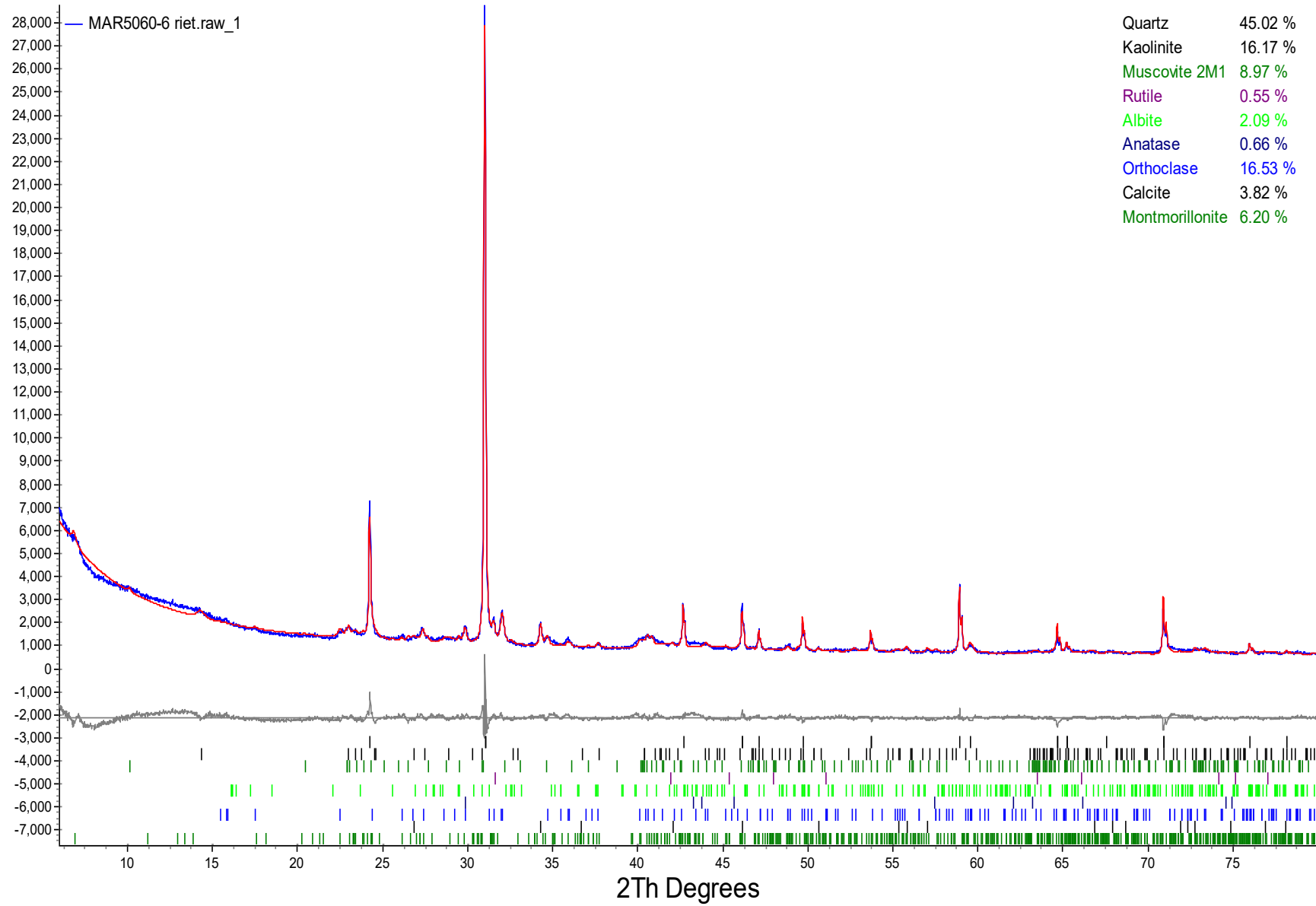
The weight percent quantities indicated have been normalized to a sum of 100%. The quantity of amorphous material has not been determined.

Mineral/Compound	Formula
Quartz	SiO ₂
Kaolinite	Al ₂ Si ₂ O ₅ (OH) ₄
Muscovite	KAl ₂ (AlSi ₃ O ₁₀)(OH) ₂
Microcline	KAlSi ₃ O ₈
Rutile	TiO ₂
Albite	NaAlSi ₃ O ₈
Anatase	TiO ₂
Pyrite	FeS ₂
Orthoclase	KAlSi ₃ O ₈
Calcite	CaCO ₃
Montmorillonite	(Na,Ca) _{0.3} (Al,Mg) ₂ Si ₄ O ₁₀ (OH) ₂ ·nH ₂ O
Diopside	CaMgSi ₂ O ₆
Biotite	K(Mg,Fe) ₃ (AlSi ₃ O ₁₀)(OH) ₂

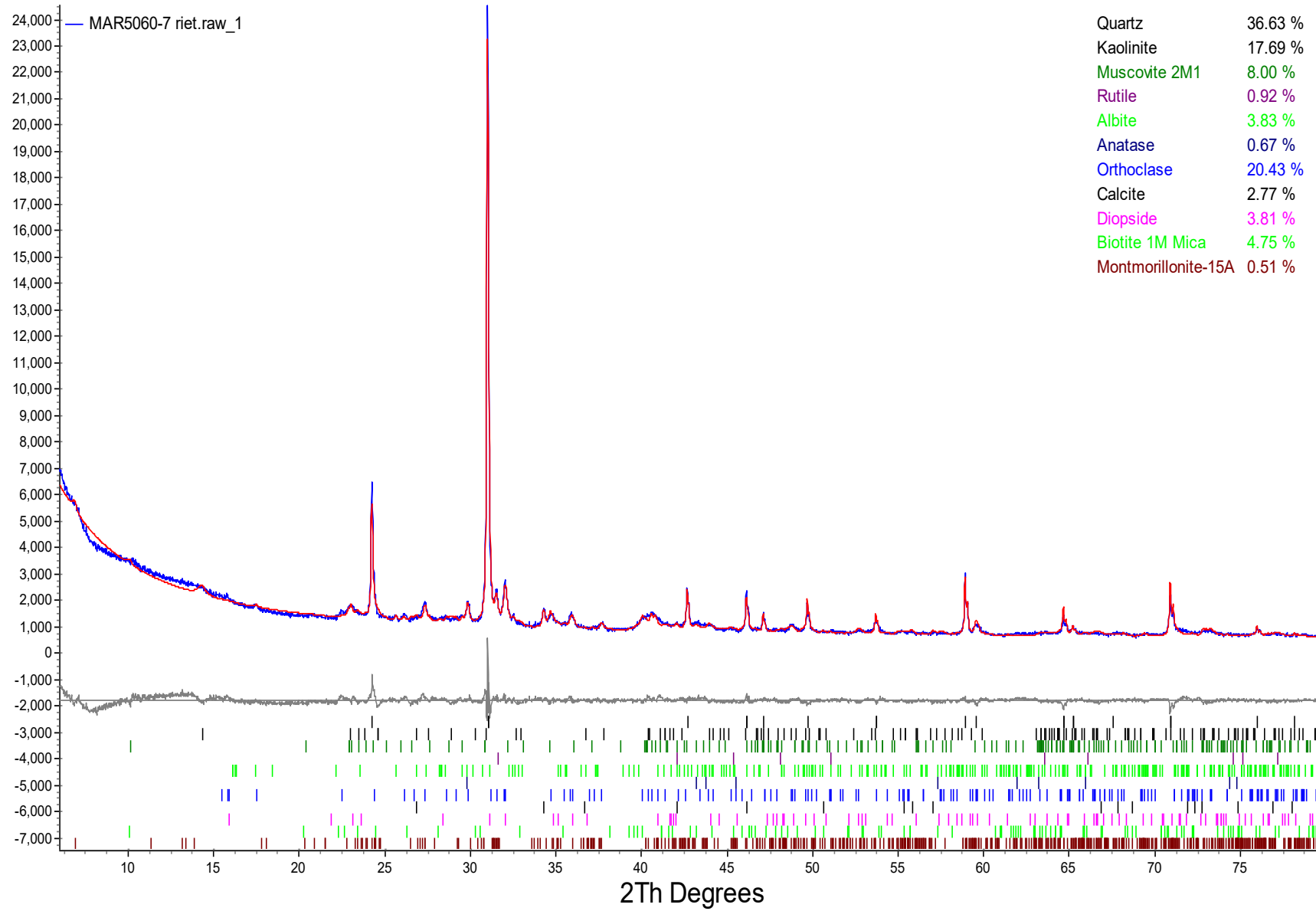
S-7677_5_DPT01AP3



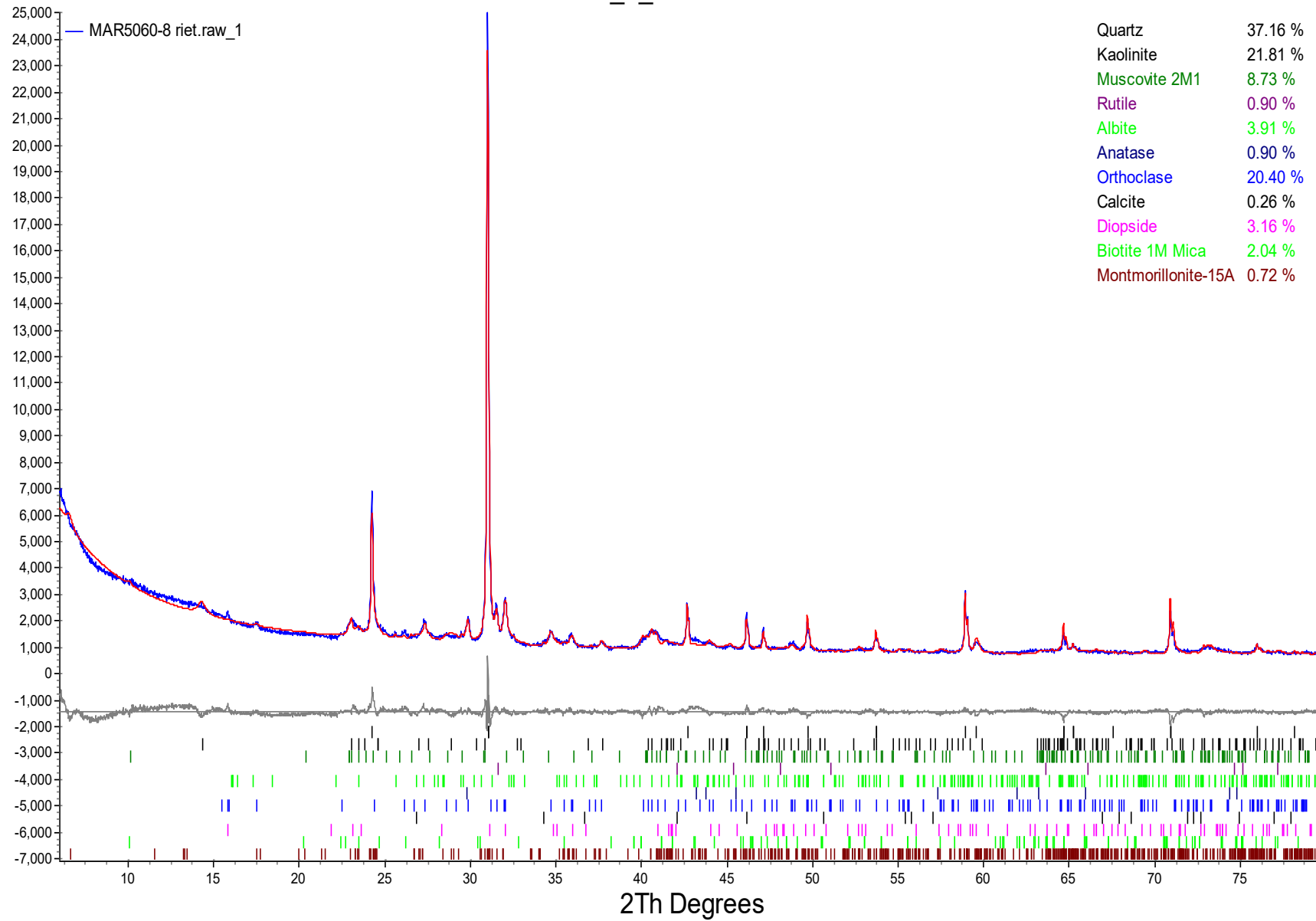
S-7677_6_DPT03AP3



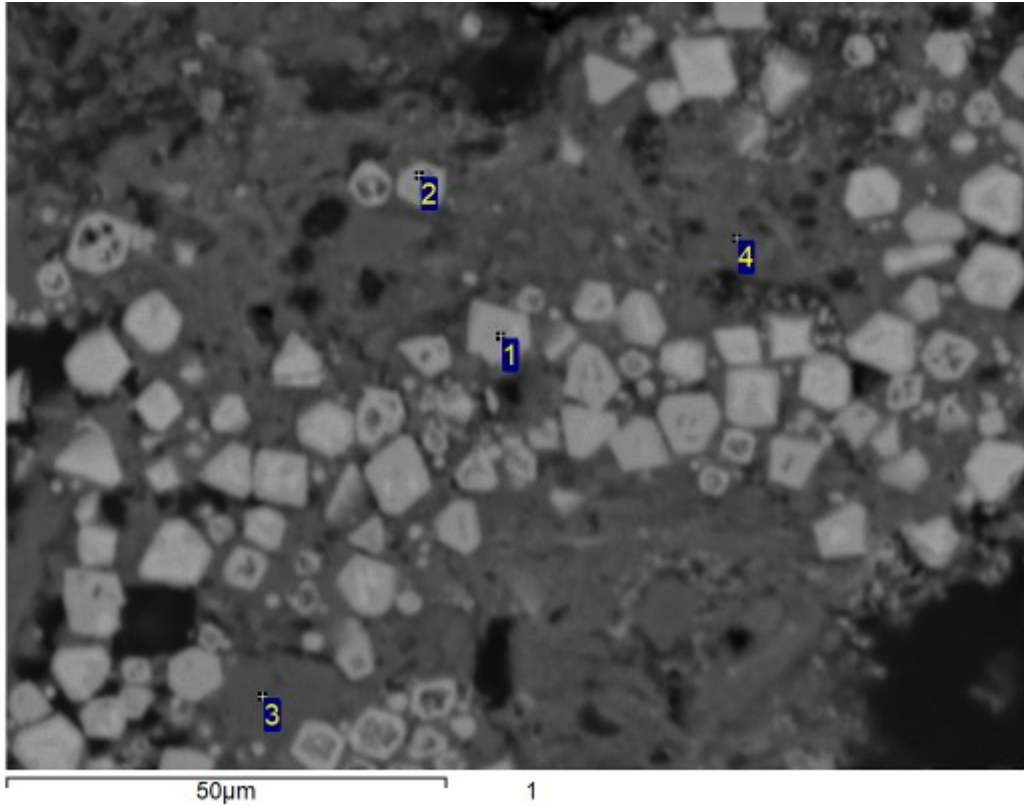
S-7677_7_DPT02AP3



S-7677_8_DPT04AP3



Sample Notes:
S-7677_5_DPT01AP3

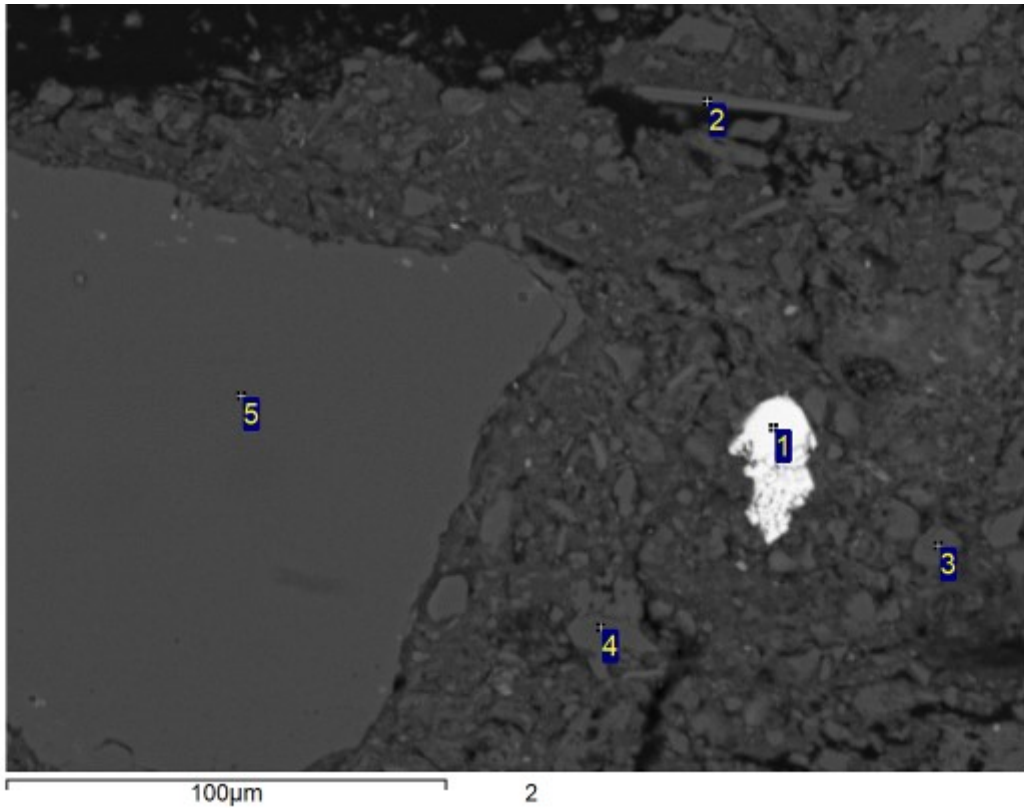


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Fe	Total	Mineral ID
1	41.4		2.1	2.3	0.7		53.5	100.0	Fe-Oxide/Oxyhydroxide
2	42.7		3.0	4.6	0.6		49.0	100.0	Fe-Oxide/Oxyhydroxide
3	50.6			48.6			0.9	100.0	Quartz
4	47.5	1.5	9.2	32.0		3.6	6.2	100.0	Fe-Oxide/Oxyhydroxide/K-Feldspar mixture

All results in weight%

Sample Notes:
S-7677_5_DPT01AP3

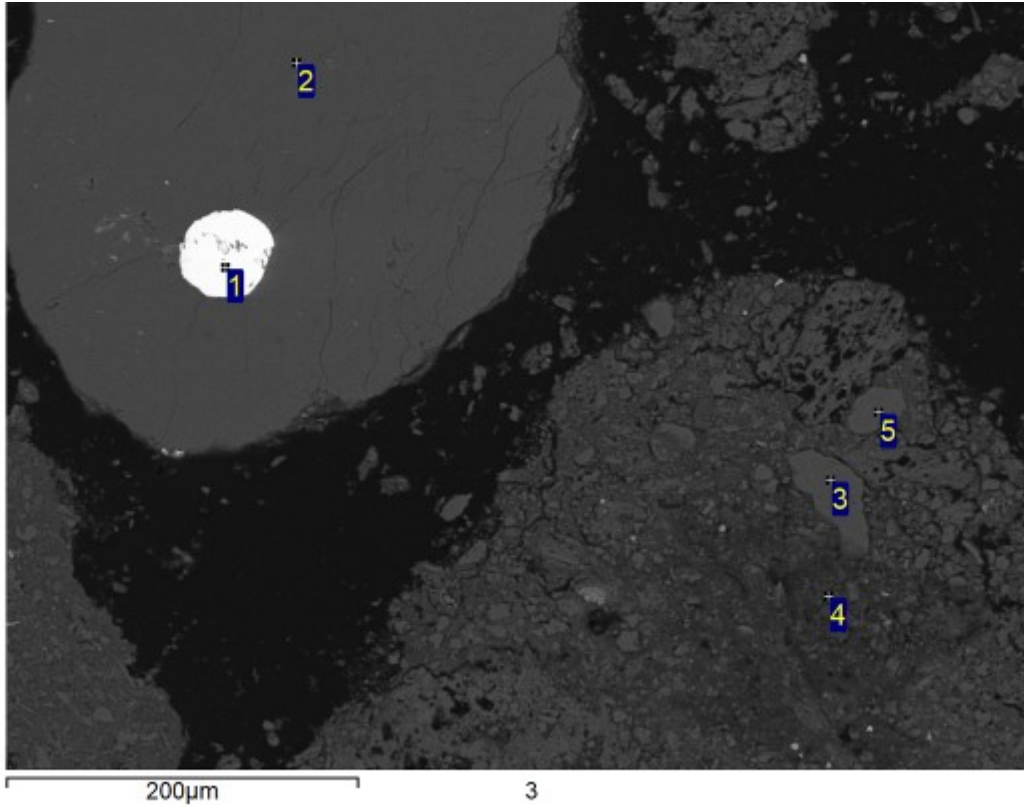


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ca	Fe	Sr	Ba	Total	Mineral ID
1	26.4				14.6				1.6	57.4	100.0	Barite
2	47.3	0.5	18.2	24.5		9.0		0.4			100.0	Mica
3	50.1			49.5				0.4			100.0	Quartz
4	51.0			48.7			0.3				100.0	Quartz
5	51.5			48.5							100.0	Quartz

All results in weight%

Sample Notes:
S-7677_5_DPT01AP3

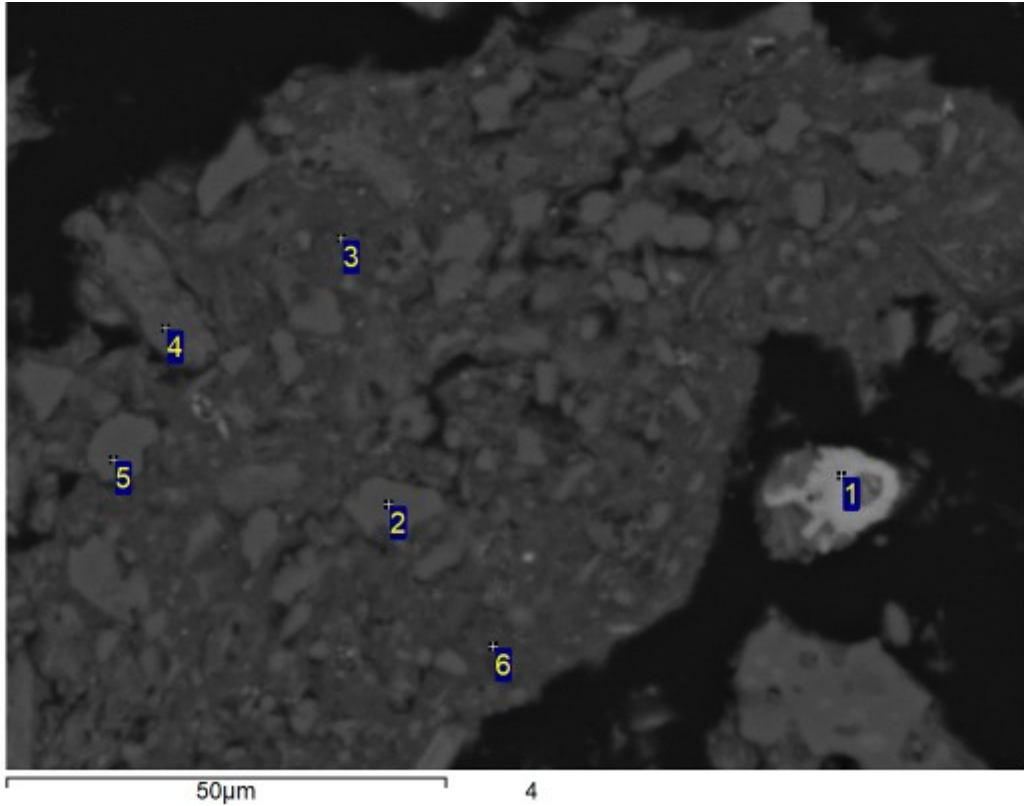


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	Cl	K	Ca	Ti	Fe	La	Ce	Nd	Th	Total	Mineral ID
1	29.4				14.3			0.5			12.5	28.6	10.4	4.2	100	Monazite
2	51.3			48.7											100	Quartz
3	51.3			48.7											100	Quartz
4	39.8	1.6	12.2	36.5		0.6	4.0		1.1	4.2					100	Clay
5	49.5	0.6	1.9	44.5						3.6					100	Quartz

All results in weight%

Sample Notes:
S-7677_5_DPT01AP3

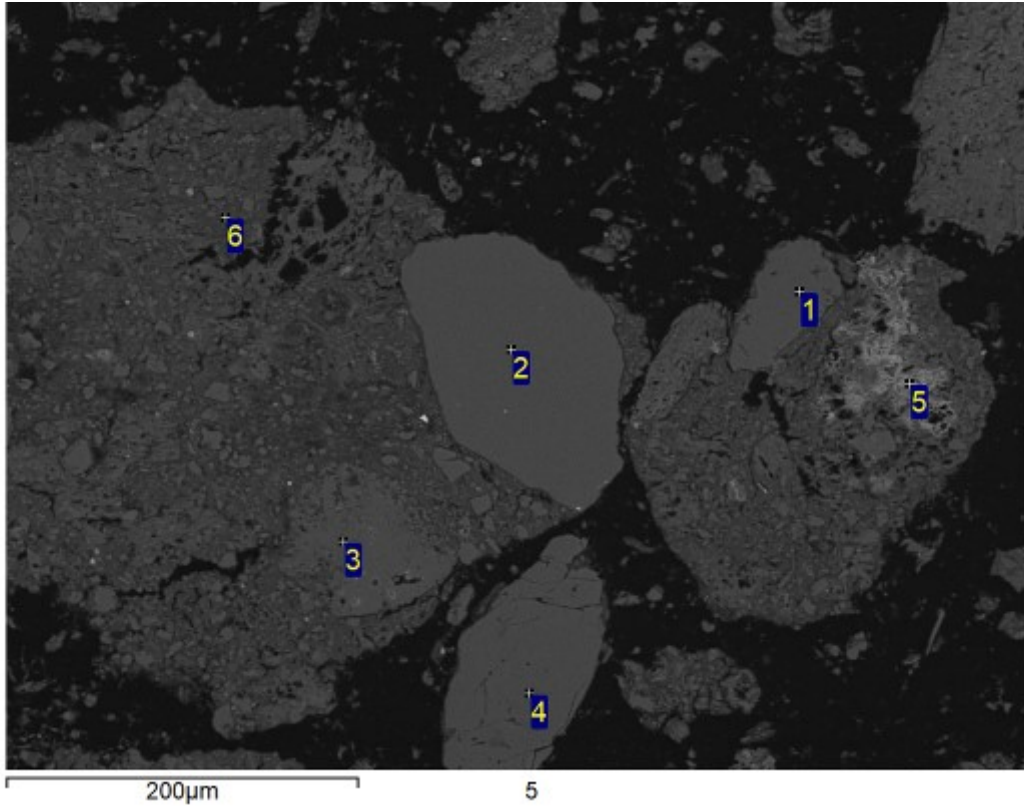


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	S	K	Ca	Ti	Fe	Total	Mineral ID
1	42.1		2.4	2.2	1.5					51.8	100.0	Fe-Oxide-Oxyhydroxide
2	51.6		0.6	47.8							100.0	Quartz
3	45.5	1.3	14.6	29.8		0.4	2.5	0.3	1.2	4.3	100.0	Kaolinite/Muscovite
4	46.4	2.3	9.7	34.5			4.0		0.6	2.4	100.0	K-Feldspar
5	51.3			48.7							100.0	Quartz
6	44.6	1.6	12.9	34.1			2.0			4.9	100.0	Kaolinite/Muscovite

All results in weight%

Sample Notes:
S-7677_5_DPT01AP3

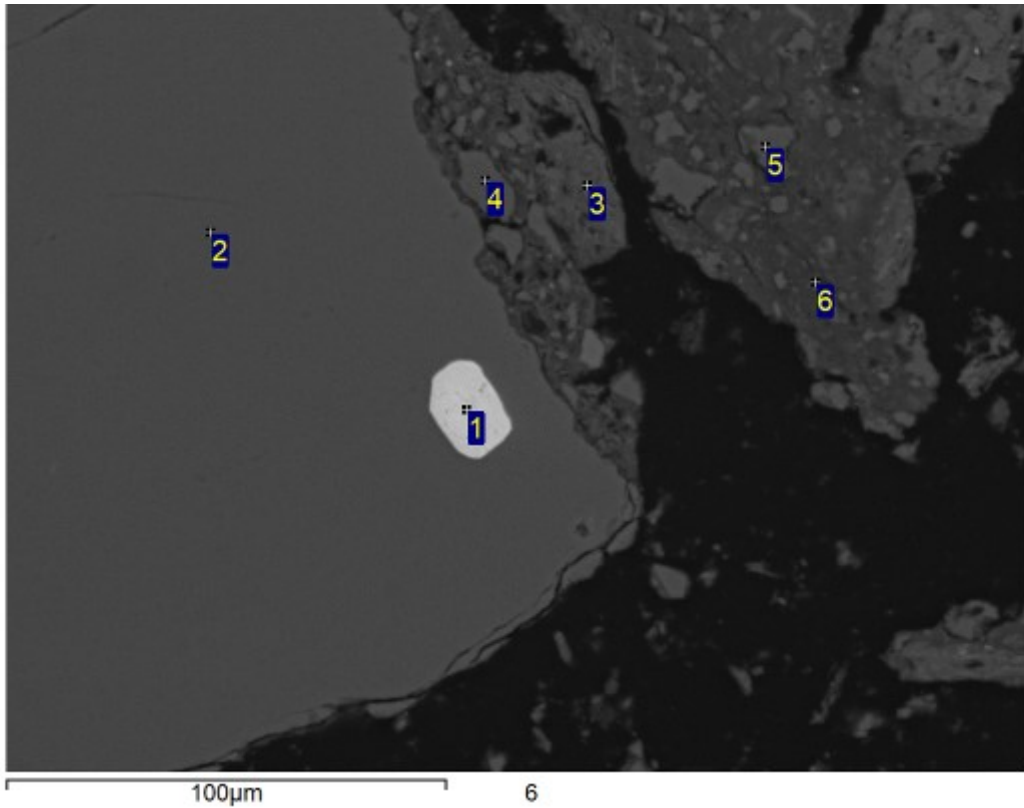


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	51.3			48.7							100.0	Quartz
2	51.0			49.0							100.0	Quartz
3	50.9		0.4	46.6						2.1	100.0	Quartz
4	50.3			49.7							100.0	Quartz
5	34.6		3.8	1.5	0.6		0.4		13.4	45.7	100.0	Fe-Oxide
6	44.4	1.1	11.7	35.7		2.4		0.5		4.1	100.0	Fe-Oxide/K-Feldspar mixture

All results in weight%

Sample Notes:
S-7677_5_DPT01AP3

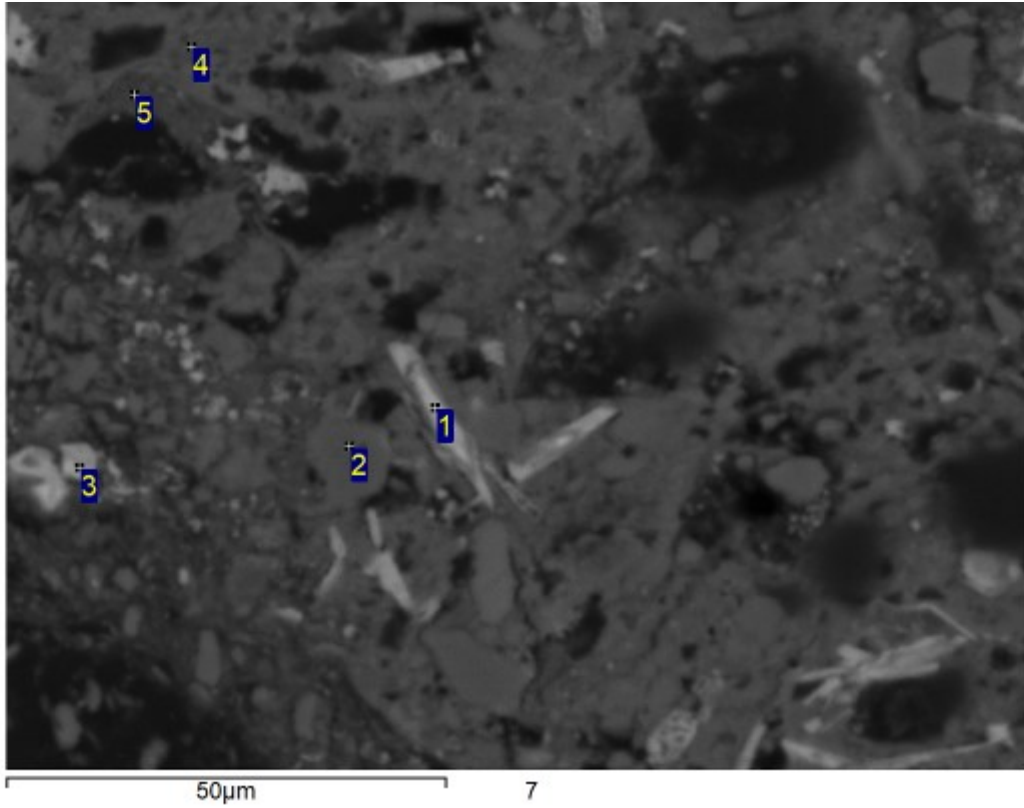


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ti	Fe	Zr	Hf	Total	Mineral ID
1	33.6			15.5				0.5	48.7	1.7	100.0	Zircon
2	51.1			48.9							100.0	Quartz
3	46.5	1.2	9.7	33.0		3.3	1.6	4.6			100.0	Fe-Oxide/K-Feldspar mixture
4	51.3			48.7							100.0	Quartz
5	51.7			48.3							100.0	Quartz
6	44.2	0.7	11.4	35.6	2.0	2.2	0.4	3.5			100.0	Fe-Oxide/K-Feldspar mixture

All results in weight%

Sample Notes:
S-7677_5_DPT01AP3

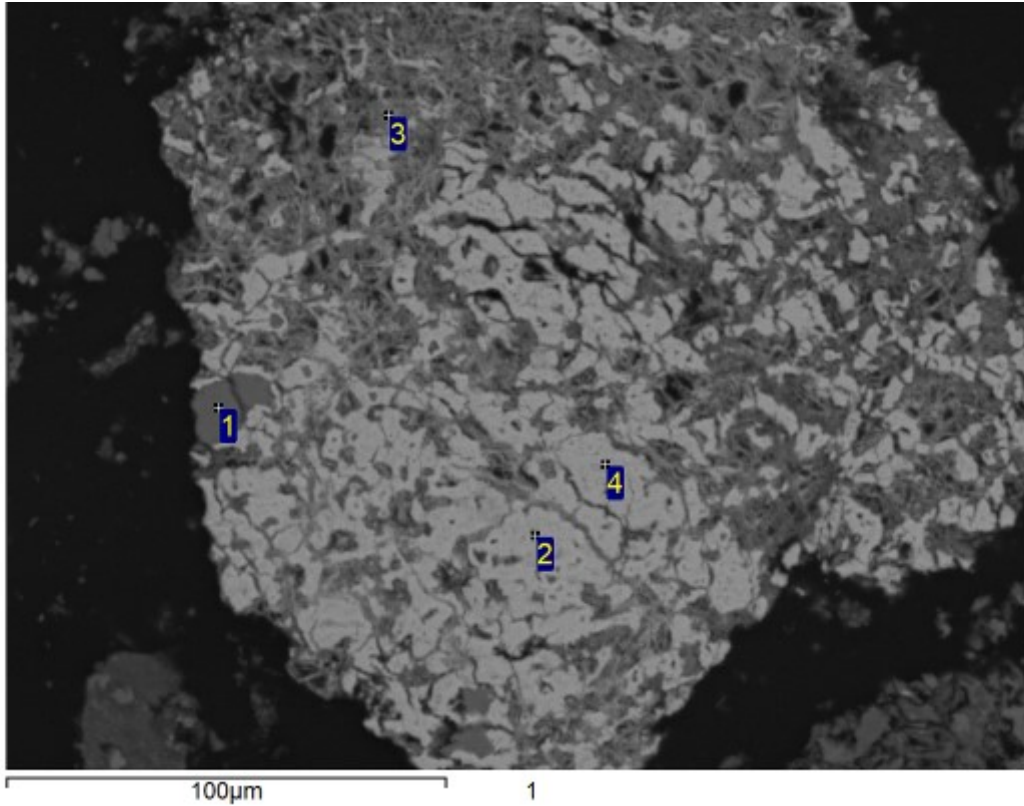


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	39.2		1.3	3.2	0.9			0.4	54.9	100.0	Fe-Oxide/Oxyhydroxide
2	52.1			46.3					1.6	100.0	Quartz
3	42.8		3.8	4.0	1.6	0.4			47.5	100.0	Fe-Oxide/Oxyhydroxide
4	46.2	2.0	9.4	34.4		3.7	0.3		3.9	100.0	Fe-Oxide/K-Feldspar mixture
5	43.5	1.8	11.6	30.8		2.7	2.4		7.3	100.0	Fe-Oxide/K-Feldspar mixture

All results in weight%

Sample Notes:
S-7677_6_DPT03AP3

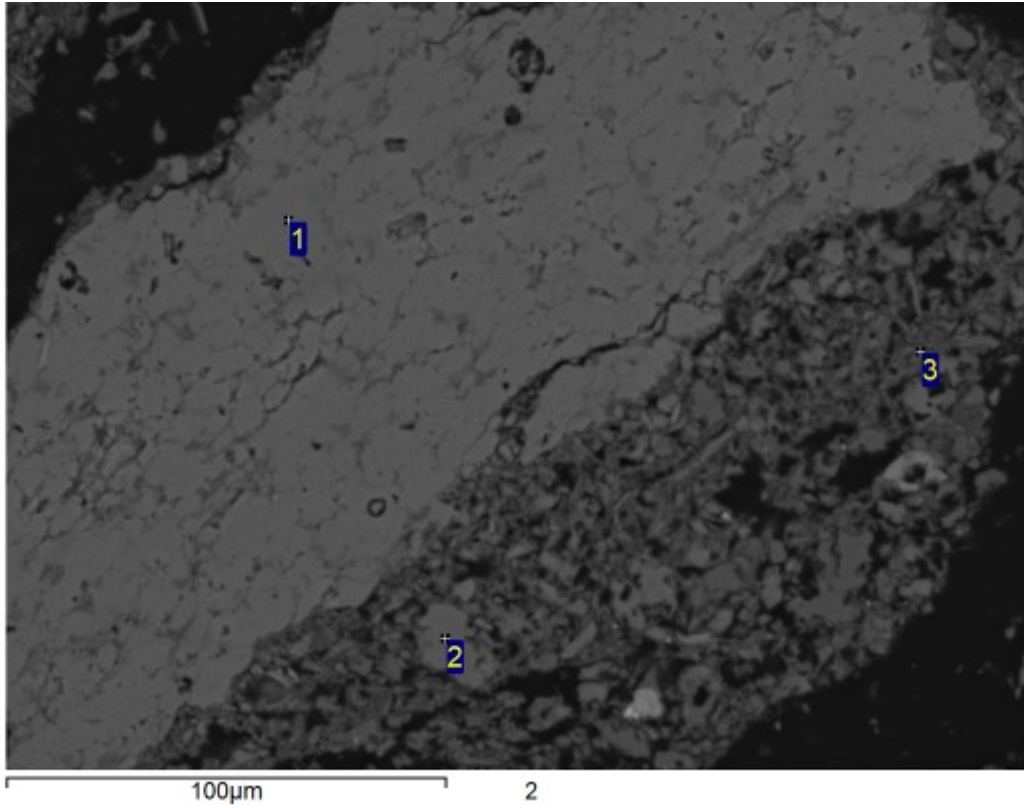


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	K	Ca	Fe	Total	Mineral ID
1	45.2	9.3	31.5		13.4		0.6	100.0	K-Feldspar
2	39.3	0.9	2.0	0.5			57.3	100.0	Fe-Oxide/Oxyhydroxide
3	32.8	2.4	2.8	1.3			60.7	100.0	Fe-Oxide/Oxyhydroxide
4	40.1	0.9	2.4	0.7		0.3	55.6	100.0	Fe-Oxide/Oxyhydroxide

All results in weight%

Sample Notes:
S-7677_6_DPT03AP3

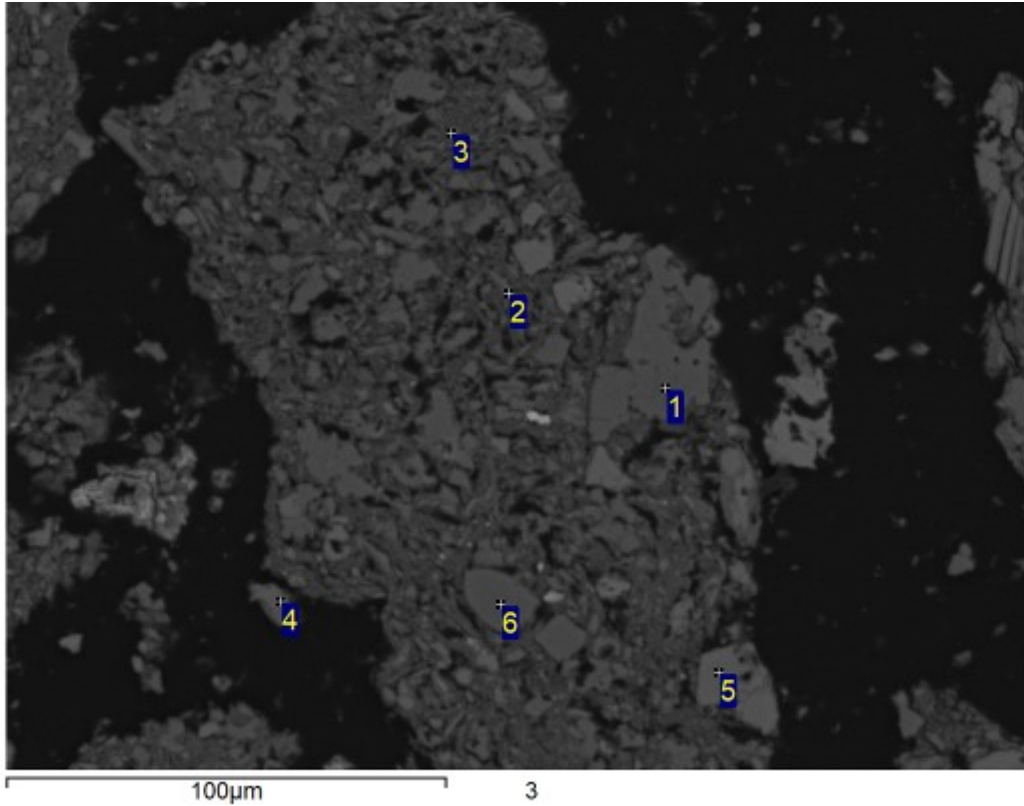


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ca	Fe	Total	Mineral ID
1	54.2	0.8				45.0		100.0	Calcite
2	45.9		9.1	31.9	13.1			100.0	K-Feldspar
3	41.2	2.9	7.7	37.5	8.9		1.7	100.0	K-Feldspar

All results in weight%

Sample Notes:
S-7677_6_DPT03AP3

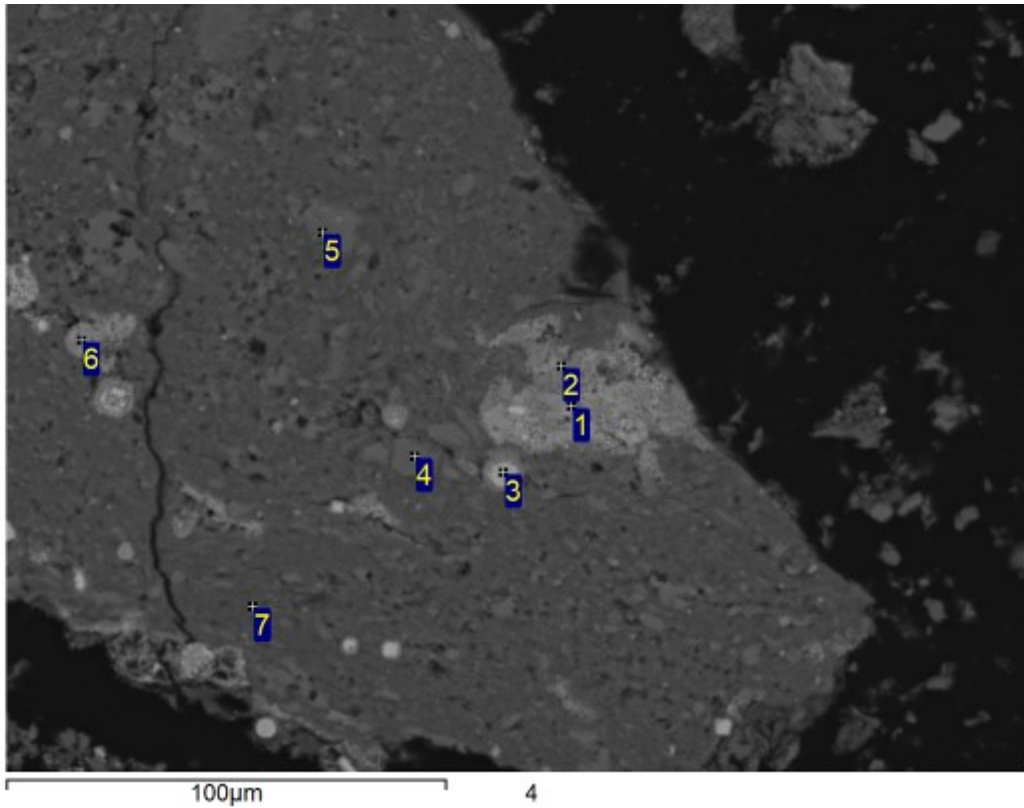


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ca	Ti	Fe	Total	Mineral ID
1	51.9			47.8		0.3			100.0	Quartz
2	45.4	2.2	8.7	34.8	6.0		0.6	2.3	100.0	Mica/K-Feldspar mixture
3	42.0	3.2	7.9	39.8	1.3	0.5	0.5	4.8	100.0	Mica/K-Feldspar mixture
4	44.9	0.6	9.0	32.7	12.8				100.0	K-Feldspar
5	45.2		9.5	32.0	13.4				100.0	K-Feldspar
6	51.0			49.0					100.0	Quartz

All results in weight%

Sample Notes:
S-7677_6_DPT03AP3

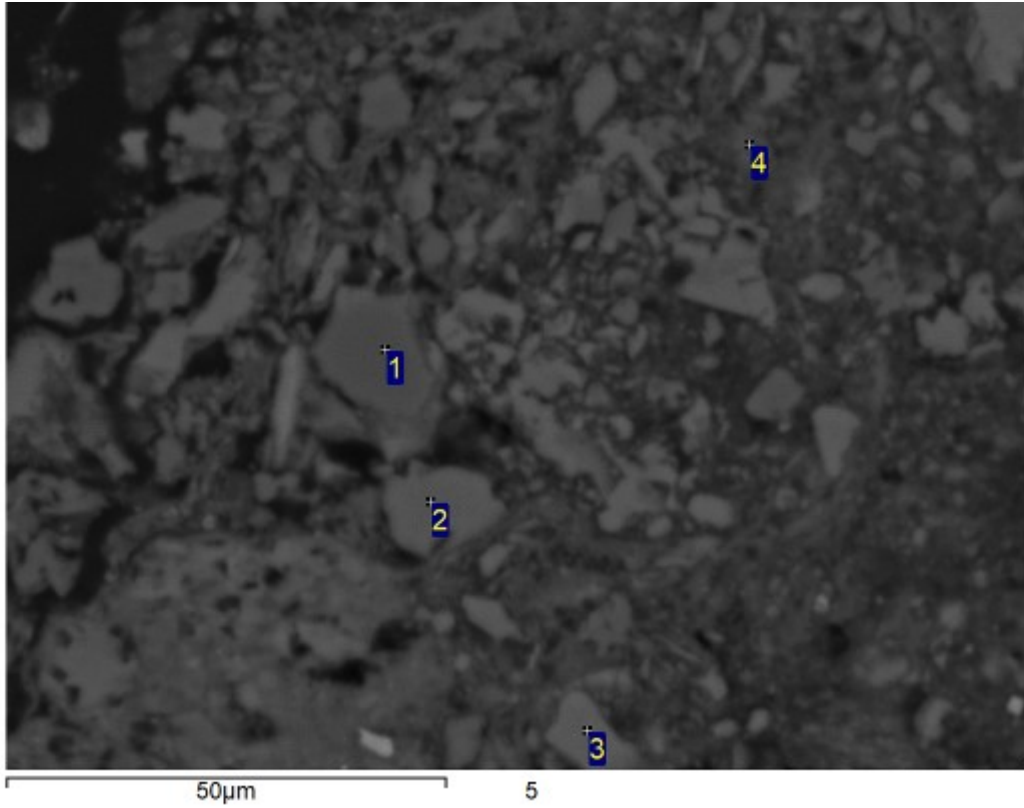


Processing option : All elements analysed (Normalised)

Spectrum	O	F	Na	Mg	Al	Si	P	K	Ca	Fe	Total	Mineral ID
1	45.0				5.6	19.7		7.4	0.6	21.5	100.0	Fe-Oxide/K-Feldspar mixture
2	37.0			6.2	2.8	12.8	0.5		1.3	39.5	100.0	Fe-Oxide/Clay mixture
3	35.4			1.1	0.9	4.8			1.1	56.7	100.0	Fe-Oxide/Oxyhydroxide
4	48.5			0.7	8.3	29.8		11.3	0.8	0.5	100.0	K-Feldspar
5	45.9		0.9	0.3	9.4	31.7		11.4		0.4	100.0	K-Feldspar
6	30.7			0.9	2.0	8.0	0.7	0.5	1.4	55.8	100.0	Fe-Oxide/Kaolinite mixture
7	48.6	1.9		8.9	6.1	27.7		3.8	0.4	2.7	100.0	Silicate mixture/Mica

All results in weight%

Sample Notes:
S-7677_6_DPT03AP3

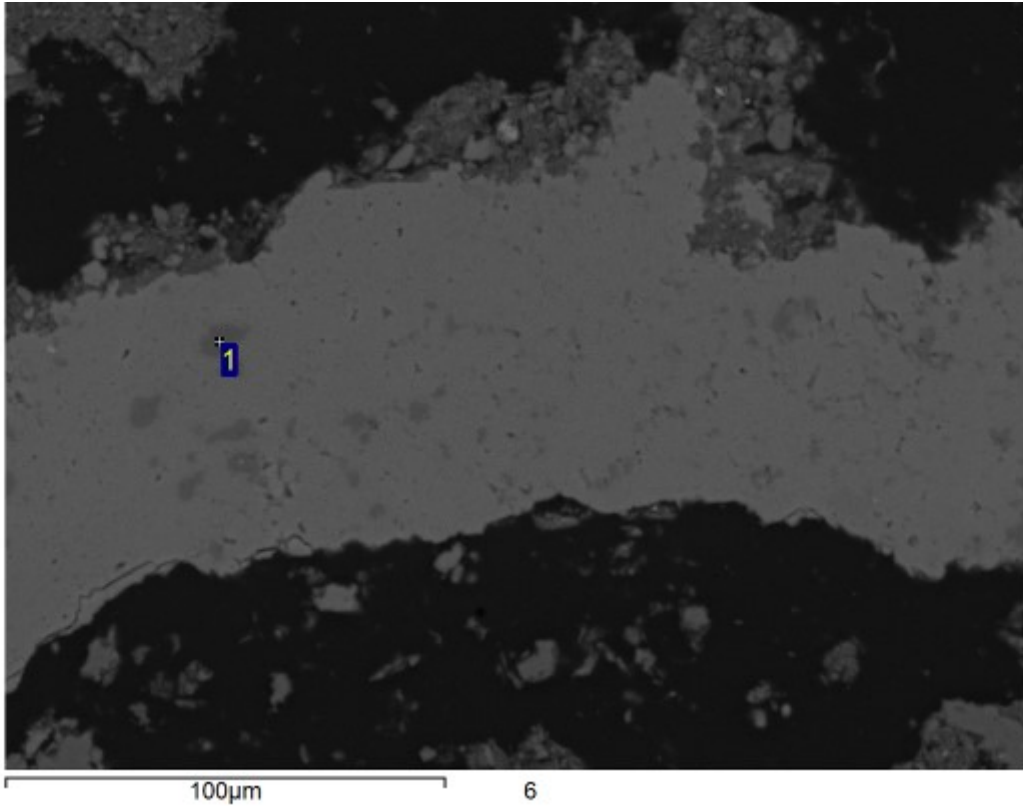


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Fe	Total	Mineral ID
1	51.6			48.4			100.0	Quartz
2	44.3		9.4	32.4	13.9		100.0	K-Feldspar
3	47.8	11.5	10.8	15.0		14.9	100.0	Chlorite
4	44.5	1.8	3.5	46.5	1.9	1.7	100.0	Quartz

All results in weight%

Sample Notes:
S-7677_6_DPT03AP3

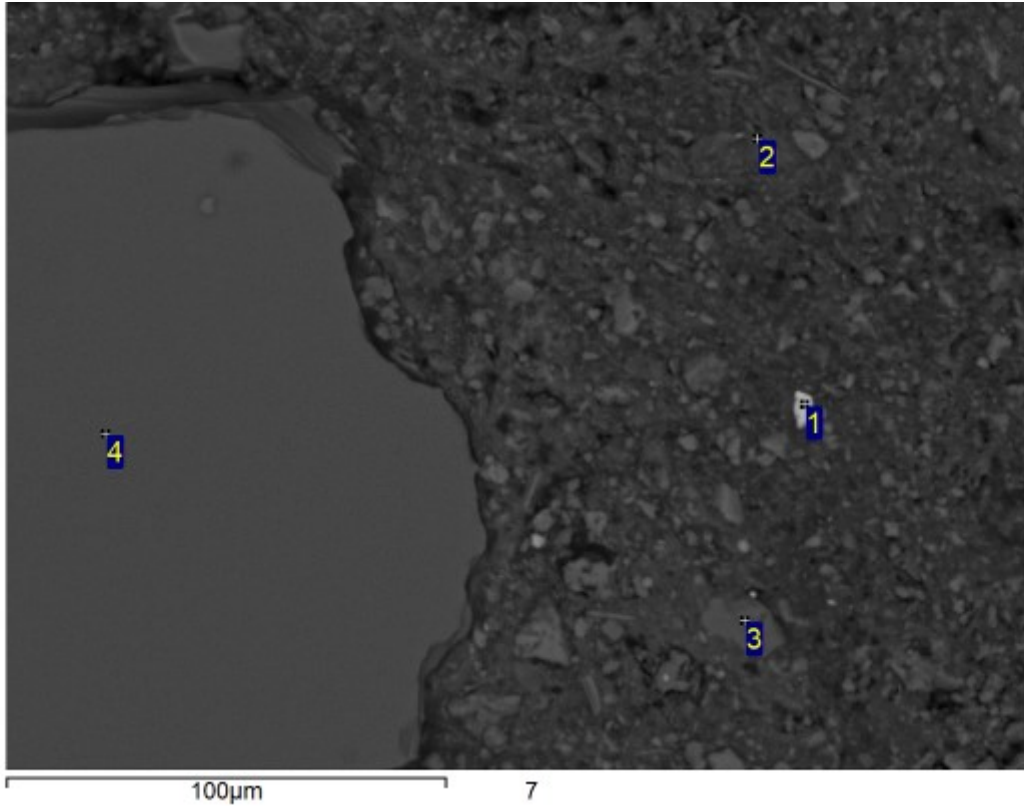


Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Ca	Total	Mineral ID
1	51.5	47.9	0.7	100.0	Quartz

All results in weight%

Sample Notes:
S-7677_6_DPT03AP3

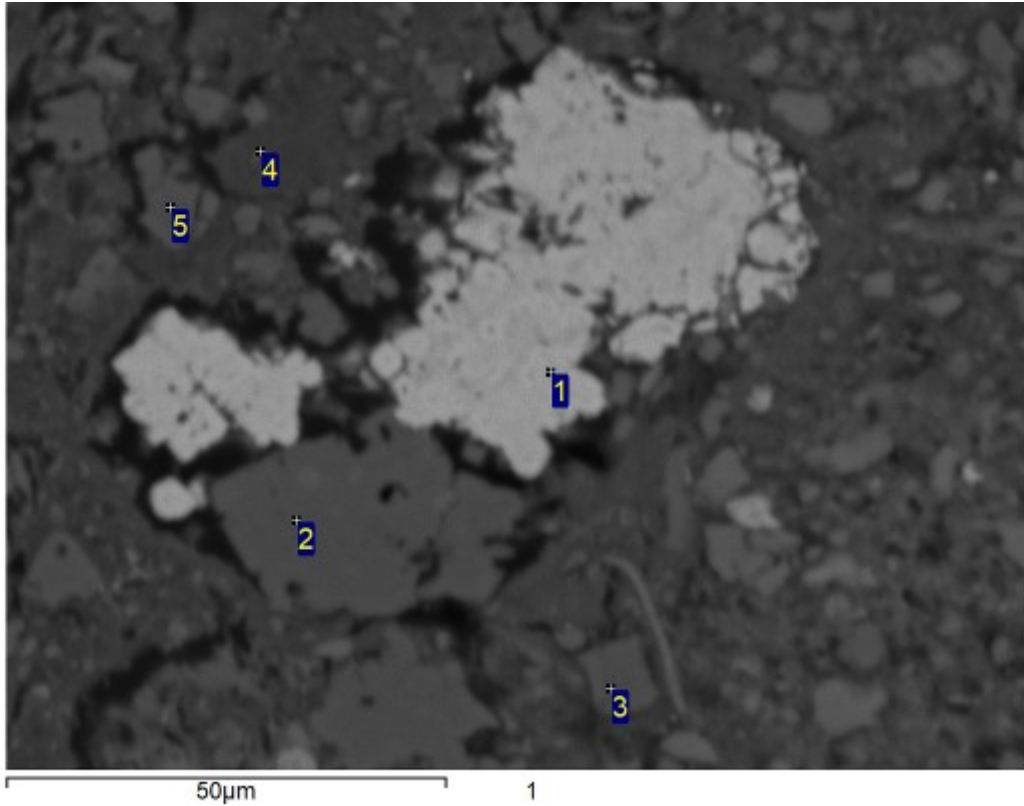


Processing option : All elements analysed (Normalised)

Spectrum	O	F	Mg	Al	Si	K	Ca	Ti	Fe	Zr	Total	Mineral ID
1	41.5			0.7	14.2		0.3		0.6	42.7	100.0	Zircon
2	47.6	2.6	5.7	11.1	26.1	2.8		1.0	3.1		100.0	Mica
3	52.8				47.2						100.0	Quartz
4	51.2				48.8						100.0	Quartz

All results in weight%

Sample Notes:
S-7677_7_DPT02AP3

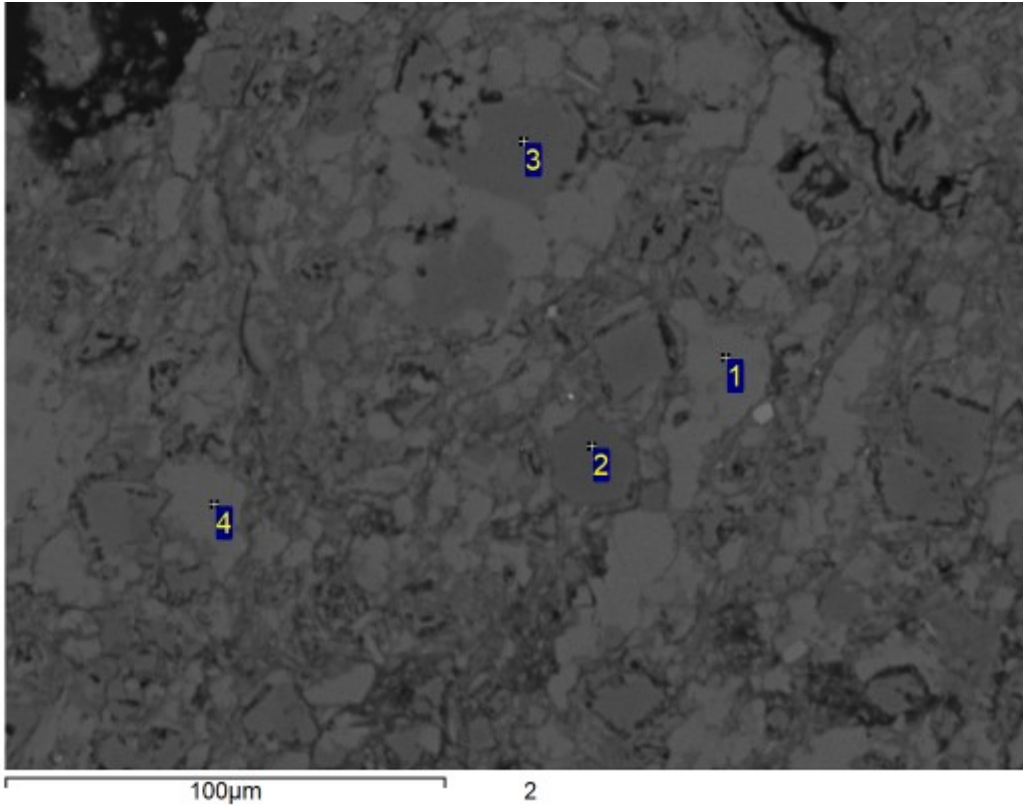


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	S	K	Ca	Ti	Fe	Total	Mineral ID
1	37.0		0.5	0.9	0.8			0.4		60.5	100.0	Fe-Oxide/Oxyhydroxide
2	52.0			46.9				0.7		0.4	100.0	Quartz
3	52.3		0.6	46.4						0.6	100.0	Quartz
4	44.4	1.4	14.7	28.1		1.3	2.1	0.4	0.4	7.0	100.0	Chlorite?
5	51.1	0.4		48.5							100.0	Quartz

All results in weight%

Sample Notes:
S-7677_7_DPT02AP3

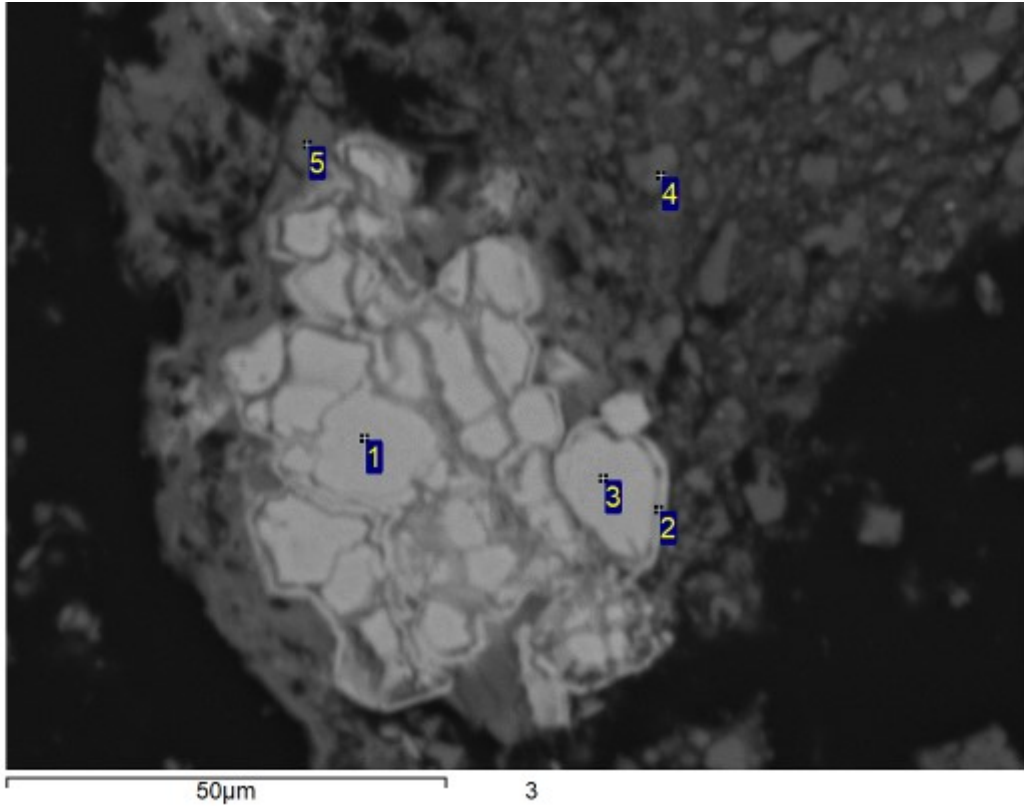


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Si	Ca	Total	Mineral ID
1	52.9	0.7		46.4	100.0	Calcite
2	51.9		47.9	0.2	100.0	Quartz
3	56.9	13.8	0.4	28.9	100.0	Dolomite
4	55.1	0.6		44.2	100.0	Calcite

All results in weight%

Sample Notes:
S-7677_7_DPT02AP3

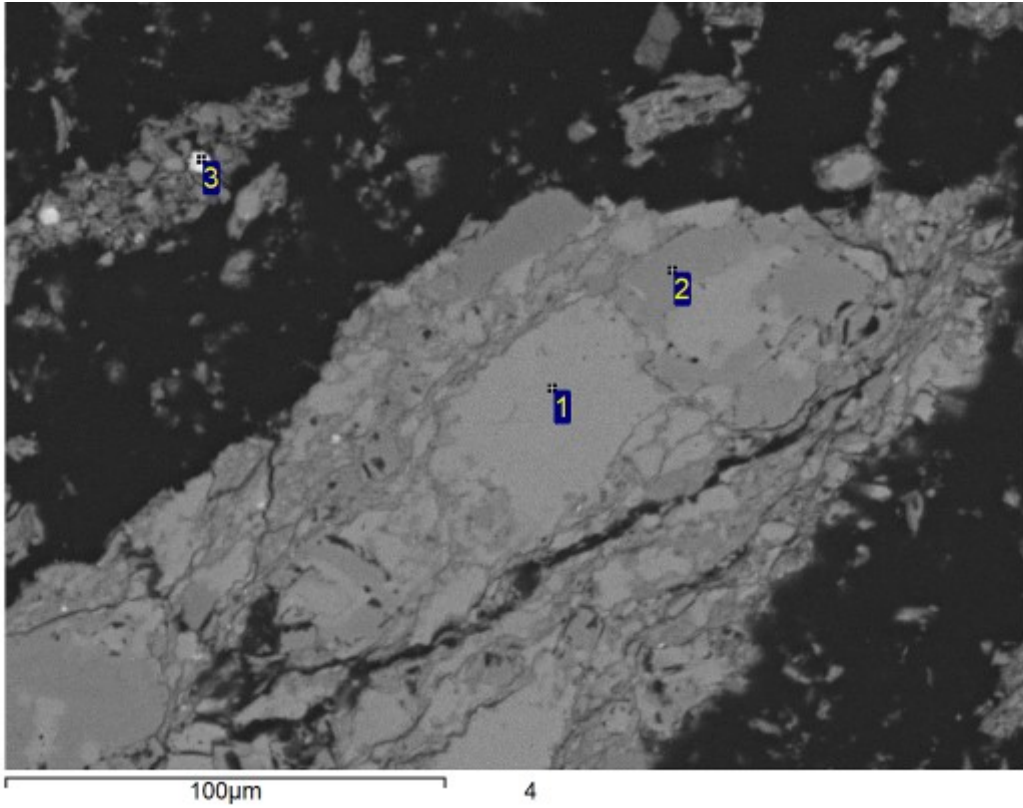


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ca	Fe	Total	Mineral ID
1	37.2			1.6	0.4		0.4	60.3	100.0	Fe-Oxide/Oxyhydroxide
2	40.4	0.8	0.6	5.6	0.5		1.0	51.2	100.0	Fe-Oxide/Oxyhydroxide
3	37.7			1.5	0.4		0.4	60.0	100.0	Fe-Oxide/Oxyhydroxide
4	45.4	0.7	8.7	32.5		11.8		0.9	100.0	K-Feldspar
5	45.7	0.6	8.6	31.0		11.5		2.5	100.0	K-Feldspar

All results in weight%

Sample Notes:
S-7677_7_DPT02AP3

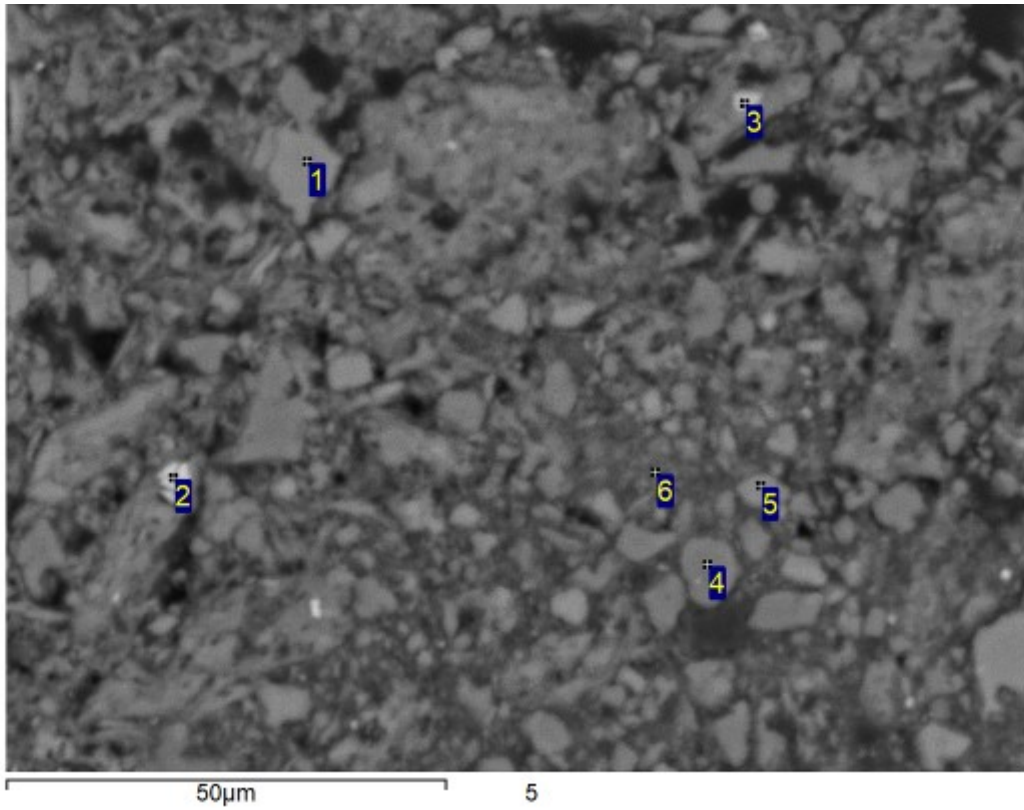


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	Ca	Fe	Total	Mineral ID
1	53.3	1.5		0.9		44.3		100.0	Calcite
2	56.2	13.7				28.8	1.3	100.0	Dolomite
3	38.8		1.7	5.9	1.0	0.4	52.2	100.0	Fe-Oxide/Oxyhydroxide

All results in weight%

Sample Notes:
S-7677_7_DPT02AP3

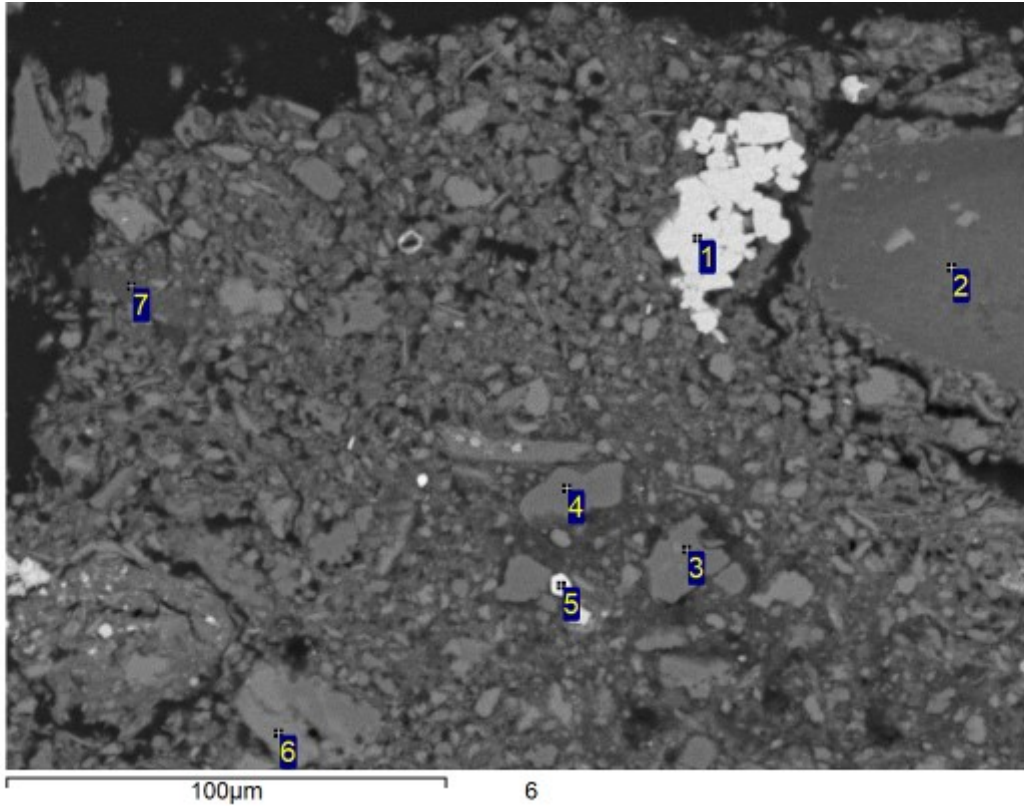


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	Cl	K	Ca	Ti	Fe	Total	Mineral ID
1	46.6			9.6	31.5		12.3				100.0	K-Feldspar
2	47.8		4.1	6.8	32.0	0.5	4.8	1.3		2.9	100.0	Clay/Mica mixture
3	43.2		4.7	5.1	39.7		2.5	0.8		4.0	100.0	Clay/Mica mixture
4	30.7		4.8	4.4	51.5		4.0	0.9		3.7	100.0	Clay/Mica mixture
5	44.6		7.6	5.4	34.3		2.1	0.7		5.4	100.0	Clay/Mica mixture
6	43.0	3.6	3.6	8.4	33.4		4.1		0.5	3.3	100.0	Clay/Mica mixture

All results in weight%

Sample Notes:
S-7677_7_DPT02AP3

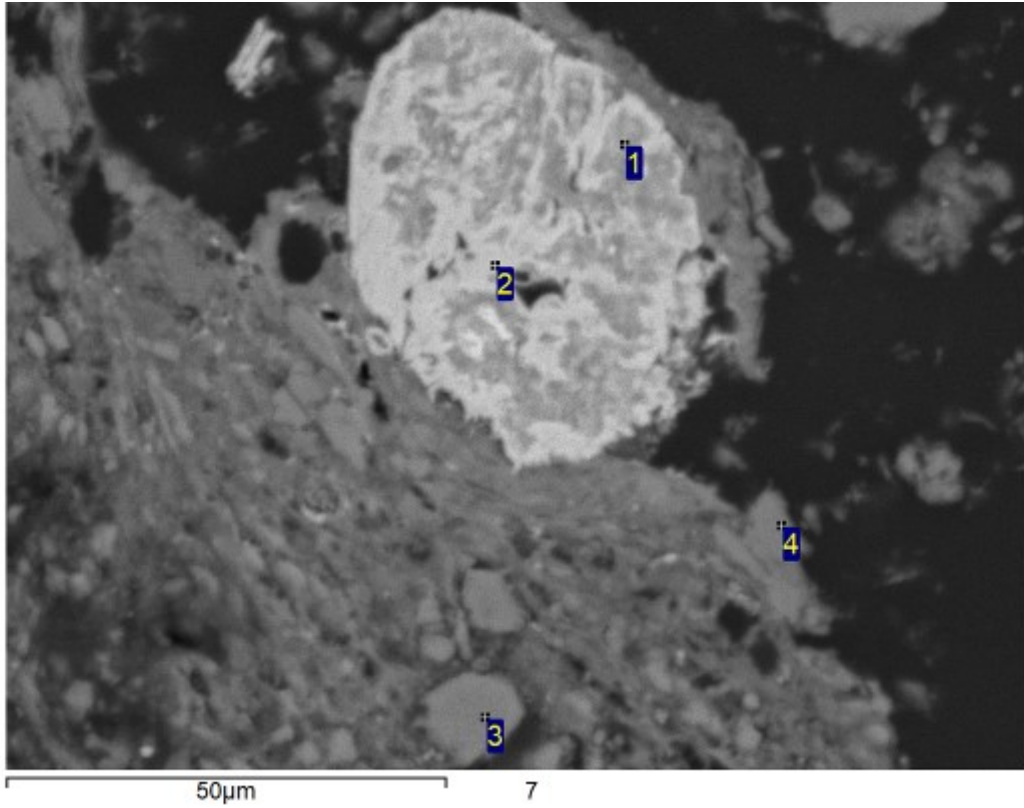


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ca	Ti	Fe	Total	Mineral ID
1	36.1			1.4					62.6	100.0	Fe-Oxide/Oxyhydroxide
2	45.2		16.1	28.1		1.5	0.6	0.6	7.9	100.0	Fe-Oxide/Oxyhydroxide /Kaolinite mixture
3	56.7			24.4			18.8			100.0	Wollastonite
4	52.0			48.0						100.0	Quartz
5				0.6	54.4				44.9	100.0	Pyrite
6	45.4		9.3	32.1		13.2				100.0	K-Feldspar
7	41.5	1.5	13.4	33.1		1.5	0.6		8.3	100.0	Fe-Oxide/Oxyhydroxide /Kaolinite mixture

All results in weight%

Sample Notes:
S-7677_7_DPT02AP3

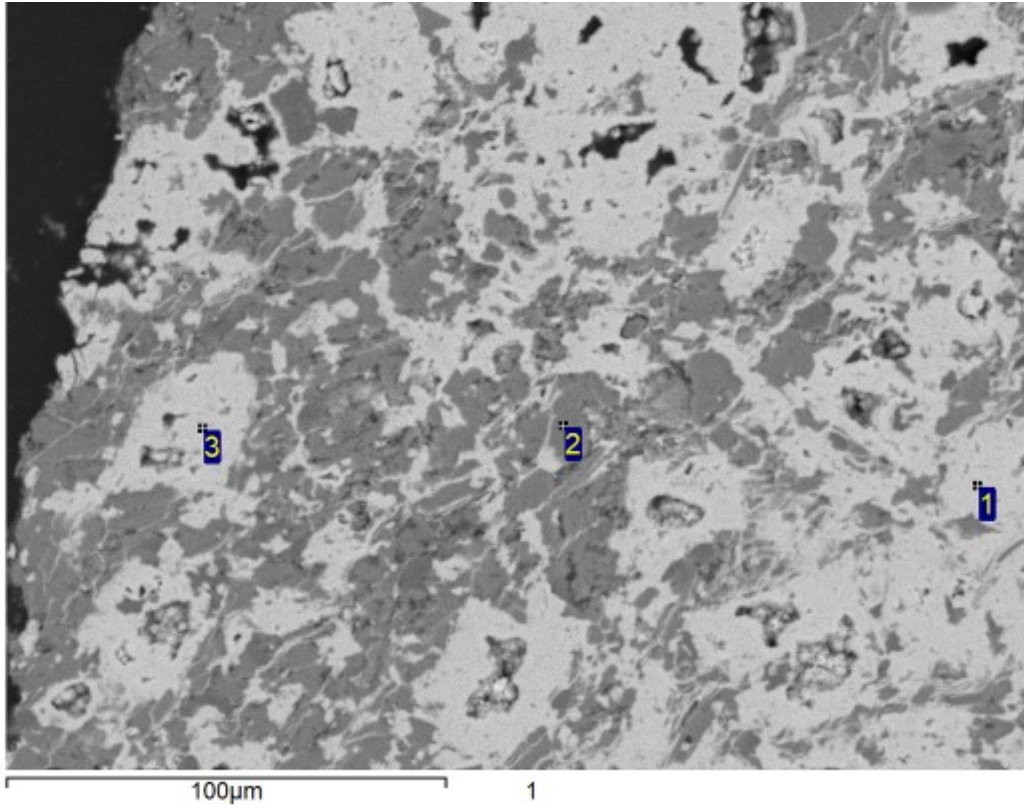


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	K	Ca	Fe	Total	Mineral ID
1	34.5	1.7	2.9	2.2		1.4	57.4	100.0	Fe-Oxide/Oxyhydroxide
2	41.7	2.2	2.4	1.1		0.4	52.1	100.0	Fe-Oxide/Oxyhydroxide
3	45.0	9.6	32.0		13.4			100.0	K-Feldspar
4	46.4	9.4	31.4		12.8			100.0	K-Feldspar

All results in weight%

Sample Notes:
S-7677_8_DPT04AP3

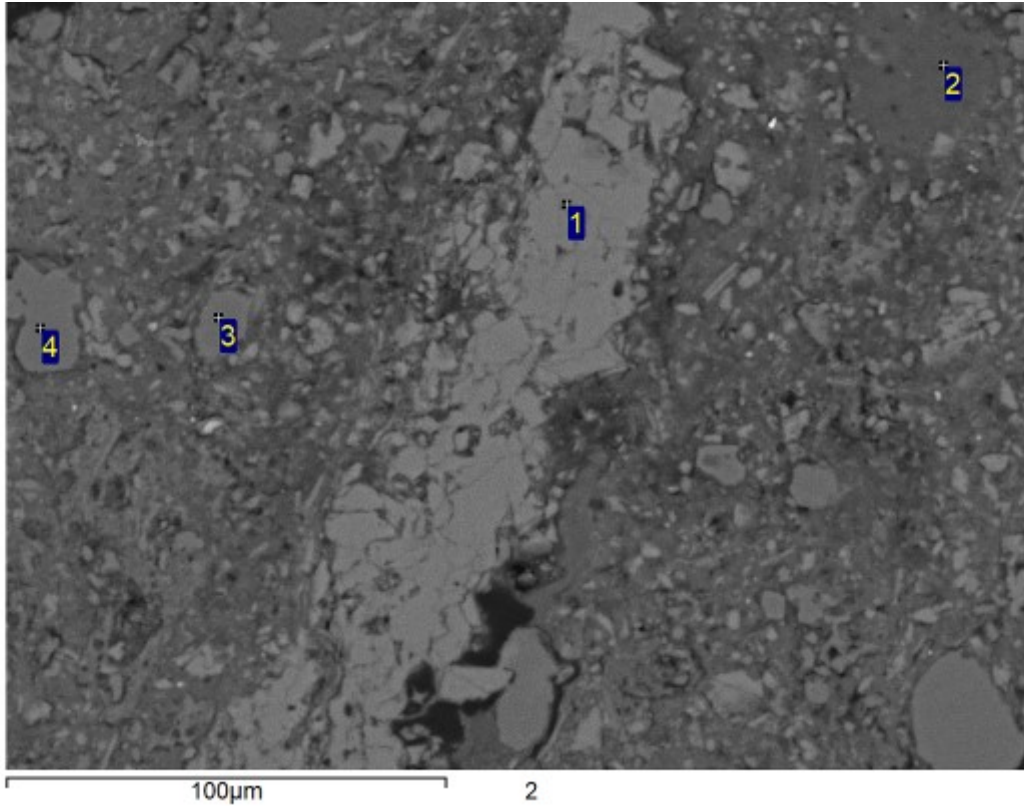


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	K	Fe	Total	Mineral ID
1	41.0		3.3	0.6		55.1	100.0	Fe-Oxide/Oxyhydroxide
2	46.6	8.6	30.7		13.0	1.1	100.0	K-Feldspar
3	40.6	1.1	3.0	0.9		54.4	100.0	Fe-Oxide/Oxyhydroxide

All results in weight%

Sample Notes:
S-7677_8_DPT04AP3

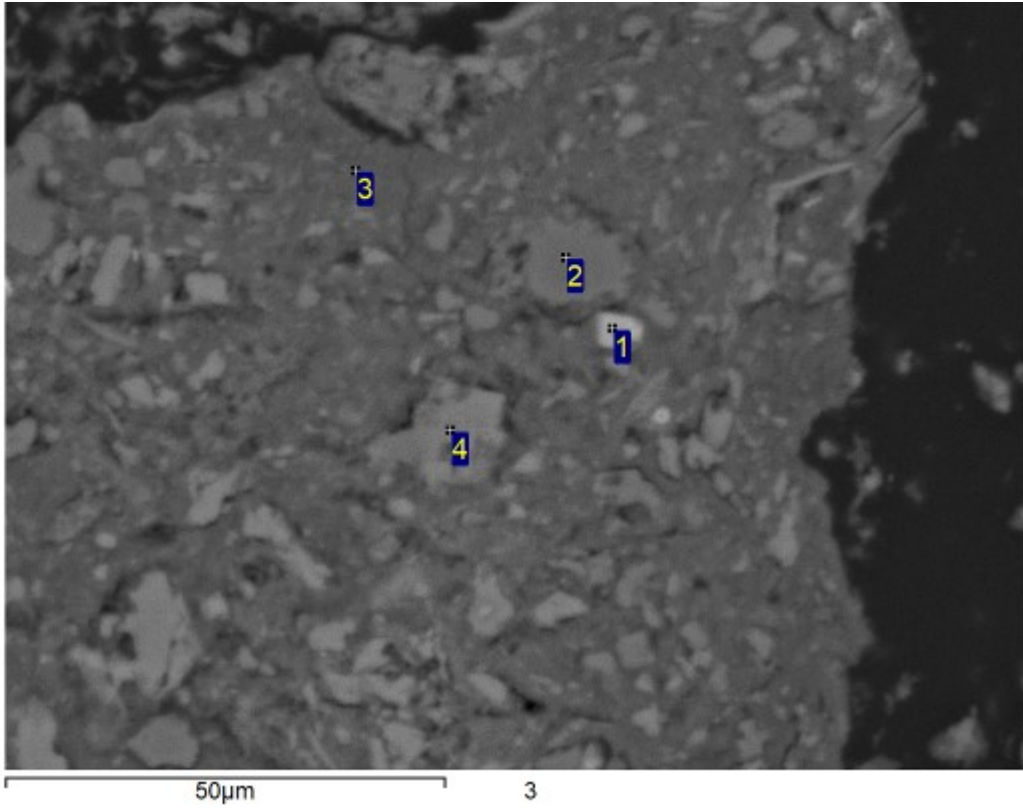


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Fe	Total	Mineral ID
1	45.7		9.1	32.2	13.0		100.0	K-Feldspar
2	44.0	1.0	18.1	26.6	1.2	9.0	100.0	Fe-Oxide/Kaolinite mixture
3	51.5			48.5			100.0	Quartz
4	52.0		0.5	46.3	1.1		100.0	Quartz

All results in weight%

Sample Notes:
S-7677_8_DPT04AP3

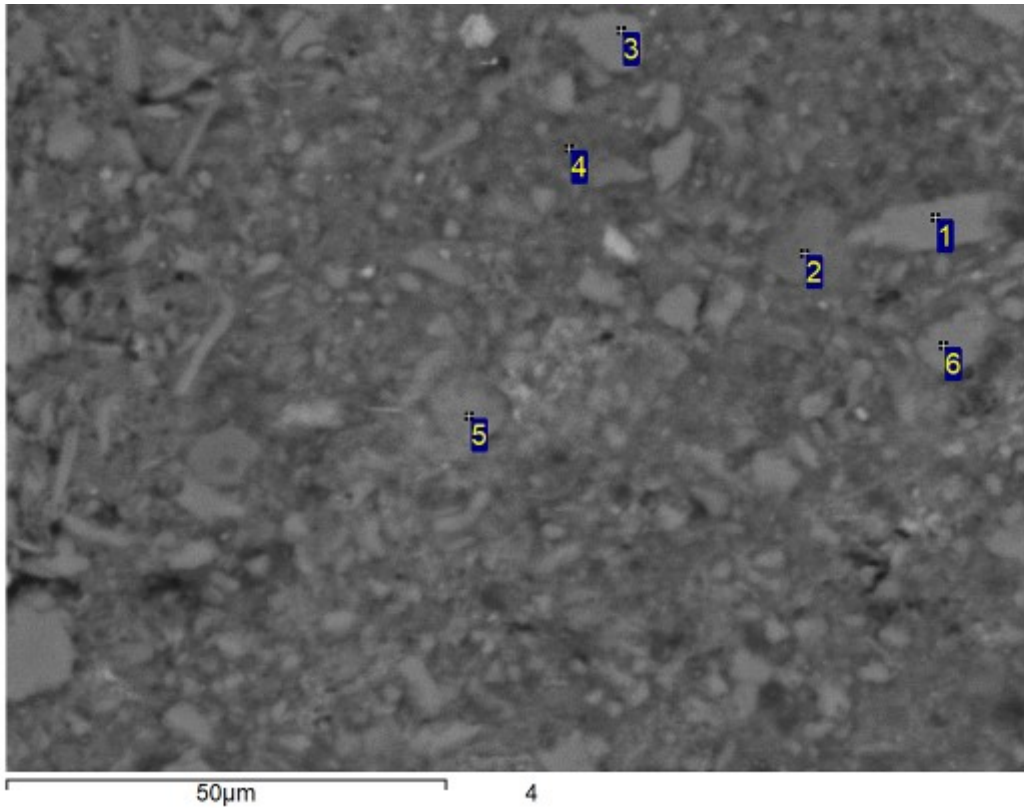


Processing option : All elements analysed (Normalised)

Spectrum	O	F	Mg	Al	Si	P	K	Ca	Ti	Fe	Total	Mineral ID
1	42.7	6.8		0.7	1.0	16.1		32.8			100.0	Apatite
2	52.2				47.8						100.0	Quartz
3	45.9		1.0	12.7	29.5		6.1		0.6	4.2	100.0	Mica
4	44.8			7.8	36.8		10.5				100.0	K-Feldspar

All results in weight%

Sample Notes:
S-7677_8_DPT04AP3

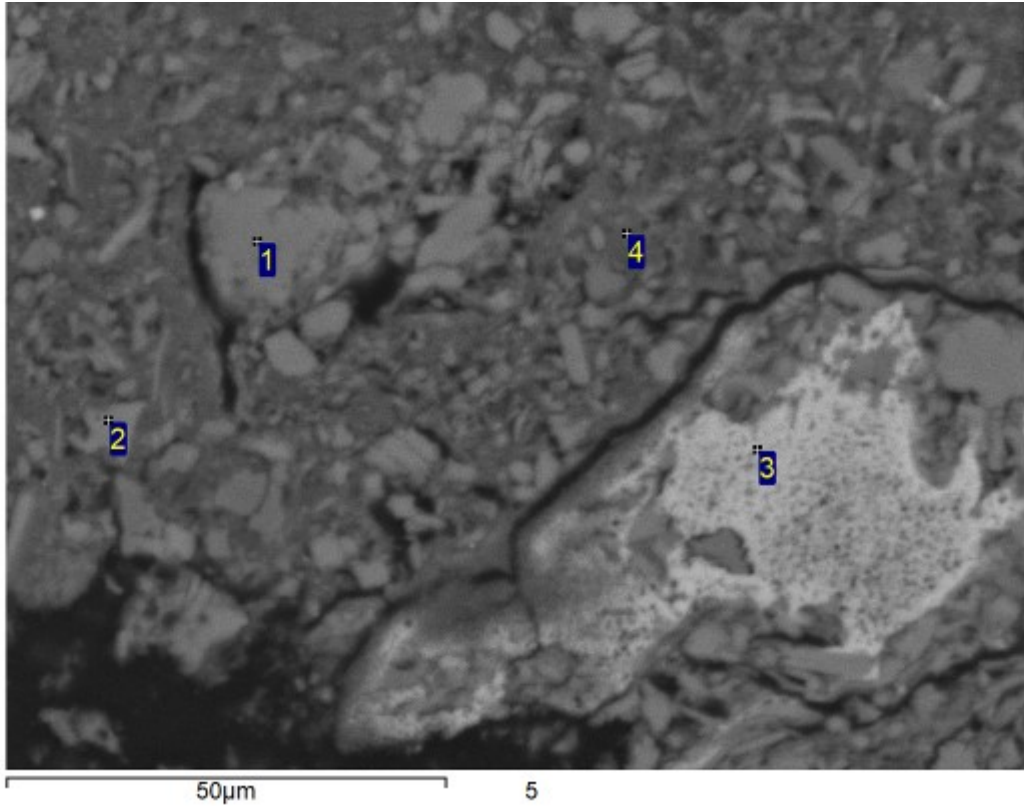


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ti	Fe	Total	Mineral ID
1	47.9		9.2	30.3		12.0		0.6	100.0	K-Feldspar
2	43.4	1.2	11.1	24.8		6.0	0.6	12.8	100.0	Fe-Oxide/K-Feldspar mixture
3	46.6		8.0	32.1		8.4		4.9	100.0	Mica
4	38.6	1.2	8.6	25.5		5.3	1.6	19.2	100.0	Fe-Oxide/K-Feldspar mixture
5	41.1	4.2	8.0	15.8	0.7	2.4	1.2	26.5	100.0	Fe-Oxide/K-Feldspar mixture
6	44.6		8.0	22.8		5.6	0.9	18.1	100.0	Fe-Oxide/K-Feldspar mixture

All results in weight%

Sample Notes:
S-7677_8_DPT04AP3

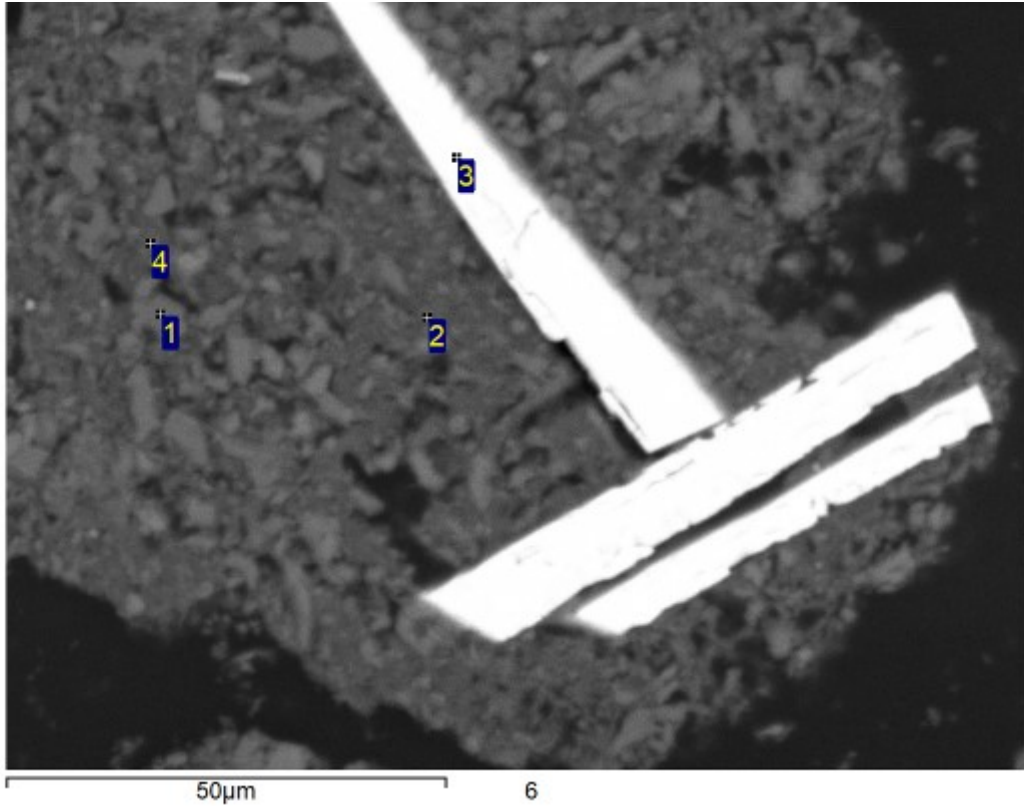


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	K	Ca	Fe	Total	Mineral ID
1	44.8			9.3	32.7		13.3			100.0	K-Feldspar
2	47.6	1.5		9.6	30.9		10.5			100.0	K-Feldspar
3	39.4		0.6	3.9	4.3	1.2		0.4	50.1	100.0	Fe-Oxide/Oxyhydroxide
4	42.2		2.6	13.9	30.1		3.8		7.4	100.0	Mica?

All results in weight%

Sample Notes:
S-7677_8_DPT04AP3

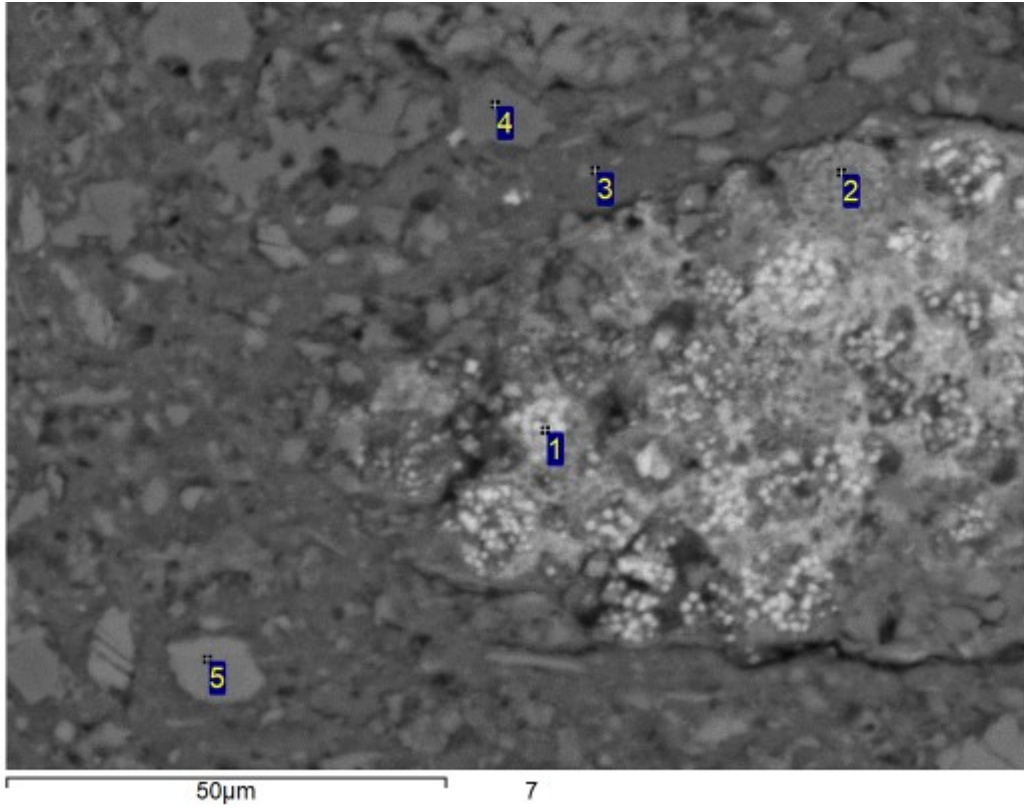


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Fe	Sr	Ba	Total	Mineral ID
1	52.6			47.4						100.0	Quartz
2	46.1	1.2	11.9	31.4		5.7	3.6			100.0	Muscovite
3	25.7				14.5			2.0	57.9	100.0	Barite
4	43.3	1.0	9.8	38.4		2.1	5.4			100.0	Muscovite/Kaolinite

All results in weight%

Sample Notes:
S-7677_8_DPT04AP3



Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ca	Fe	Total	Mineral ID
1	35.3		1.2	2.1	1.1			60.2	100.0	Fe-Oxide/Oxyhydroxide
2	32.3		2.8	12.0	1.9		1.4	49.7	100.0	Fe-Oxide/Kaolinite mixture
3	44.8	1.2	13.2	29.6		3.8		7.3	100.0	Fe-Oxide/K-Feldspar mixture
4	54.0			45.5				0.5	100.0	Quartz
5	46.0		9.4	31.9		12.7			100.0	K-Feldspar

All results in weight%

ANALYTICAL REPORT

Eurofins TestAmerica, Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

Laboratory Job ID: 140-22793-2
Client Project/Site: S-7677 SiREMNA

For:
Sirem, div of Geosyntec Consultants
130 Stone Rd West
Guelph, Ontario N1G 3Z2

Attn: Kela Ashworth



Authorized for release by:
7/14/2021 4:38:12 PM

Ryan Henry, Project Manager I
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-2

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-2

Job ID: 140-22793-2

Laboratory: Eurofins TestAmerica, Knoxville

Narrative

Job Narrative 140-22793-2

Receipt

The samples were received on 4/22/2021 at 10:30am and arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 9.6° C.

Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: S-7677_5_DPT01AP3 (140-22793-4), S-7677_6_DPT03AP3 (140-22793-5) and S-7677_7_DPT02AP3 (140-22793-6). 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:

$$\text{Result, } \mu\text{g/g or mg/Kg, dry weight} = (C \times V \times V1 \times D) / (W \times S \times V2)$$

Where:

C = Concentration from instrument readout, $\mu\text{g/mL}$

V = Final volume of digestate, mL

D = Instrument dilution factor

V1 = Total volume of leachate, mL

Case Narrative

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-2

Job ID: 140-22793-2 (Continued)

Laboratory: Eurofins TestAmerica, Knoxville (Continued)

V2 = Volume of leachate digested, mL
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.

Method 6010B: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following samples: S-7677_5_DPT01AP3 (140-22793-4) and S-7677_7_DPT02AP3 (140-22793-6).

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: 140-22793-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
140-22793-4	S-7677_5_DPT01AP3	Solid	04/20/21 00:00	04/22/21 10:30	
140-22793-5	S-7677_6_DPT03AP3	Solid	04/20/21 00:00	04/22/21 10:30	
140-22793-6	S-7677_7_DPT02AP3	Solid	04/20/21 00:00	04/22/21 10:30	

1

2

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Client Sample Results

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-2

Client Sample ID: S-7677_5_DPT01AP3

Lab Sample ID: 140-22793-4

Date Collected: 04/20/21 00:00

Matrix: Solid

Date Received: 04/22/21 10:30

Percent Solids: 69.1

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	ND		14	0.87	mg/Kg	☼	04/29/21 08:00	05/05/21 14:08	4
Molybdenum	ND		12	0.47	mg/Kg	☼	04/29/21 08:00	05/05/21 14:08	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	ND		11	0.65	mg/Kg	☼	04/30/21 08:00	05/05/21 15:31	3
Molybdenum	ND		8.7	0.36	mg/Kg	☼	04/30/21 08:00	05/05/21 15:31	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.58	J	3.6	0.22	mg/Kg	☼	05/03/21 08:00	05/05/21 17:05	1
Molybdenum	ND		2.9	0.12	mg/Kg	☼	05/03/21 08:00	05/05/21 17:05	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	6.4		3.6	0.22	mg/Kg	☼	05/04/21 08:00	05/10/21 15:16	1
Molybdenum	ND		2.9	0.12	mg/Kg	☼	05/04/21 08:00	05/10/21 15:16	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	ND		54	3.2	mg/Kg	☼	05/06/21 08:00	05/10/21 16:40	5
Molybdenum	ND		43	1.8	mg/Kg	☼	05/06/21 08:00	05/10/21 16:40	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	11		3.6	0.22	mg/Kg	☼	05/06/21 08:00	05/10/21 18:14	1
Molybdenum	ND		2.9	0.14	mg/Kg	☼	05/06/21 08:00	05/10/21 18:14	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	24		3.6	0.22	mg/Kg	☼	05/10/21 08:00	05/11/21 15:34	1
Molybdenum	ND		2.9	0.12	mg/Kg	☼	05/10/21 08:00	05/11/21 15:34	1

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	42		2.5	0.15	mg/Kg			05/13/21 10:05	1
Molybdenum	ND		2.0	0.082	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
Lithium	58		18	1.1	mg/Kg	☼	04/27/21 08:00	05/11/21 19:49	5
Molybdenum	ND		14	0.59	mg/Kg	☼	04/27/21 08:00	05/11/21 19:49	5

Client Sample Results

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-2

Client Sample ID: S-7677_6_DPT03AP3

Lab Sample ID: 140-22793-5

Date Collected: 04/20/21 00:00

Matrix: Solid

Date Received: 04/22/21 10:30

Percent Solids: 65.9

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	ND		15	0.91	mg/Kg	☼	04/29/21 08:00	05/05/21 14:12	4
Molybdenum	ND		12	0.50	mg/Kg	☼	04/29/21 08:00	05/05/21 14:12	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.88	J	11	0.68	mg/Kg	☼	04/30/21 08:00	05/05/21 15:36	3
Molybdenum	ND		9.1	0.37	mg/Kg	☼	04/30/21 08:00	05/05/21 15:36	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.70	J	3.8	0.23	mg/Kg	☼	05/03/21 08:00	05/05/21 17:10	1
Molybdenum	0.14	J	3.0	0.12	mg/Kg	☼	05/03/21 08:00	05/05/21 17:10	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	24		3.8	0.23	mg/Kg	☼	05/04/21 08:00	05/10/21 15:21	1
Molybdenum	ND		3.0	0.12	mg/Kg	☼	05/04/21 08:00	05/10/21 15:21	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	6.6	J	57	3.3	mg/Kg	☼	05/06/21 08:00	05/10/21 16:45	5
Molybdenum	ND		46	1.9	mg/Kg	☼	05/06/21 08:00	05/10/21 16:45	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	230		3.8	0.23	mg/Kg	☼	05/06/21 08:00	05/10/21 18:19	1
Molybdenum	ND		3.0	0.15	mg/Kg	☼	05/06/21 08:00	05/10/21 18:19	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	41		3.8	0.23	mg/Kg	☼	05/10/21 08:00	05/11/21 15:39	1
Molybdenum	ND		3.0	0.12	mg/Kg	☼	05/10/21 08:00	05/11/21 15:39	1

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	300		2.5	0.15	mg/Kg			05/13/21 10:05	1
Molybdenum	0.14	J	2.0	0.082	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
Lithium	280		3.8	0.23	mg/Kg	☼	04/27/21 08:00	05/11/21 16:49	1
Molybdenum	0.31	J	3.0	0.12	mg/Kg	☼	04/27/21 08:00	05/11/21 16:49	1

Client Sample Results

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-2

Client Sample ID: S-7677_7_DPT02AP3

Lab Sample ID: 140-22793-6

Date Collected: 04/20/21 00:00

Matrix: Solid

Date Received: 04/22/21 10:30

Percent Solids: 67.0

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	ND		15	0.90	mg/Kg	☼	04/29/21 08:00	05/05/21 14:17	4
Molybdenum	0.73	J	12	0.49	mg/Kg	☼	04/29/21 08:00	05/05/21 14:17	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.93	J	11	0.67	mg/Kg	☼	04/30/21 08:00	05/05/21 15:41	3
Molybdenum	ND		9.0	0.37	mg/Kg	☼	04/30/21 08:00	05/05/21 15:41	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.55	J	3.7	0.22	mg/Kg	☼	05/03/21 08:00	05/05/21 17:15	1
Molybdenum	1.3	J	3.0	0.12	mg/Kg	☼	05/03/21 08:00	05/05/21 17:15	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	17		3.7	0.22	mg/Kg	☼	05/04/21 08:00	05/10/21 15:26	1
Molybdenum	0.81	J	3.0	0.12	mg/Kg	☼	05/04/21 08:00	05/10/21 15:26	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	5.6	J	56	3.3	mg/Kg	☼	05/06/21 08:00	05/10/21 16:50	5
Molybdenum	ND		45	1.9	mg/Kg	☼	05/06/21 08:00	05/10/21 16:50	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	170		3.7	0.22	mg/Kg	☼	05/06/21 08:00	05/10/21 18:23	1
Molybdenum	0.19	J	3.0	0.15	mg/Kg	☼	05/06/21 08:00	05/10/21 18:23	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	34		3.7	0.22	mg/Kg	☼	05/10/21 08:00	05/11/21 15:44	1
Molybdenum	ND		3.0	0.12	mg/Kg	☼	05/10/21 08:00	05/11/21 15:44	1

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	230		2.5	0.15	mg/Kg			05/13/21 10:05	1
Molybdenum	3.1		2.0	0.082	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
Lithium	190		7.5	0.45	mg/Kg	☼	04/27/21 08:00	05/11/21 19:38	2
Molybdenum	3.2	J	6.0	0.24	mg/Kg	☼	04/27/21 08:00	05/11/21 19:38	2

Default Detection Limits

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-2

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Prep: 3010A

SEP: Exchangeable

Analyte	RL	MDL	Units
Lithium	2.5	0.15	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Prep: 3010A

SEP: Carbonate

Analyte	RL	MDL	Units
Lithium	2.5	0.15	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Prep: 3010A

SEP: Non-Crystalline

Analyte	RL	MDL	Units
Lithium	2.5	0.15	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Prep: 3010A

SEP: Metal Hydroxide

Analyte	RL	MDL	Units
Lithium	2.5	0.15	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Prep: 3010A

SEP: Organic-Bound

Analyte	RL	MDL	Units
Lithium	7.5	0.44	mg/Kg
Molybdenum	6.0	0.25	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 6

SEP: Acid/Sulfide

Analyte	RL	MDL	Units
Lithium	2.5	0.15	mg/Kg
Molybdenum	2.0	0.099	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Prep: Residual

Analyte	RL	MDL	Units
Lithium	2.5	0.15	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	RL	MDL	Units
Lithium	2.5	0.15	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B - SEP Metals (ICP) - Total

Eurofins TestAmerica, Knoxville

Default Detection Limits

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-2

Method: 6010B - SEP Metals (ICP) - Total

Prep: Total

Analyte	RL	MDL	Units
Lithium	2.5	0.15	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

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QC Association Summary

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-2

Metals

Prep Batch: 49213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Total/NA	Solid	Total	
140-22793-5	S-7677_6_DPT03AP3	Total/NA	Solid	Total	
140-22793-6	S-7677_7_DPT02AP3	Total/NA	Solid	Total	

SEP Batch: 49214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Step 1	Solid	Exchangeable	
140-22793-5	S-7677_6_DPT03AP3	Step 1	Solid	Exchangeable	
140-22793-6	S-7677_7_DPT02AP3	Step 1	Solid	Exchangeable	

Prep Batch: 49305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Step 1	Solid	3010A	49214
140-22793-5	S-7677_6_DPT03AP3	Step 1	Solid	3010A	49214
140-22793-6	S-7677_7_DPT02AP3	Step 1	Solid	3010A	49214

SEP Batch: 49306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Step 2	Solid	Carbonate	
140-22793-5	S-7677_6_DPT03AP3	Step 2	Solid	Carbonate	
140-22793-6	S-7677_7_DPT02AP3	Step 2	Solid	Carbonate	

Prep Batch: 49358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Step 2	Solid	3010A	49306
140-22793-5	S-7677_6_DPT03AP3	Step 2	Solid	3010A	49306
140-22793-6	S-7677_7_DPT02AP3	Step 2	Solid	3010A	49306

SEP Batch: 49359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Step 3	Solid	Non-Crystalline	
140-22793-5	S-7677_6_DPT03AP3	Step 3	Solid	Non-Crystalline	
140-22793-6	S-7677_7_DPT02AP3	Step 3	Solid	Non-Crystalline	

Prep Batch: 49393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Step 3	Solid	3010A	49359
140-22793-5	S-7677_6_DPT03AP3	Step 3	Solid	3010A	49359
140-22793-6	S-7677_7_DPT02AP3	Step 3	Solid	3010A	49359

SEP Batch: 49394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Step 4	Solid	Metal Hydroxide	
140-22793-5	S-7677_6_DPT03AP3	Step 4	Solid	Metal Hydroxide	
140-22793-6	S-7677_7_DPT02AP3	Step 4	Solid	Metal Hydroxide	

Prep Batch: 49441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Step 4	Solid	3010A	49394
140-22793-5	S-7677_6_DPT03AP3	Step 4	Solid	3010A	49394
140-22793-6	S-7677_7_DPT02AP3	Step 4	Solid	3010A	49394

QC Association Summary

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-2

Metals

SEP Batch: 49442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Step 5	Solid	Organic-Bound	
140-22793-5	S-7677_6_DPT03AP3	Step 5	Solid	Organic-Bound	
140-22793-6	S-7677_7_DPT02AP3	Step 5	Solid	Organic-Bound	

Prep Batch: 49541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Step 5	Solid	3010A	49442
140-22793-5	S-7677_6_DPT03AP3	Step 5	Solid	3010A	49442
140-22793-6	S-7677_7_DPT02AP3	Step 5	Solid	3010A	49442

SEP Batch: 49542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Step 6	Solid	Acid/Sulfide	
140-22793-5	S-7677_6_DPT03AP3	Step 6	Solid	Acid/Sulfide	
140-22793-6	S-7677_7_DPT02AP3	Step 6	Solid	Acid/Sulfide	

Analysis Batch: 49543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Step 1	Solid	6010B SEP	49305
140-22793-4	S-7677_5_DPT01AP3	Step 2	Solid	6010B SEP	49358
140-22793-4	S-7677_5_DPT01AP3	Step 3	Solid	6010B SEP	49393
140-22793-5	S-7677_6_DPT03AP3	Step 1	Solid	6010B SEP	49305
140-22793-5	S-7677_6_DPT03AP3	Step 2	Solid	6010B SEP	49358
140-22793-5	S-7677_6_DPT03AP3	Step 3	Solid	6010B SEP	49393
140-22793-6	S-7677_7_DPT02AP3	Step 1	Solid	6010B SEP	49305
140-22793-6	S-7677_7_DPT02AP3	Step 2	Solid	6010B SEP	49358
140-22793-6	S-7677_7_DPT02AP3	Step 3	Solid	6010B SEP	49393

Prep Batch: 49611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Step 7	Solid	Residual	
140-22793-5	S-7677_6_DPT03AP3	Step 7	Solid	Residual	
140-22793-6	S-7677_7_DPT02AP3	Step 7	Solid	Residual	

Analysis Batch: 49686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Step 4	Solid	6010B SEP	49441
140-22793-4	S-7677_5_DPT01AP3	Step 5	Solid	6010B SEP	49541
140-22793-4	S-7677_5_DPT01AP3	Step 6	Solid	6010B SEP	49542
140-22793-5	S-7677_6_DPT03AP3	Step 4	Solid	6010B SEP	49441
140-22793-5	S-7677_6_DPT03AP3	Step 5	Solid	6010B SEP	49541
140-22793-5	S-7677_6_DPT03AP3	Step 6	Solid	6010B SEP	49542
140-22793-6	S-7677_7_DPT02AP3	Step 4	Solid	6010B SEP	49441
140-22793-6	S-7677_7_DPT02AP3	Step 5	Solid	6010B SEP	49541
140-22793-6	S-7677_7_DPT02AP3	Step 6	Solid	6010B SEP	49542

Analysis Batch: 49736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Step 7	Solid	6010B SEP	49611
140-22793-4	S-7677_5_DPT01AP3	Total/NA	Solid	6010B	49213
140-22793-5	S-7677_6_DPT03AP3	Step 7	Solid	6010B SEP	49611

Eurofins TestAmerica, Knoxville

QC Association Summary

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-2

Metals (Continued)

Analysis Batch: 49736 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-5	S-7677_6_DPT03AP3	Total/NA	Solid	6010B	49213
140-22793-6	S-7677_7_DPT02AP3	Step 7	Solid	6010B SEP	49611
140-22793-6	S-7677_7_DPT02AP3	Total/NA	Solid	6010B	49213

Analysis Batch: 49785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-22793-4	S-7677_5_DPT01AP3	Sum of Steps 1-7	Solid	6010B SEP	
140-22793-5	S-7677_6_DPT03AP3	Sum of Steps 1-7	Solid	6010B SEP	
140-22793-6	S-7677_7_DPT02AP3	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
140-22793-4	S-7677_5_DPT01AP3	Total/NA	Solid	Moisture	
140-22793-5	S-7677_6_DPT03AP3	Total/NA	Solid	Moisture	
140-22793-6	S-7677_7_DPT02AP3	Total/NA	Solid	Moisture	
140-22793-5 DU	S-7677_6_DPT03AP3	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-2

Client Sample ID: S-7677_5_DPT01AP3

Lab Sample ID: 140-22793-4

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_5_DPT01AP3

Lab Sample ID: 140-22793-4

Date Collected: 04/20/21 00:00

Matrix: Solid

Date Received: 04/22/21 10:30

Percent Solids: 69.1

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		5			49736	05/11/21 19:49	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 14:08	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 15:31	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 17:05	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 15:16	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 16:40	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 18:14	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		1			49736	05/11/21 15:34	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-2

Client Sample ID: S-7677_6_DPT03AP3

Lab Sample ID: 140-22793-5

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_6_DPT03AP3

Lab Sample ID: 140-22793-5

Date Collected: 04/20/21 00:00

Matrix: Solid

Date Received: 04/22/21 10:30

Percent Solids: 65.9

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 16:49	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 14:12	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 15:36	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 17:10	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 15:21	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 16:45	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 18:19	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		1			49736	05/11/21 15:39	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-2

Client Sample ID: S-7677_7_DPT02AP3

Lab Sample ID: 140-22793-6

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_7_DPT02AP3

Lab Sample ID: 140-22793-6

Date Collected: 04/20/21 00:00

Matrix: Solid

Date Received: 04/22/21 10:30

Percent Solids: 67.0

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 19:38	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 14:17	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 15:41	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 17:15	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 15:26	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 16:50	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 18:23	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		1			49736	05/11/21 15:44	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-22793-2

Client Sample ID: S-7677_6_DPT03AP3

Lab Sample ID: 140-22793-5 DU

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
Total/NA	Analysis	Moisture		1			49285	04/28/21 07:50	BKD	TAL KNX

Instrument ID: NOEQUIP

Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

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Accreditation/Certification Summary

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-22793-2

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: 140-22793-2

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 P ke, Knoxville, TN 37921, TEL (865)291-3000

Chain of Custody Record

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: _____ of _____ COCs							
SIREM		Email: kashworth@siremlab.com		Lab Contact:		Carrier:		TALS Project #:							
130 Stone Road West		Tel/Fax:		Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below _____ <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Filtered Sample (Y/N)		Perform MS/MSD (Y/N)		Sequential Extraction Procedure					
Guelph, Ontario, N1G 2Z3		519-822-2265													
519-822-2265		FAX (xxx) xxx-xxxx		Project Name: S-7677 SIREMNA		Site:		Job / SDG No.:		Sample Specific Notes:					
P O # 800003206		Sample Date		Sample Time		Sample Type (C=Comp, G=Grab)		Matrix		# of Cont.					
Sample Identification		[Redacted]		20-Apr-21		S		1		X					
						S		1		X		SEP for Cobalt			
						S		1		X		SEP for Cobalt			
				S-7677_5_DPT01AP3				S		1		X		SEP for Cobalt	
				S-7677_6_DPT03AP3				S		1		X		SEP for Lithium & Molybdenum	
				S-7677_7_DPT02AP3				S		1		X		SEP for Lithium & Molybdenum	
<p>NO CUSTODY SEALS RECEIVED AT RT 9.8 / CT 9.4 C BKS 4-22-21 CODING FAX # 773497438746 INT PD</p>															
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)									
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.						<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months									
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						Special Instructions/QC Requirements & Comments:									
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____		Corr'd: _____		Therm ID No.:							
Relinquished by: Kela Ashworth		Company: SIREM		Date/Time: 16:30 21 Apr 21		Received by: [Signature]		Company: ETH KWX		Date/Time: 4-22-21 12:30					
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:					
Relinquished by:		Company:		Date/Time:		Received in Laboratory by:		Company:		Date/Time:					



140-22793 Chain of Custody

Page 21 of 22

7/14/2021



EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken														
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	<div style="border: 1px solid black; padding: 5px;"> <p>Labeling Verified by: _____ Date: _____</p> <p>pH test strip lot number: _____</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Box 16A: pH Preservation</td> <td style="width: 50%; text-align: center;">Box 18A: Residual Chlorine</td> </tr> <tr> <td>Preservative: _____</td> <td></td> </tr> <tr> <td>Lot Number: _____</td> <td></td> </tr> <tr> <td>Exp Date: _____</td> <td></td> </tr> <tr> <td>Analyst: _____</td> <td></td> </tr> <tr> <td>Date: _____</td> <td></td> </tr> <tr> <td>Time: _____</td> <td></td> </tr> </table> </div>	Box 16A: pH Preservation	Box 18A: Residual Chlorine	Preservative: _____		Lot Number: _____		Exp Date: _____		Analyst: _____		Date: _____		Time: _____	
Box 16A: pH Preservation	Box 18A: Residual Chlorine																		
Preservative: _____																			
Lot Number: _____																			
Exp Date: _____																			
Analyst: _____																			
Date: _____																			
Time: _____																			
2. Were ambient air containers received intact?			/	<input type="checkbox"/> Checked in lab															
3. The coolers/containers custody seal if present, is it intact?			/	<input type="checkbox"/> Yes <input type="checkbox"/> NA															
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID : <u>SC70</u> Correction factor: <u>-0.2°C</u>		/		<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt															
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken															
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel															
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received															
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received															
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted															
10. Was the sampler identified on the COC?	/		/	<input type="checkbox"/> Sampler Not Listed on COC															
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete															
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC															
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete															
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete															
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt															
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative															
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only)															
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			/	<input type="checkbox"/> Residual Chlorine															
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust															
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info															
Project #: <u>14006308</u> PM Instructions: <u>NA</u>																			

Sample Receiving Associate: Ryan Daman Date: 4-22-21

QA026R32.doc, 062719



APPENDIX D

Laboratory Analytical and Field Sampling Reports

LABORATORY ANALYTICAL RESULTS

July 2020

July 23, 2020

Kelley Sharpe
ARCADIS - Atlanta
2839 Paces Ferry Rd
STE 900
Atlanta, GA 30339

RE: Project: Plant Hammond-Ash Pond #3
Pace Project No.: 92486806

Dear Kelley Sharpe:

Enclosed are the analytical results for sample(s) received by the laboratory on July 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 - Peachtree Corners, GA

Client provided updated COC on 7/20/20.

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: Jean Brown, Georgia Power
David Duncan, Southern Company
Warren Johnson, ARCADIS - Atlanta
Christine Ridley, Southern Company
Erika Yeager, Southern Company



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Hammond-Ash Pond #3
Pace Project No.: 92486806

Pace Analytical Services Peachtree Corners

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

North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

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SAMPLE SUMMARY

Project: Plant Hammond-Ash Pond #3

Pace Project No.: 92486806

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92486806001	H-SCC NBR	Water	07/17/20 14:15	07/17/20 17:34
92486806002	H-SCC E41	Water	07/17/20 12:30	07/17/20 17:34
92486806003	H-SCC	Water	07/17/20 12:05	07/17/20 17:34

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SAMPLE ANALYTE COUNT

Project: Plant Hammond-Ash Pond #3
Pace Project No.: 92486806

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92486806001	H-SCC NBR	EPA 6020B	CW1	1	PASI-GA
92486806002	H-SCC E41	EPA 6020B	CW1	1	PASI-GA
92486806003	H-SCC	EPA 6020B	CW1	1	PASI-GA

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Hammond-Ash Pond #3

Pace Project No.: 92486806

Sample: H-SCC NBR		Lab ID: 92486806001		Collected: 07/17/20 14:15	Received: 07/17/20 17:34	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Molybdenum	ND	mg/L	0.010	1	07/20/20 17:34	07/21/20 15:16	7439-98-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Hammond-Ash Pond #3
 Pace Project No.: 92486806

Sample: H-SCC E41		Lab ID: 92486806002		Collected: 07/17/20 12:30	Received: 07/17/20 17:34	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Molybdenum	ND	mg/L	0.010	1	07/20/20 17:34	07/21/20 15:39	7439-98-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Hammond-Ash Pond #3

Pace Project No.: 92486806

Sample: H-SCC		Lab ID: 92486806003		Collected: 07/17/20 12:05	Received: 07/17/20 17:34	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Molybdenum	ND	mg/L	0.010	1	07/20/20 17:34	07/21/20 15:45	7439-98-7	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Hammond-Ash Pond #3

Pace Project No.: 92486806

QC Batch: 554508

Analysis Method: EPA 6020B

QC Batch Method: EPA 3005A

Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92486806001, 92486806002, 92486806003

METHOD BLANK: 2945842

Matrix: Water

Associated Lab Samples: 92486806001, 92486806002, 92486806003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Molybdenum	mg/L	ND	0.010	07/21/20 15:05	

LABORATORY CONTROL SAMPLE: 2945843

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Molybdenum	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2945844 2945845

Parameter	Units	2945844		2945845		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92486806001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.097	100	97	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

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QUALIFIERS

Project: Plant Hammond-Ash Pond #3

Pace Project No.: 92486806

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Hammond-Ash Pond #3

Pace Project No.: 92486806

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92486806001	H-SCC NBR	EPA 3005A	554508	EPA 6020B	554522
92486806002	H-SCC E41	EPA 3005A	554508	EPA 6020B	554522
92486806003	H-SCC	EPA 3005A	554508	EPA 6020B	554522

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: ARCADIS - Atlanta Address: 2638 Peach Ferry Rd Atlanta, GA 30338 Email: Warren Johnson@arcadis.com Phone: 678 486 5396 Fax: Requested Date/Time: 7 Day TAT

Section B Required Project Information: Report To: Ben Hodges, GPC Copy To: Purchase Order #: SCS10002775 Project Name: Paul Hammond AP-3 Project #: Requested Date/Time: 7 Day TAT

Section C Invoice Information: Attention: Ben Hodges Company Name: GPC Address: Pack Order: Pack Project Manager: Maria.Park@arcadis.com, Pack Order #: 2239

Regulatory Agency: State / Location: GA

ITEM #	H-SOC NBR	MATRIX CODE (see vial codes to left)	SAMPLE TYPE (G-CRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyse Test	Y/N	Requested Analysis Returned (Y/N)	Residual Chlorine (Y/N)
				START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol				
1	H-SOC NBR			7-17-14	15													
2	H-SOC E41			7-17-14	2:30													
3	H-SOC			7-17-14	2:05													
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

ADDITIONAL COMMENTS	RELINQUISHED BY / APPLICATION	DATE	TIME	ACCEPTED BY / APPLICATION	DATE	TIME	SAMPLE CONDITIONS
	<i>Ben Hodges</i>	7/17/14		<i>Paul Hammond</i>	7/17/14		Received on Ice (Y/N) Y Custody Sealed Cooler (Y/N) Y Samples intact (Y/N) Y

Barcode: 92486806

WO#: 92486806

Signature: *Paul Hammond*

Signature: *Ben Hodges*

Date Signed: 7-17-2014

TEMP in C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples intact (Y/N)



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

Company: ARCADIS - Atlanta
 Address: 2638 Peach Ferry Rd
 Atlanta, GA 30338
 Email: Warren Johnson@arcadis.com
 Phone: 678 486 5398 Fax:
 Requested Date/Time: 7 Day TAT

Report To: Ben Hodges, GPC
 Copy To:
 Purchase Order #: SCS10082775
 Project Name: Pearl Hammond AP-3
 Project #:

Attention: Ben Hodges
 Company Name: GPC
 Address:
 Pack Order:
 Price Project Manager: Maria.Park@arcadis.com
 Price Profile #: 2239

Regulatory Agency:
 State / Location: GA

ITEM #	H-SOC NBR	MATRIX CODE (see vial codes to left)	SAMPLE TYPE (G-CRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Y/N	Requested Analysis preserved (Y/N)	Residual Chlorine (Y/N)
				START DATE	END DATE			H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other				
1	H-SOC NBR	WT	WT	7-17-14	15													
2	H-SOC E41	WT	WT	7-17-14	2:30													
3	H-SOC	WT	WT	7-17-14	2:05													
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

ADDITIONAL COMMENTS: *Handwritten signature*
 RELINQUISHED BY / APPLICATION: *Handwritten signature* DATE: 7/17/14 TIME: 7:00 AM
 ACCEPTED BY / APPLICATION: *Handwritten signature* DATE: 7/17/14 TIME: 7:10 AM

SAMPLE NAME AND SIGNATURE: *Handwritten signature*
 PROJECT NAME OF SAMPLE: *Handwritten signature*
 SIGNATURE OF ANALYST: *Handwritten signature* DATE SIGNED: 7-17-14
 TEMP in C: _____
 Received on Ice (Y/N): _____
 Custody Sealed Cooler (Y/N): _____
 Samples intact (Y/N): _____

W0#: 92486806
 92486806

Sample Condition Upon Receipt



Client Name: Acadish

WO#: 92486806

PM: MP Due Date: 07/22/20
 CLIENT: GA-AreadAtI

Courier: Fed Ex UPS USPS Client Commercial Pace Other
 Tracking #: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used 233 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 2.4 Biological Tissue Is Frozen: Yes No
 Temp should be above freezing to 6°C

Date and Initials of person examining contents: 7/18/2004

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

Client Notification/ Resolution: _____ Field Data Required? Y / N
 Person Contacted: _____ Date/Time: _____
 Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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

August 2020

November 10, 2020

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

RE: Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 25, 2020 and August 31, 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,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Pace Analytical Services Charlotte

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

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

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
Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92492418001	HGWA-122	Water	08/24/20 16:52	08/25/20 11:25
92492418002	HGWA-2	Water	08/25/20 10:38	08/26/20 12:00
92492418003	HGWA-3	Water	08/25/20 09:29	08/26/20 12:00
92492418004	HGWC-125	Water	08/25/20 14:51	08/26/20 12:00
92492418005	HGWC-126	Water	08/25/20 12:55	08/26/20 12:00
92492418006	FB-01	Water	08/25/20 16:00	08/26/20 12:00
92492418007	HGWC-121A	Water	08/26/20 15:17	08/27/20 08:56
92492418008	MW-32	Water	08/26/20 13:10	08/27/20 08:56
92492418009	MW-39	Water	08/26/20 10:23	08/27/20 08:56
92492418010	MW-41	Water	08/26/20 11:37	08/27/20 08:56
92492418011	HGWC-120	Water	08/26/20 16:50	08/27/20 08:56
92492418012	FD-01	Water	08/26/20 00:00	08/27/20 08:56
92492418013	HGWC-124	Water	08/27/20 11:17	08/28/20 11:08
92492418014	HGWA-1	Water	08/28/20 09:26	08/31/20 12:08

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92492418001	HGWA-122	EPA 6020B	CW1, KH	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92492418002	HGWA-2	EPA 6020B	CW1, KH	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	BRJ	1
92492418003	HGWA-3	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	BRJ	1
92492418004	HGWC-125	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92492418005	HGWC-126	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92492418006	FB-01	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92492418007	HGWC-121A	EPA 6020B	CW1, KH	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92492418008	MW-32	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92492418009	MW-39	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92492418010	MW-41	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92492418011	HGWC-120	EPA 6020B	CW1	12

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92492418012	FD-01	EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
		EPA 6020B	CW1	12
		EPA 7470A	VB	1
92492418013	HGWC-124	EPA 300.0 Rev 2.1 1993	CDC	1
		EPA 6020B	CW1	12
		EPA 7470A	VB	1
92492418014	HGWA-1	EPA 300.0 Rev 2.1 1993	BRJ	1
		EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92492418001	HGWA-122					
	pH	6.54	Std. Units		09/08/20 11:50	
EPA 6020B	Barium	0.041	mg/L	0.010	08/28/20 16:22	
EPA 6020B	Chromium	0.00093J	mg/L	0.010	08/28/20 16:22	
EPA 6020B	Lead	0.000077J	mg/L	0.0050	08/28/20 16:22	
EPA 6020B	Molybdenum	0.0031J	mg/L	0.010	08/28/20 16:22	
EPA 300.0 Rev 2.1 1993	Fluoride	0.075J	mg/L	0.10	08/26/20 20:34	
92492418002	HGWA-2					
	pH	5.17	Std. Units		09/08/20 11:50	
EPA 6020B	Barium	0.11	mg/L	0.010	08/28/20 16:27	
EPA 6020B	Beryllium	0.00014J	mg/L	0.0030	08/28/20 16:27	
EPA 6020B	Chromium	0.00067J	mg/L	0.010	08/28/20 16:27	
EPA 6020B	Cobalt	0.018	mg/L	0.0050	08/28/20 16:27	
EPA 6020B	Lead	0.000085J	mg/L	0.0050	08/28/20 16:27	
EPA 6020B	Lithium	0.0015J	mg/L	0.030	08/28/20 16:27	
92492418003	HGWA-3					
	pH	7.14	Std. Units		09/08/20 11:50	
EPA 6020B	Barium	0.11	mg/L	0.010	08/28/20 16:33	
EPA 6020B	Lithium	0.0027J	mg/L	0.030	08/28/20 16:33	
92492418004	HGWC-125					
	pH	6.36	Std. Units		09/08/20 11:50	
EPA 6010D	Calcium	186	mg/L	1.0	09/08/20 21:53	M1
EPA 6020B	Barium	0.045	mg/L	0.010	08/28/20 17:06	
EPA 6020B	Boron	1.4	mg/L	0.10	08/28/20 17:06	
EPA 6020B	Cobalt	0.0087	mg/L	0.0050	08/28/20 17:06	
EPA 6020B	Lithium	0.0037J	mg/L	0.030	08/28/20 17:06	
EPA 6020B	Molybdenum	0.00099J	mg/L	0.010	08/28/20 17:06	
SM 2450C-2011	Total Dissolved Solids	772	mg/L	10.0	08/31/20 18:02	
EPA 300.0 Rev 2.1 1993	Chloride	10.6	mg/L	1.0	08/27/20 17:11	
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	08/27/20 17:11	
EPA 300.0 Rev 2.1 1993	Sulfate	353	mg/L	1.0	08/27/20 17:11	
92492418005	HGWC-126					
	pH	6.78	Std. Units		09/08/20 11:50	
EPA 6010D	Calcium	130	mg/L	1.0	09/08/20 22:11	
EPA 6020B	Barium	0.23	mg/L	0.010	08/28/20 17:12	
EPA 6020B	Boron	0.016J	mg/L	0.10	08/28/20 17:12	
EPA 6020B	Chromium	0.00096J	mg/L	0.010	08/28/20 17:12	
EPA 6020B	Lead	0.000045J	mg/L	0.0050	08/28/20 17:12	
EPA 6020B	Lithium	0.0037J	mg/L	0.030	08/28/20 17:12	
SM 2450C-2011	Total Dissolved Solids	505	mg/L	10.0	08/31/20 18:02	
EPA 300.0 Rev 2.1 1993	Chloride	8.7	mg/L	1.0	08/27/20 17:26	
EPA 300.0 Rev 2.1 1993	Fluoride	0.52	mg/L	0.10	08/27/20 17:26	
EPA 300.0 Rev 2.1 1993	Sulfate	62.8	mg/L	1.0	08/27/20 17:26	
92492418006	FB-01					
EPA 6020B	Barium	0.0022J	mg/L	0.010	08/28/20 17:18	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92492418007	HGWC-121A					
	pH	6.73	Std. Units		09/08/20 11:50	
EPA 6020B	Barium	0.057	mg/L	0.010	09/01/20 19:53	
EPA 6020B	Lithium	0.0071J	mg/L	0.030	09/01/20 19:53	
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	08/29/20 01:52	
92492418008	MW-32					
	pH	6.75	Std. Units		09/08/20 11:50	
EPA 6020B	Antimony	0.00035J	mg/L	0.0030	09/01/20 19:59	
EPA 6020B	Barium	0.055	mg/L	0.010	09/01/20 19:59	
EPA 6020B	Cobalt	0.0048J	mg/L	0.0050	09/01/20 19:59	
EPA 6020B	Lithium	0.031	mg/L	0.030	09/01/20 19:59	
EPA 6020B	Molybdenum	0.065	mg/L	0.010	09/01/20 19:59	
EPA 300.0 Rev 2.1 1993	Fluoride	0.33	mg/L	0.10	08/29/20 02:07	
92492418009	MW-39					
	pH	6.74	Std. Units		09/08/20 11:50	
EPA 6020B	Barium	0.059	mg/L	0.010	09/01/20 20:04	
EPA 6020B	Cobalt	0.0026J	mg/L	0.0050	09/01/20 20:04	
EPA 6020B	Lithium	0.031	mg/L	0.030	09/01/20 20:04	
EPA 6020B	Molybdenum	0.064	mg/L	0.010	09/01/20 20:04	
EPA 300.0 Rev 2.1 1993	Fluoride	0.32	mg/L	0.10	08/29/20 02:22	
92492418010	MW-41					
	pH	6.74	Std. Units		09/08/20 11:50	
EPA 6020B	Barium	0.066	mg/L	0.010	09/01/20 20:10	
EPA 6020B	Cobalt	0.00068J	mg/L	0.0050	09/01/20 20:10	
EPA 6020B	Lithium	0.027J	mg/L	0.030	09/01/20 20:10	
EPA 6020B	Molybdenum	0.039	mg/L	0.010	09/01/20 20:10	
EPA 300.0 Rev 2.1 1993	Fluoride	0.24	mg/L	0.10	08/29/20 02:37	
92492418011	HGWC-120					
	pH	6.96	Std. Units		09/08/20 11:50	
EPA 6020B	Barium	0.041	mg/L	0.010	09/01/20 20:27	
EPA 6020B	Cobalt	0.0023J	mg/L	0.0050	09/01/20 20:27	
EPA 6020B	Lithium	0.023J	mg/L	0.030	09/01/20 20:27	
EPA 6020B	Molybdenum	0.050	mg/L	0.010	09/01/20 20:27	
EPA 300.0 Rev 2.1 1993	Fluoride	0.48	mg/L	0.10	08/29/20 03:22	
92492418012	FD-01					
EPA 6020B	Barium	0.057	mg/L	0.010	09/01/20 20:33	
EPA 6020B	Cobalt	0.0046J	mg/L	0.0050	09/01/20 20:33	
EPA 6020B	Lithium	0.031	mg/L	0.030	09/01/20 20:33	
EPA 6020B	Molybdenum	0.067	mg/L	0.010	09/01/20 20:33	
EPA 300.0 Rev 2.1 1993	Fluoride	0.33	mg/L	0.10	08/29/20 03:37	
92492418013	HGWC-124					
	pH	7.15	Std. Units		09/08/20 11:50	
EPA 6020B	Barium	0.062	mg/L	0.010	09/01/20 20:44	
EPA 6020B	Lithium	0.00091J	mg/L	0.030	09/01/20 20:44	
EPA 6020B	Molybdenum	0.00091J	mg/L	0.010	09/01/20 20:44	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92492418014	HGWA-1					
	pH	7.02	Std. Units		09/08/20 11:50	
EPA 6020B	Barium	0.036	mg/L	0.010	09/02/20 17:11	
EPA 6020B	Lead	0.000070J	mg/L	0.0050	09/02/20 17:11	
EPA 6020B	Lithium	0.00087J	mg/L	0.030	09/02/20 17:11	
EPA 300.0 Rev 2.1 1993	Fluoride	0.080J	mg/L	0.10	09/03/20 19:50	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

Sample: HGWA-122		Lab ID: 92492418001		Collected: 08/24/20 16:52		Received: 08/25/20 11:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.54	Std. Units			1		09/08/20 11:50		
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	09/18/20 15:00	09/18/20 18:07	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/27/20 17:10	08/28/20 16:22	7440-38-2	
Barium	0.041	mg/L	0.010	0.00071	1	08/27/20 17:10	08/28/20 16:22	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/27/20 17:10	08/28/20 16:22	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/27/20 17:10	08/28/20 16:22	7440-43-9	
Chromium	0.00093J	mg/L	0.010	0.00055	1	08/27/20 17:10	08/28/20 16:22	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/27/20 17:10	08/28/20 16:22	7440-48-4	
Lead	0.000077J	mg/L	0.0050	0.000036	1	08/27/20 17:10	08/28/20 16:22	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	08/27/20 17:10	08/28/20 16:22	7439-93-2	
Molybdenum	0.0031J	mg/L	0.010	0.00069	1	08/27/20 17:10	08/28/20 16:22	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/27/20 17:10	08/28/20 16:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/27/20 17:10	08/28/20 16:22	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	08/26/20 12:00	08/27/20 10:26	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.075J	mg/L	0.10	0.050	1		08/26/20 20:34	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Sample: HGWA-2		Lab ID: 92492418002		Collected: 08/25/20 10:38		Received: 08/26/20 12:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.17	Std. Units			1		09/08/20 11:50		
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	09/18/20 15:00	09/18/20 18:12	7440-36-0	M1, R1
Arsenic	ND	mg/L	0.0050	0.00078	1	08/27/20 17:10	08/28/20 16:27	7440-38-2	
Barium	0.11	mg/L	0.010	0.00071	1	08/27/20 17:10	08/28/20 16:27	7440-39-3	
Beryllium	0.00014J	mg/L	0.0030	0.000046	1	08/27/20 17:10	08/28/20 16:27	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/27/20 17:10	08/28/20 16:27	7440-43-9	
Chromium	0.00067J	mg/L	0.010	0.00055	1	08/27/20 17:10	08/28/20 16:27	7440-47-3	
Cobalt	0.018	mg/L	0.0050	0.00038	1	08/27/20 17:10	08/28/20 16:27	7440-48-4	
Lead	0.00085J	mg/L	0.0050	0.000036	1	08/27/20 17:10	08/28/20 16:27	7439-92-1	
Lithium	0.0015J	mg/L	0.030	0.00081	1	08/27/20 17:10	08/28/20 16:27	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/27/20 17:10	08/28/20 16:27	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/27/20 17:10	08/28/20 16:27	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/27/20 17:10	08/28/20 16:27	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	08/31/20 11:00	09/01/20 10:06	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		08/27/20 16:41	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Sample: HGWA-3 **Lab ID: 92492418003** Collected: 08/25/20 09:29 Received: 08/26/20 12:00 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.14	Std. Units			1		09/08/20 11:50		
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	08/27/20 17:10	08/28/20 16:33	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/27/20 17:10	08/28/20 16:33	7440-38-2	
Barium	0.11	mg/L	0.010	0.00071	1	08/27/20 17:10	08/28/20 16:33	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/27/20 17:10	08/28/20 16:33	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/27/20 17:10	08/28/20 16:33	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	08/27/20 17:10	08/28/20 16:33	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/27/20 17:10	08/28/20 16:33	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/27/20 17:10	08/28/20 16:33	7439-92-1	
Lithium	0.0027J	mg/L	0.030	0.00081	1	08/27/20 17:10	08/28/20 16:33	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/27/20 17:10	08/28/20 16:33	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/27/20 17:10	08/28/20 16:33	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/27/20 17:10	08/28/20 16:33	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	08/31/20 11:00	09/01/20 10:08	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		08/27/20 16:56	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

Sample: HGWC-125 Lab ID: 92492418004 Collected: 08/25/20 14:51 Received: 08/26/20 12:00 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.36	Std. Units			1		09/08/20 11:50		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	186	mg/L	1.0	0.070	1	09/08/20 13:08	09/08/20 21:53	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	08/27/20 17:10	08/28/20 17:06	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/27/20 17:10	08/28/20 17:06	7440-38-2	
Barium	0.045	mg/L	0.010	0.00071	1	08/27/20 17:10	08/28/20 17:06	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/27/20 17:10	08/28/20 17:06	7440-41-7	
Boron	1.4	mg/L	0.10	0.0052	1	08/27/20 17:10	08/28/20 17:06	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/27/20 17:10	08/28/20 17:06	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	08/27/20 17:10	08/28/20 17:06	7440-47-3	
Cobalt	0.0087	mg/L	0.0050	0.00038	1	08/27/20 17:10	08/28/20 17:06	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	08/27/20 17:10	08/28/20 17:06	7439-92-1	
Lithium	0.0037J	mg/L	0.030	0.00081	1	08/27/20 17:10	08/28/20 17:06	7439-93-2	
Molybdenum	0.00099J	mg/L	0.010	0.00069	1	08/27/20 17:10	08/28/20 17:06	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/27/20 17:10	08/28/20 17:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/27/20 17:10	08/28/20 17:06	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	08/31/20 11:00	09/01/20 10:15	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	772	mg/L	10.0	10.0	1		08/31/20 18:02		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	10.6	mg/L	1.0	0.60	1		08/27/20 17:11	16887-00-6	
Fluoride	0.16	mg/L	0.10	0.050	1		08/27/20 17:11	16984-48-8	
Sulfate	353	mg/L	1.0	0.50	1		08/27/20 17:11	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Sample: HGWC-126		Lab ID: 92492418005		Collected: 08/25/20 12:55		Received: 08/26/20 12:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.78	Std. Units			1		09/08/20 11:50		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	130	mg/L	1.0	0.070	1	09/08/20 13:08	09/08/20 22:11	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	08/27/20 17:10	08/28/20 17:12	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/27/20 17:10	08/28/20 17:12	7440-38-2	
Barium	0.23	mg/L	0.010	0.00071	1	08/27/20 17:10	08/28/20 17:12	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/27/20 17:10	08/28/20 17:12	7440-41-7	
Boron	0.016J	mg/L	0.10	0.0052	1	08/27/20 17:10	08/28/20 17:12	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/27/20 17:10	08/28/20 17:12	7440-43-9	
Chromium	0.00096J	mg/L	0.010	0.00055	1	08/27/20 17:10	08/28/20 17:12	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/27/20 17:10	08/28/20 17:12	7440-48-4	
Lead	0.000045J	mg/L	0.0050	0.000036	1	08/27/20 17:10	08/28/20 17:12	7439-92-1	
Lithium	0.0037J	mg/L	0.030	0.00081	1	08/27/20 17:10	08/28/20 17:12	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/27/20 17:10	08/28/20 17:12	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/27/20 17:10	08/28/20 17:12	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	08/27/20 17:10	08/28/20 17:12	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	08/31/20 11:00	09/01/20 10:18	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	505	mg/L	10.0	10.0	1		08/31/20 18:02		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	8.7	mg/L	1.0	0.60	1		08/27/20 17:26	16887-00-6	
Fluoride	0.52	mg/L	0.10	0.050	1		08/27/20 17:26	16984-48-8	
Sulfate	62.8	mg/L	1.0	0.50	1		08/27/20 17:26	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

Sample: FB-01		Lab ID: 92492418006		Collected: 08/25/20 16:00		Received: 08/26/20 12:00		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
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	09/08/20 13:08	09/08/20 22:15	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	08/27/20 17:10	08/28/20 17:18	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	08/27/20 17:10	08/28/20 17:18	7440-38-2		
Barium	0.0022J	mg/L	0.010	0.00071	1	08/27/20 17:10	08/28/20 17:18	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	08/27/20 17:10	08/28/20 17:18	7440-41-7		
Boron	ND	mg/L	0.10	0.0052	1	08/27/20 17:10	08/28/20 17:18	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	08/27/20 17:10	08/28/20 17:18	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	08/27/20 17:10	08/28/20 17:18	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	08/27/20 17:10	08/28/20 17:18	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	08/27/20 17:10	08/28/20 17:18	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	08/27/20 17:10	08/28/20 17:18	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	08/27/20 17:10	08/28/20 17:18	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	08/27/20 17:10	08/28/20 17:18	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	08/27/20 17:10	08/28/20 17:18	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	08/31/20 11:00	09/01/20 10:20	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		08/31/20 18:02			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		08/27/20 17:41	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		08/27/20 17:41	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		08/27/20 17:41	14808-79-8		

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

Sample: HGWC-121A		Lab ID: 92492418007		Collected: 08/26/20 15:17		Received: 08/27/20 08:56		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.73	Std. Units			1		09/08/20 11:50		
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	09/18/20 15:00	09/18/20 18:47	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/01/20 19:53	7440-38-2	
Barium	0.057	mg/L	0.010	0.00071	1	09/01/20 14:03	09/01/20 19:53	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 16:53	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/01/20 19:53	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/01/20 14:03	09/01/20 19:53	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/01/20 19:53	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/01/20 19:53	7439-92-1	
Lithium	0.0071J	mg/L	0.030	0.00081	1	09/01/20 14:03	09/01/20 19:53	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/01/20 14:03	09/01/20 19:53	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/01/20 19:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/01/20 19:53	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	08/31/20 11:00	09/01/20 10:22	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.16	mg/L	0.10	0.050	1		08/29/20 01:52	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Sample: MW-32 Lab ID: 92492418008 Collected: 08/26/20 13:10 Received: 08/27/20 08:56 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.75	Std. Units			1		09/08/20 11:50		
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	09/01/20 14:03	09/01/20 19:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/01/20 19:59	7440-38-2	
Barium	0.055	mg/L	0.010	0.00071	1	09/01/20 14:03	09/01/20 19:59	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 16:58	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/01/20 19:59	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/01/20 14:03	09/01/20 19:59	7440-47-3	
Cobalt	0.0048J	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/01/20 19:59	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/01/20 19:59	7439-92-1	
Lithium	0.031	mg/L	0.030	0.00081	1	09/01/20 14:03	09/01/20 19:59	7439-93-2	
Molybdenum	0.065	mg/L	0.010	0.00069	1	09/01/20 14:03	09/01/20 19:59	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/01/20 19:59	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/01/20 19:59	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	08/31/20 11:00	09/01/20 10:25	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.33	mg/L	0.10	0.050	1		08/29/20 02:07	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Sample: MW-39 Lab ID: 92492418009 Collected: 08/26/20 10:23 Received: 08/27/20 08:56 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

pH	6.74	Std. Units			1		09/08/20 11:50		
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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	09/01/20 14:03	09/01/20 20:04	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/01/20 20:04	7440-38-2	
Barium	0.059	mg/L	0.010	0.00071	1	09/01/20 14:03	09/01/20 20:04	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 17:04	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/01/20 20:04	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/01/20 14:03	09/01/20 20:04	7440-47-3	
Cobalt	0.0026J	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/01/20 20:04	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/01/20 20:04	7439-92-1	
Lithium	0.031	mg/L	0.030	0.00081	1	09/01/20 14:03	09/01/20 20:04	7439-93-2	
Molybdenum	0.064	mg/L	0.010	0.00069	1	09/01/20 14:03	09/01/20 20:04	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/01/20 20:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/01/20 20:04	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	08/31/20 11:00	09/01/20 11:36	7439-97-6	
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Fluoride	0.32	mg/L	0.10	0.050	1		08/29/20 02:22	16984-48-8	
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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

Sample: MW-41		Lab ID: 92492418010		Collected: 08/26/20 11:37		Received: 08/27/20 08:56		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.74	Std. Units			1		09/08/20 11:50		
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	09/01/20 14:03	09/01/20 20:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/01/20 20:10	7440-38-2	
Barium	0.066	mg/L	0.010	0.00071	1	09/01/20 14:03	09/01/20 20:10	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 17:10	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/01/20 20:10	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/01/20 14:03	09/01/20 20:10	7440-47-3	
Cobalt	0.00068J	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/01/20 20:10	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/01/20 20:10	7439-92-1	
Lithium	0.027J	mg/L	0.030	0.00081	1	09/01/20 14:03	09/01/20 20:10	7439-93-2	
Molybdenum	0.039	mg/L	0.010	0.00069	1	09/01/20 14:03	09/01/20 20:10	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/01/20 20:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/01/20 20:10	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	09/08/20 11:15	09/09/20 11:08	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.24	mg/L	0.10	0.050	1		08/29/20 02:37	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

Sample: HGWC-120		Lab ID: 92492418011		Collected: 08/26/20 16:50		Received: 08/27/20 08:56		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.96	Std. Units			1		09/08/20 11:50		
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	09/01/20 14:03	09/01/20 20:27	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/01/20 20:27	7440-38-2	
Barium	0.041	mg/L	0.010	0.00071	1	09/01/20 14:03	09/01/20 20:27	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 17:15	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/01/20 20:27	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/01/20 14:03	09/01/20 20:27	7440-47-3	
Cobalt	0.0023J	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/01/20 20:27	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/01/20 20:27	7439-92-1	
Lithium	0.023J	mg/L	0.030	0.00081	1	09/01/20 14:03	09/01/20 20:27	7439-93-2	
Molybdenum	0.050	mg/L	0.010	0.00069	1	09/01/20 14:03	09/01/20 20:27	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/01/20 20:27	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/01/20 20:27	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	09/08/20 11:15	09/09/20 11:10	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.48	mg/L	0.10	0.050	1		08/29/20 03:22	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Sample: FD-01		Lab ID: 92492418012		Collected: 08/26/20 00:00	Received: 08/27/20 08:56	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
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	09/01/20 14:03	09/01/20 20:33	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/01/20 20:33	7440-38-2		
Barium	0.057	mg/L	0.010	0.00071	1	09/01/20 14:03	09/01/20 20:33	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 17:21	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/01/20 20:33	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	09/01/20 14:03	09/01/20 20:33	7440-47-3		
Cobalt	0.0046J	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/01/20 20:33	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/01/20 20:33	7439-92-1		
Lithium	0.031	mg/L	0.030	0.00081	1	09/01/20 14:03	09/01/20 20:33	7439-93-2		
Molybdenum	0.067	mg/L	0.010	0.00069	1	09/01/20 14:03	09/01/20 20:33	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/01/20 20:33	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/01/20 20:33	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	09/08/20 11:15	09/09/20 11:13	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	0.33	mg/L	0.10	0.050	1		08/29/20 03:37	16984-48-8		

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Sample: HGWC-124		Lab ID: 92492418013		Collected: 08/27/20 11:17		Received: 08/28/20 11:08		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.15	Std. Units			1		09/08/20 11:50		
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	09/01/20 14:03	09/01/20 20:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/01/20 20:44	7440-38-2	
Barium	0.062	mg/L	0.010	0.00071	1	09/01/20 14:03	09/01/20 20:44	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 17:33	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/01/20 20:44	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/01/20 14:03	09/01/20 20:44	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/01/20 20:44	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/01/20 20:44	7439-92-1	
Lithium	0.00091J	mg/L	0.030	0.00081	1	09/01/20 14:03	09/01/20 20:44	7439-93-2	
Molybdenum	0.00091J	mg/L	0.010	0.00069	1	09/01/20 14:03	09/01/20 20:44	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/01/20 20:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/01/20 20:44	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	09/08/20 11:15	09/09/20 11:15	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		08/29/20 20:26	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

Sample: HGWA-1		Lab ID: 92492418014		Collected: 08/28/20 09:26		Received: 08/31/20 12:08		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.02	Std. Units			1		09/08/20 11:50		
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	09/01/20 14:06	09/02/20 17:11	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:06	09/02/20 17:11	7440-38-2	
Barium	0.036	mg/L	0.010	0.00071	1	09/01/20 14:06	09/02/20 17:11	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/01/20 14:06	09/02/20 17:11	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/01/20 14:06	09/02/20 17:11	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/01/20 14:06	09/02/20 17:11	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/01/20 14:06	09/02/20 17:11	7440-48-4	
Lead	0.000070J	mg/L	0.0050	0.000036	1	09/01/20 14:06	09/02/20 17:11	7439-92-1	
Lithium	0.00087J	mg/L	0.030	0.00081	1	09/01/20 14:06	09/02/20 17:11	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/01/20 14:06	09/02/20 17:11	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:06	09/02/20 17:11	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:06	09/02/20 17:11	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	09/08/20 11:15	09/09/20 11:18	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.080J	mg/L	0.10	0.050	1		09/03/20 19:50	16984-48-8	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

QC Batch: 564973 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92492418004, 92492418005, 92492418006

METHOD BLANK: 2994728 Matrix: Water
Associated Lab Samples: 92492418004, 92492418005, 92492418006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	09/08/20 21:36	

LABORATORY CONTROL SAMPLE: 2994729

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: 2994730 2994731

Parameter	Units	2994730		2994731		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	186	1	180	183	-551	-205	75-125	2	20	M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

QC Batch: 562831 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92492418001, 92492418002, 92492418003, 92492418004, 92492418005, 92492418006

METHOD BLANK: 2984655 Matrix: Water
Associated Lab Samples: 92492418001, 92492418002, 92492418003, 92492418004, 92492418005, 92492418006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	08/28/20 15:42	
Arsenic	mg/L	ND	0.0050	0.00078	08/28/20 15:42	
Barium	mg/L	ND	0.010	0.00071	08/28/20 15:42	
Beryllium	mg/L	ND	0.0030	0.000046	08/28/20 15:42	
Cadmium	mg/L	ND	0.0025	0.00012	08/28/20 15:42	
Chromium	mg/L	ND	0.010	0.00055	08/28/20 15:42	
Cobalt	mg/L	ND	0.0050	0.00038	08/28/20 15:42	
Lead	mg/L	ND	0.0050	0.000036	08/28/20 15:42	
Lithium	mg/L	ND	0.030	0.00081	08/28/20 15:42	
Molybdenum	mg/L	ND	0.010	0.00069	08/28/20 15:42	
Selenium	mg/L	ND	0.010	0.0016	08/28/20 15:42	
Thallium	mg/L	ND	0.0010	0.00014	08/28/20 15:42	

LABORATORY CONTROL SAMPLE: 2984656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.095	95	80-120	
Arsenic	mg/L	0.1	0.094	94	80-120	
Barium	mg/L	0.1	0.093	93	80-120	
Beryllium	mg/L	0.1	0.096	96	80-120	
Cadmium	mg/L	0.1	0.096	96	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	0.089	89	80-120	
Lithium	mg/L	0.1	0.094	94	80-120	
Molybdenum	mg/L	0.1	0.094	94	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.089	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2984657 2984658

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92491917001 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Antimony	mg/L	ND	0.1	0.1	0.097	0.095	97	95	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.094	0.094	94	94	75-125	0	20	
Barium	mg/L	0.030	0.1	0.1	0.12	0.12	94	89	75-125	4	20	
Beryllium	mg/L	ND	0.1	0.1	0.098	0.096	98	96	75-125	1	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Parameter	Units	2984657		2984658		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92491917001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Cadmium	mg/L	ND	0.1	0.1	0.097	0.095	97	95	75-125	3	20		
Chromium	mg/L	0.00063J	0.1	0.1	0.098	0.095	98	94	75-125	4	20		
Cobalt	mg/L	0.0039J	0.1	0.1	0.10	0.098	96	94	75-125	3	20		
Lead	mg/L	ND	0.1	0.1	0.090	0.088	90	88	75-125	2	20		
Lithium	mg/L	ND	0.1	0.1	0.098	0.096	97	96	75-125	2	20		
Molybdenum	mg/L	ND	0.1	0.1	0.097	0.095	97	95	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.093	0.093	93	93	75-125	1	20		
Thallium	mg/L	ND	0.1	0.1	0.090	0.089	90	89	75-125	1	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

QC Batch: 563747 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92492418007, 92492418008, 92492418009, 92492418010, 92492418011, 92492418012, 92492418013

METHOD BLANK: 2988642 Matrix: Water
Associated Lab Samples: 92492418007, 92492418008, 92492418009, 92492418010, 92492418011, 92492418012, 92492418013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	09/01/20 19:19	
Arsenic	mg/L	ND	0.0050	0.00078	09/01/20 19:19	
Barium	mg/L	ND	0.010	0.00071	09/01/20 19:19	
Beryllium	mg/L	ND	0.0030	0.000046	09/02/20 16:41	
Cadmium	mg/L	ND	0.0025	0.00012	09/01/20 19:19	
Chromium	mg/L	ND	0.010	0.00055	09/01/20 19:19	
Cobalt	mg/L	ND	0.0050	0.00038	09/01/20 19:19	
Lead	mg/L	ND	0.0050	0.000036	09/01/20 19:19	
Lithium	mg/L	ND	0.030	0.00081	09/01/20 19:19	
Molybdenum	mg/L	ND	0.010	0.00069	09/01/20 19:19	
Selenium	mg/L	ND	0.010	0.0016	09/01/20 19:19	
Thallium	mg/L	ND	0.0010	0.00014	09/01/20 19:19	

LABORATORY CONTROL SAMPLE: 2988643

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	0.099	99	80-120	
Barium	mg/L	0.1	0.10	101	80-120	
Beryllium	mg/L	0.1	0.092	92	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.096	96	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.092	92	80-120	
Molybdenum	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Thallium	mg/L	0.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2988644 2988645

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92492563004 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Antimony	mg/L	ND	0.1	0.1	0.10	0.095	100	95	75-125	5	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.093	99	92	75-125	7	20	
Barium	mg/L	0.056	0.1	0.1	0.15	0.15	93	90	75-125	2	20	
Beryllium	mg/L	ND	0.1	0.1	0.091	0.089	91	89	75-125	2	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Parameter	Units	2988644		2988645		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92492563004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Cadmium	mg/L	ND	0.1	0.1	0.097	0.094	97	94	75-125	3	20		
Chromium	mg/L	0.00098J	0.1	0.1	0.098	0.10	97	100	75-125	3	20		
Cobalt	mg/L	0.00061J	0.1	0.1	0.097	0.098	97	97	75-125	1	20		
Lead	mg/L	0.00036J	0.1	0.1	0.094	0.095	94	95	75-125	1	20		
Lithium	mg/L	0.0028J	0.1	0.1	0.092	0.091	89	88	75-125	1	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20		
Selenium	mg/L	ND	0.1	0.1	0.10	0.093	98	92	75-125	7	20		
Thallium	mg/L	ND	0.1	0.1	0.093	0.095	93	95	75-125	1	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

QC Batch: 563754 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92492418014

METHOD BLANK: 2988660 Matrix: Water
Associated Lab Samples: 92492418014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00031J	0.0030	0.00028	09/02/20 15:28	
Arsenic	mg/L	ND	0.0050	0.00078	09/02/20 15:28	
Barium	mg/L	ND	0.010	0.00071	09/02/20 15:28	
Beryllium	mg/L	ND	0.0030	0.000046	09/02/20 15:28	
Cadmium	mg/L	ND	0.0025	0.00012	09/02/20 15:28	
Chromium	mg/L	ND	0.010	0.00055	09/02/20 15:28	
Cobalt	mg/L	ND	0.0050	0.00038	09/02/20 15:28	
Lead	mg/L	ND	0.0050	0.000036	09/02/20 15:28	
Lithium	mg/L	ND	0.030	0.00081	09/02/20 15:28	
Molybdenum	mg/L	ND	0.010	0.00069	09/02/20 15:28	
Selenium	mg/L	ND	0.010	0.0016	09/02/20 15:28	
Thallium	mg/L	ND	0.0010	0.00014	09/02/20 15:28	

LABORATORY CONTROL SAMPLE: 2988661

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2988662 2988663

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92493129002	Result	Conc.	Conc.							Result
Antimony	mg/L	ND	0.1	0.1	0.097	0.099	97	98	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.097	0.099	97	99	75-125	2	20	
Barium	mg/L	0.021	0.1	0.1	0.12	0.12	95	98	75-125	3	20	
Beryllium	mg/L	ND	0.1	0.1	0.089	0.093	89	93	75-125	5	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Parameter	Units	2988662		2988663		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92493129002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Cadmium	mg/L	ND	0.1	0.1	0.094	0.096	94	96	75-125	3	20		
Chromium	mg/L	0.00059J	0.1	0.1	0.099	0.10	99	100	75-125	1	20		
Cobalt	mg/L	0.0021J	0.1	0.1	0.097	0.099	94	97	75-125	2	20		
Lead	mg/L	0.000095J	0.1	0.1	0.096	0.097	96	97	75-125	1	20		
Lithium	mg/L	0.0047J	0.1	0.1	0.096	0.099	92	94	75-125	2	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.098	0.098	97	97	75-125	0	20		
Thallium	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

QC Batch: 567520

Analysis Method: EPA 6020B

QC Batch Method: EPA 3005A

Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92492418001, 92492418002, 92492418007

METHOD BLANK: 3007459

Matrix: Water

Associated Lab Samples: 92492418001, 92492418002, 92492418007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	09/18/20 17:55	

LABORATORY CONTROL SAMPLE: 3007460

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.095	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3007461 3007462

Parameter	Units	3007461		3007462		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92492418002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Antimony	mg/L	ND	0.1	0.1	0.17	0.098	170	98	75-125	54	20 M1,R1

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

QC Batch: 562436

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92492418001

METHOD BLANK: 2982834

Matrix: Water

Associated Lab Samples: 92492418001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	08/27/20 10:10	

LABORATORY CONTROL SAMPLE: 2982835

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2982836 2982837

Parameter	Units	2982836		2982837		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0024	97	96	75-125	1	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

QC Batch:	563370	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92492418002, 92492418003, 92492418004, 92492418005, 92492418006, 92492418007, 92492418008

METHOD BLANK: 2987104 Matrix: Water
Associated Lab Samples: 92492418002, 92492418003, 92492418004, 92492418005, 92492418006, 92492418007, 92492418008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	0.00011J	0.00050	0.000078	09/01/20 09:18	

LABORATORY CONTROL SAMPLE: 2987105

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: 2987106 2987107

Parameter	Units	2987106		2987107		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0024	0.0024	93	94	75-125	1	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

QC Batch: 563371

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92492418009

METHOD BLANK: 2987108

Matrix: Water

Associated Lab Samples: 92492418009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	09/01/20 10:32	

LABORATORY CONTROL SAMPLE: 2987109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0023	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2987110 2987111

Parameter	Units	2987110		2987111		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	0.00017J	0.0025	0.0026	0.0025	95	95	75-125	1	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

QC Batch: 564593 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92492418010, 92492418011, 92492418012, 92492418013, 92492418014

METHOD BLANK: 2992563 Matrix: Water
Associated Lab Samples: 92492418010, 92492418011, 92492418012, 92492418013, 92492418014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	09/09/20 10:18	

LABORATORY CONTROL SAMPLE: 2992564

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2992565 2992566

Parameter	Units	2992565		2992566		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92493137001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0024	0.0023	95	94	75-125	2	20

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

QC Batch: 563552

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: 92492418004, 92492418005, 92492418006

METHOD BLANK: 2988051

Matrix: Water

Associated Lab Samples: 92492418004, 92492418005, 92492418006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/31/20 17:59	

LABORATORY CONTROL SAMPLE: 2988052

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	397	99	84-108	

SAMPLE DUPLICATE: 2988053

Parameter	Units	92492424001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	246	252	2	10	

SAMPLE DUPLICATE: 2988054

Parameter	Units	92492418006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

QC Batch: 562433 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92492418001

METHOD BLANK: 2982806 Matrix: Water
Associated Lab Samples: 92492418001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	08/26/20 18:18	

LABORATORY CONTROL SAMPLE: 2982807

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2982808 2982809

Parameter	Units	92492436002		MS		MSD		% Rec		Limits		Max		Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec	RPD	RPD			
Fluoride	mg/L	0.41	2.5	2.5	2.5	2.9	2.9	100	101	90-110	0	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2982810 2982811

Parameter	Units	92492228007		MS		MSD		% Rec		Limits		Max		Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec	RPD	RPD			
Fluoride	mg/L	0.077J	2.5	2.5	2.5	2.5	2.6	98	101	90-110	3	10		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

QC Batch: 562698 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92492418002, 92492418003, 92492418004, 92492418005, 92492418006

METHOD BLANK: 2984151 Matrix: Water
Associated Lab Samples: 92492418002, 92492418003, 92492418004, 92492418005, 92492418006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/27/20 13:21	
Fluoride	mg/L	ND	0.10	0.050	08/27/20 13:21	
Sulfate	mg/L	ND	1.0	0.50	08/27/20 13:21	

LABORATORY CONTROL SAMPLE: 2984152

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.5	101	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	50	50.9	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2984153 2984154

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92492398001	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	25.8	50	50	50	77.8	78.7	104	106	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.1	2.1	82	84	90-110	2	10	M1
Sulfate	mg/L	61.1	50	50	50	106	105	90	89	90-110	1	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2984155 2984156

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92492228018	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	ND	50	50	50	52.4	53.3	105	106	90-110	2	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.6	2.7	105	107	90-110	1	10	
Sulfate	mg/L	ND	50	50	50	52.2	53.0	104	106	90-110	2	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

QC Batch: 563042 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92492418007, 92492418008, 92492418009, 92492418010, 92492418011, 92492418012

METHOD BLANK: 2985604 Matrix: Water
Associated Lab Samples: 92492418007, 92492418008, 92492418009, 92492418010, 92492418011, 92492418012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	08/28/20 19:55	

LABORATORY CONTROL SAMPLE: 2985605

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.7	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2985606 2985607

Parameter	Units	2985606		2985607		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Fluoride	mg/L	0.062J	2.5	2.5	2.7	2.7	105	106	90-110	1	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2985608 2985609

Parameter	Units	2985608		2985609		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Fluoride	mg/L	0.14	2.5	2.5	2.8	2.8	106	106	90-110	0	10

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

QC Batch: 563290

Analysis Method: EPA 300.0 Rev 2.1 1993

QC Batch Method: EPA 300.0 Rev 2.1 1993

Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92492418013

METHOD BLANK: 2986801

Matrix: Water

Associated Lab Samples: 92492418013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	08/29/20 14:28	

LABORATORY CONTROL SAMPLE: 2986802

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: 2986803 2986804

Parameter	Units	2986803		2986804		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Fluoride	mg/L	0.14	2.5	2.5	2.8	2.8	105	106	90-110	1	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2986805 2986806

Parameter	Units	2986805		2986806		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Fluoride	mg/L	0.15	2.5	2.5	2.8	2.8	105	107	90-110	1	10

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

QC Batch: 564239

Analysis Method: EPA 300.0 Rev 2.1 1993

QC Batch Method: EPA 300.0 Rev 2.1 1993

Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92492418014

METHOD BLANK: 2990890

Matrix: Water

Associated Lab Samples: 92492418014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	09/03/20 15:51	

LABORATORY CONTROL SAMPLE: 2990891

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.7	110	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2990892 2990893

Parameter	Units	2990892		2990893		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92493471003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Fluoride	mg/L	10.9	2.5	2.5	12.8	12.9	76	80	90-110	1	10 M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2990894 2990895

Parameter	Units	2990894		2990895		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92493567003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Fluoride	mg/L	0.57	2.5	2.5	3.3	3.3	108	110	90-110	2	10

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QUALIFIERS

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

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.

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SCAN/BKG 03
Pace Project No.: 92492418

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92492418001	HGWA-122				
92492418002	HGWA-2				
92492418003	HGWA-3				
92492418004	HGWC-125				
92492418005	HGWC-126				
92492418007	HGWC-121A				
92492418008	MW-32				
92492418009	MW-39				
92492418010	MW-41				
92492418011	HGWC-120				
92492418013	HGWC-124				
92492418014	HGWA-1				
92492418004	HGWC-125	EPA 3010A	564973	EPA 6010D	565003
92492418005	HGWC-126	EPA 3010A	564973	EPA 6010D	565003
92492418006	FB-01	EPA 3010A	564973	EPA 6010D	565003
92492418001	HGWA-122	EPA 3005A	562831	EPA 6020B	562944
92492418001	HGWA-122	EPA 3005A	567520	EPA 6020B	567541
92492418002	HGWA-2	EPA 3005A	562831	EPA 6020B	562944
92492418002	HGWA-2	EPA 3005A	567520	EPA 6020B	567541
92492418003	HGWA-3	EPA 3005A	562831	EPA 6020B	562944
92492418004	HGWC-125	EPA 3005A	562831	EPA 6020B	562944
92492418005	HGWC-126	EPA 3005A	562831	EPA 6020B	562944
92492418006	FB-01	EPA 3005A	562831	EPA 6020B	562944
92492418007	HGWC-121A	EPA 3005A	563747	EPA 6020B	563831
92492418007	HGWC-121A	EPA 3005A	567520	EPA 6020B	567541
92492418008	MW-32	EPA 3005A	563747	EPA 6020B	563831
92492418009	MW-39	EPA 3005A	563747	EPA 6020B	563831
92492418010	MW-41	EPA 3005A	563747	EPA 6020B	563831
92492418011	HGWC-120	EPA 3005A	563747	EPA 6020B	563831
92492418012	FD-01	EPA 3005A	563747	EPA 6020B	563831
92492418013	HGWC-124	EPA 3005A	563747	EPA 6020B	563831
92492418014	HGWA-1	EPA 3005A	563754	EPA 6020B	563832
92492418001	HGWA-122	EPA 7470A	562436	EPA 7470A	562585
92492418002	HGWA-2	EPA 7470A	563370	EPA 7470A	563482
92492418003	HGWA-3	EPA 7470A	563370	EPA 7470A	563482
92492418004	HGWC-125	EPA 7470A	563370	EPA 7470A	563482
92492418005	HGWC-126	EPA 7470A	563370	EPA 7470A	563482
92492418006	FB-01	EPA 7470A	563370	EPA 7470A	563482
92492418007	HGWC-121A	EPA 7470A	563370	EPA 7470A	563482
92492418008	MW-32	EPA 7470A	563370	EPA 7470A	563482
92492418009	MW-39	EPA 7470A	563371	EPA 7470A	563653
92492418010	MW-41	EPA 7470A	564593	EPA 7470A	564990

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SCAN/BKG 03

Pace Project No.: 92492418

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92492418011	HGWC-120	EPA 7470A	564593	EPA 7470A	564990
92492418012	FD-01	EPA 7470A	564593	EPA 7470A	564990
92492418013	HGWC-124	EPA 7470A	564593	EPA 7470A	564990
92492418014	HGWA-1	EPA 7470A	564593	EPA 7470A	564990
92492418004	HGWC-125	SM 2450C-2011	563552		
92492418005	HGWC-126	SM 2450C-2011	563552		
92492418006	FB-01	SM 2450C-2011	563552		
92492418001	HGWA-122	EPA 300.0 Rev 2.1 1993	562433		
92492418002	HGWA-2	EPA 300.0 Rev 2.1 1993	562698		
92492418003	HGWA-3	EPA 300.0 Rev 2.1 1993	562698		
92492418004	HGWC-125	EPA 300.0 Rev 2.1 1993	562698		
92492418005	HGWC-126	EPA 300.0 Rev 2.1 1993	562698		
92492418006	FB-01	EPA 300.0 Rev 2.1 1993	562698		
92492418007	HGWC-121A	EPA 300.0 Rev 2.1 1993	563042		
92492418008	MW-32	EPA 300.0 Rev 2.1 1993	563042		
92492418009	MW-39	EPA 300.0 Rev 2.1 1993	563042		
92492418010	MW-41	EPA 300.0 Rev 2.1 1993	563042		
92492418011	HGWC-120	EPA 300.0 Rev 2.1 1993	563042		
92492418012	FD-01	EPA 300.0 Rev 2.1 1993	563042		
92492418013	HGWC-124	EPA 300.0 Rev 2.1 1993	563290		
92492418014	HGWA-1	EPA 300.0 Rev 2.1 1993	564239		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Rec

WO#: 92492418

Client Name: G. A. Power



Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used: 214

Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature: 5.8
Temp should be above freezing to 6°C

Biological Tissue is Frozen: Yes No

Optional
Proj. Due Date:
Proj. Name:

Date and Initials of person examining contents: 8/25/2004

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

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review:

Date: _____

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



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

Section B
 Required Project Information:
 Report for: SCS Contacts
 Copy to: Geosynthetic Contacts

Section C
 Invoice Information:
 Adaptor: Southern Co.
 Company Name:
 Address:
 State:
 City:
 Zip:
 Project Name: Plant Hammond AP-3 SCARBKG 03
 Project Number: GW6581
 Requested Due Date/TAT: 10 Day
 Requested Analysis Filtered (Y/N):
 Site Location:
 STATE: GA

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER CCR

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE SAMPLE TYPE (G=GRAB C=COMP) DATE TIME DATE TIME SAMPLE TEMP AT COLLECTION # OF CONTAINERS Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other Analysis Test Fluoride App IV Metals 00207470* RAD 226/228	COLLECTED DATE TIME DATE TIME	PRESERVED Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH	ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		ACCEPTED BY / AFFILIATION		SAMPLE CONDITIONS		
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)					
1	HQWA-1	WT G													
2	HQWA-2	WT G													
3	HQWA-3	WT G													
4	HQWA-122	WT G	8/24	16:52											
5	HQWA-120	WT G													
6	HQWA-124	WT G													
7	HQWA-124	WT G													
8	HQWA-124	WT G													
9	HQWA-124	WT G													
10	HQWA-124	WT G													
11	HQWA-124	WT G													
12	HQWA-124	WT G													

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

RELINQUISHED BY / AFFILIATION:
 Date: 8/25/20
 Time: 11:21
 Signature: *[Signature]*
 Affiliation: Media Relations Georgia

ACCEPTED BY / AFFILIATION:
 Date: 8/24/2020
 Time: 19:53
 Signature: *[Signature]*
 Affiliation: Media Relations Georgia

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

SAAMPLER NAME AND SIGNATURE: Aaron Reaser
PRINT NAME OF SAAMPLER: Aaron Reaser
SIGNATURE OF SAAMPLER: *[Signature]*
DATE SIGNED (MM/DD/YY): 08/24/2020

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

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



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		Section B Required Project Information Report To: SCS Contacts Copy To: Geosyntec Contacts		Section C Invoice Information Attention: Southern Co. Company Name: Address: Price Quote Reference: Price Project Manager: Price Profile #:	
Email To: SCS Contacts Phone: Requested Due Date/TAT: 10 Day		Purchase Order No.: Project Name: Plant Hammond AP-3 Scan/BKG 03 Project Number: GW6581		REGULATORY AGENCY NPOES <input type="checkbox"/> GROUND WAT ¹ <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> Site Location: <u>GA</u> STATE:	
Section D Required Client Information Valid Matrix Codes Matrix Code Sample ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE		Section B Required Project Information Matrix Code Sample Type (G=GRAB C=COMP) Date Time Date Time Sample Temp at Collection # of Containers Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other Analysis Test Fluoride App IV Metals 6020/7470* RAD 226/228		Section C Preservatives Y/N N N N N Requested Analyte Filtered (Y/N)	

ITEM #	MATRIX CODE	SAMPLE TYPE	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	UNPRESERVED	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Analysis Test	Fluoride	App IV Metals 6020/7470*	RAD 226/228	Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)	Price Project No./ Lab ID.	
1	HQWWT-1	WT G	8/25	10:35			19	4	1	3														
2	HQWNA-2	WT G	8/25	09:25			19	4	1	3														
3	HQWNA-3	WT G																						
4	HQWWT-122	WT G																						
5	HQWWT-120	WT G																						
6	HQWWT-121	WT G																						
7	HQWWT-124	WT G																						
8	MMW-92	WT G																						
9	MMW-90	WT G																						
10	MMW-41	WT G																						
11																								
12																								

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

App IV Metals-Sb, As, Ba, Be, Cd, Cr, Cu, Pb, U, Hg, Mo, Se, Tl

Relinquished by / Affiliation: *Chad R. Russo* Date: 8/25 Time: 1615

Accepted by / Affiliation: *Charles...* Date: 8/25 Time: 1615

Signature of Sampler: *Chad Russo* Date Signed: 8/25

Signature of Analyte Filtered: *Chad Russo* Date Signed: 8/25

Temp in °C: 46.7

Received on Ice (Y/N): Y

Custody Sealed Cooler (Y/N): Y

Samples Intact (Y/N): Y

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



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

Page: 2 of 2

Section A Required Client Information	Section B Required Project Information	Section C Invoice Information:
Company: GA Power	Report To: SCS Contacts	Address: Southern Co.
Address: Atlanta, GA	Copy To: Goosynite Contacts	Company Name: Southern Co.
Phone: SCS Contacts	Purchase Order No.:	Address:
Fax:	Project Name: Plant Hammond AP-3 Scan/BKG 03	Site Location:
Requested Due Date/TAT: 10 day	Project Number: GW0581	State: GA
		REGULATORY AGENCY
		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER CCR

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	MATRIX CODE (See valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
					DATE	TIME	DATE										
1	HGWC-125	WASTE WATER WASTE WATER PRODUCT SOL/SOLID	WT G	G	8/25	1151	19	5	2	3	X	N	62.3				
2	HGWC-126		WT G	G	8/25	1255	20	5	2	3	X	N	6.78				
3	FB-01		WT G	G	8/25	1600	-	5	2	3	X	N					
4	FB-01		WT G	C							X	N					
5											X	N					
6											X	N					
7											X	N					
8											X	N					
9											X	N					
10											X	N					
11											X	N					
12											X	N					

ADDITIONAL COMMENTS

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

RELEASUED BY / AFFILIATION

8/25/02 1830 1615

8/25/02 1830 1730

8/26/02 0949 9:30a

8/26/02 1200 4:6

ACCEPTED BY / AFFILIATION

8/25/02 1615

8/25/02 1730

8/26/02 9:30a

8/26/02 1200

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Russ

SIGNATURE of SAMPLER: Chad Russ

DATE Signed (MM/DD/YYYY): 8/25/02

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

F-ALL-Q-020REV 07, 15.F-06-2007



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information Company: GA Power Address: Atlanta, GA	Section B Required Project Information Report To: SCS Contacts Copy To: Geosynthetic Contacts	Section C Invoicing Information Attention: Southern Co.	Page: _____ of _____
----------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------	----------------------

Requested Due Date/TIME: 18 Day	Project Name: Plant Hammond AP-3 Scan/BKG 03	Company Name: _____	Address: _____
Requested Due DATE/TIME: 18 Day	Project Number: GW6581	Price Quote: _____	Price Quote Reference: Kevin Heming
Requested Analytic Filtered (Y/N)	Requested Analytic Filtered (Y/N)	Requested Analytic Filtered (Y/N)	Requested Analytic Filtered (Y/N)
Requested Analytic Filtered (Y/N)	Requested Analytic Filtered (Y/N)	Requested Analytic Filtered (Y/N)	Requested Analytic Filtered (Y/N)

ITEM #	Section D Required Client Information	Valid Matrix Codes E001E D001E W001E W002E W003E W004E W005E W006E W007E W008E W009E W010E W011E W012E W013E W014E W015E W016E W017E W018E W019E W020E W021E W022E W023E W024E W025E W026E W027E W028E W029E W030E W031E W032E W033E W034E W035E W036E W037E W038E W039E W040E W041E W042E W043E W044E W045E W046E W047E W048E W049E W050E W051E W052E W053E W054E W055E W056E W057E W058E W059E W060E W061E W062E W063E W064E W065E W066E W067E W068E W069E W070E W071E W072E W073E W074E W075E W076E W077E W078E W079E W080E W081E W082E W083E W084E W085E W086E W087E W088E W089E W090E W091E W092E W093E W094E W095E W096E W097E W098E W099E W100E	Matrix Code (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Preservatives	Analysis Test	Fluoride	App IV Metals 60207470*	RAD 220/228	Residual Chlorine (Y/N)	pH
1	HQWA-1	WT G																
2	HQWA-2	WT G																
3	HQWA-3	WT G																
4	HQWA-4	WT G																
5	HQWA-5	WT G																
6	HQWA-6	WT G																
7	HQWA-7	WT G																
8	HQWA-8	WT G																
9	HQWA-9	WT G																
10	HQWA-10	WT G																
11	HQWA-11	WT G																
12	HQWA-12	WT G																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please note dry wells, stone through any well not sampled, and note when the last sample for the event has been taken.	Baron Reeder	8/27/20	0805	Baron Reeder	8/27/20	0805	
	Baron Reeder	8/27/20	0556	Baron Reeder	8/27/20	0856	
	Baron Reeder	8/27/20	12:40	Baron Reeder	8/27/20	1240	

SAMPLER NAME AND SIGNATURE		DATE SIGNED	DATE	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT NAME OF SAMPLER: Baron Reeder		08/26/2020	08/26/2020				
SIGNATURE OF SAMPLER: <i>Baron Reeder</i>							

*App IV Metals=SR, As, Ba, Be, Cd, Cr, Co, Pb, U, Hg, Mo, Se, Tl



CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Required Client Information Company: GA Power Address: Atlanta, GA	Section B Required Project Information Report to: SCS Contacts Copy to: Geosynlec Contacts	Section C Invoice Information Attention: Southern Co. Company Name: Address:
Email To: SCS Contacts Phone: Fax Requested Due Date/TAT: 10 Day	Purchase Order No.: Project Name: Plant Hammond AP-3 Scan/BKG 03 Project Number: GW6581	Project Date: Release: Plant Project Manager: Kevin Herring Pace Project #
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER CCR		Site Location: CA STATE:

ITEM #	Section D Required Chain Information Valid Matrix Codes MATRIX CODE DW: DOMESTIC WATER WT: WASTE WATER WW: WASTE WATER P: PRODUCT S: SOIL G: GROUND W: WASTE A: AIR O: OTHER T: TISSUE	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			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Requested Analysis Filtered (Y/N)			Residual Chlorine (Y/N)	Sample Conditions Temp in °C Received on Ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N)
					DATE	TIME	DATE				TIME	Fluoride	App IV Metals 6020/470*		
1	HGMWA-1		WT-G												
2	HGMWA-2		WT-G												
3	HGMWA-3		WT-G												
4	HGMWA-122		WT-G												
5	HGMWC-120		WT-G	8/26	16:50			21							
6	HGMWC-121		WT-G												
7	HGMWC-124		WT-G												
8	MWV-32		WT-G												
9	MWV-39		WT-G												
10	MWV-41		WT-G												
11															
12															

REQUISITIONED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Blad Rutter / gco	8/26/08	17:40	Kevin Herring	8/26/08	17:40
Blad Rutter / gco	8/27/08	08:05	Kevin Herring	8/27/08	08:05
Blad Rutter / gco	8/27/08	08:56	Kevin Herring	8/27/08	08:56
Blad Rutter / gco	8/27/08	13:40	Kevin Herring	8/27/08	13:40

PRINT Name of SAMPLER: Blad Rutter	DATE Signed (MM/DD/YYYY): 8/26/08
SIGNATURE OF SAMPLER: Blad Rutter	DATE Signed (MM/DD/YYYY): 8/26/08

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

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

Section B Required Project Information
 Report To: SCS Contacts
 Copy To: Geosynlec Contacts

Section C Invoice Information
 Invoice Number: SCDFB091
 Attention: Southorn Co.
 Company Name: Southorn Co.
 Address: [Blank]

Page: _____ of _____

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER COR

Site Location: _____
 STATE: _____

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	Preservatives							Analysis Test	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH =				
												H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other						CHloride, Fluoride, Sulfate	TDS	App. III & IV Metals 6010/6020/7476	RAD 228/228
1	HQMG-123	WT G	WT G																								
2	HQMG-429	WT G	WT G																								
3	EB-01	WT G	WT G																								
4	FD-01	WT G	WT G																								
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											

ADDITIONAL COMMENTS: *DR 8-26-2020*

REMOUNISHED BY/AFFILIATION: *Baron Reedler*
 DATE: *8/27/20*
 TIME: *0805*
 ACCEPTED BY/AFFILIATION: *K. Williams*
 DATE: *8/27/20*
 TIME: *0805*

SAMPLER NAME AND SIGNATURE: *Baron Reedler*
 PRINT NAME OF SAMPLER: *Baron Reedler*
 SIGNATURE OF SAMPLER: *[Signature]*
 DATE Signed (MM/DD/YY): *08/26/2020*

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information Company: GA Power Address: Atlanta, GA Email To: SCS Contacts Phone: _____ Requested Due Date/TAT: 10 Day	Section B Project Information Report To: SCS Contacts Copy To: Geosynlec Contacts Order No.: _____ Project Name: Plant Hammond A/P-3 Scan/BKG 03 Project Number: GW6561	Section C Invoice Information Agency: Southern Co. Company Name: _____ Address: _____ Reference: _____ Pace Project Manager: Kevin Herring Pace Point # _____
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER CCM		
Site Location: _____ STATE: _____		

ITEM #	Section D Required Client Information SAMPLE ID JAZ-09/2 Sample IDs MUST BE UNIQUE	VALID Matrix Codes MATRIX CODE WATER: DIV, WASTE WATER: WW, PRODUCT: SL, OIL: WP, AIR: AIR, OTHER: OTHER, ISSUE: ISSUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test			Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH =													
					DATE	TIME					Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Y/N				Y/N	Y/N											
1	HGWA-1		WT G							4	1	3																							
2	HGWA-2		WT G							4	1	3																							
3	HGWA-3		WT G							4	1	3																							
4	HGWA-122		WT G							4	1	3																							
5	HGWA-120		WT G							4	1	3																							
6	HGWA-124		WT G							4	1	3																							
7	HGWA-124		WT G							4	1	3																							
8	MW-32		WT G							4	1	3																							
9	MW-99		WT G							4	1	3																							
10	MW-41		WT G							4	1	3																							
11																																			
12																																			

ADDITIONAL COMMENTS: _____

REINQUISHED BY / AFFILIATION: _____ DATE: _____ TIME: _____

ACCEPTED BY / AFFILIATION: _____ DATE: _____ TIME: _____

SAMPLER NAME AND SIGNATURE: _____

PRINT Name of SAMPLER: _____ DATE Signed (MM/DD/YY): _____

SIGNATURE of SAMPLER: _____

Temp in °C: _____

Received on Ice (Y/N): _____

Custody Sealed Cooler (Y/N): _____

Samples Intact (Y/N): _____

Temp in °C: _____

Received on Ice (Y/N): _____

Custody Sealed Cooler (Y/N): _____

Samples Intact (Y/N): _____

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information Company: GA Power Address: Atlanta, GA		Section B Required Project Information Report to: SCS Contacts Copy to: Geosynlec Contacts		Section C Address Information Address: Southern Co.	
Email to: SCS Contacts		Purchase Order No.:		Company Name:	
Phone:		Project Name: Plant Hammond AP-3 SCARBKG 03		Reference: Kevin Herring	
Requested Date Data/TAT: 15 day		Project Number: GWS681		Requested Analysis Filtered (Y/N)	
				<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WAT <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER COM	
		Site Location: CA		<input type="checkbox"/> DRINKING WATER <input type="checkbox"/> OTHER COM	

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION		PRESERVED		ANALYSIS TEST		Residual Chlorine (Y/N)	pH = 7.02							
		DATE	TIME	DATE	TIME	UNPRESERVED	H ₂ SO ₄	HNO ₃	HCl			NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Fluoride	App IV Metals 6020/7470*	RAD 226/228
1	HQWA-1	WT G	8/28 9:26			4	1	3										
2	HQWA-2	WT G	8/28 9:26			4	1	3										
3	HQWA-3	WT G				4	1	3										
4	HQWA-422	WT G				4	1	3										
5	HQWG-120	WT G				4	1	3										
6	HQWC-121	WT G				4	1	3										
7	HQWG-124	WT G				4	1	3										
8	MMW-32	WT G				4	1	3										
9	MMW-30	WT G				4	1	3										
10	MMW-41	WT G				4	1	3										
11																		
12																		

SAMPLER NAME AND SIGNATURE		DATE		TIME		DATE		TIME	
PRINT NAME OF SAMPLER: Thomas Kestler		8/28/20		10:51		8/28/20		10:57	
SIGNATURE OF SAMPLER: [Signature]		8/31/20		12:08		8/31/20		12:08	
DATE SIGNED (MM/DD/YY): 08/28/20		Temp in °C		Received on Ice (Y/N)		Custody Sealed Cooler (Y/N)		Samples Intact (Y/N)	

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

September 18, 2020

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

RE: Project: HAMMOND AP-3 SCAN/BKG 03 RADS
Pace Project No.: 92492413

Dear Joju Abraham:

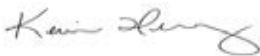
Enclosed are the analytical results for sample(s) received by the laboratory between August 25, 2020 and August 31, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92492413001	HGWA-122	Water	08/24/20 16:52	08/25/20 11:25
92492413002	HGWA-2	Water	08/25/20 10:38	08/26/20 12:00
92492413003	HGWA-3	Water	08/25/20 09:29	08/26/20 12:00
92492413004	HGWC-125	Water	08/25/20 14:51	08/26/20 12:00
92492413005	HGWC-126	Water	08/25/20 12:55	08/26/20 12:00
92492413006	FB-01	Water	08/25/20 16:00	08/26/20 12:00
92492413007	HGWC-121A	Water	08/26/20 15:17	08/27/20 08:56
92492413008	MW-32	Water	08/26/20 13:10	08/27/20 08:56
92492413009	MW-39	Water	08/26/20 10:23	08/27/20 08:56
92492413010	MW-41	Water	08/26/20 11:37	08/27/20 08:56
92492413011	HGWC-120	Water	08/26/20 16:50	08/27/20 08:56
92492413012	FD-01	Water	08/26/20 00:00	08/27/20 08:56
92492413013	HGWC-124	Water	08/27/20 11:17	08/28/20 11:08
92492413014	HGWA-1	Water	08/28/20 09:26	08/31/20 12:08

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SCAN/BKG 03 RADS
Pace Project No.: 92492413

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92492413001	HGWA-122	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492413002	HGWA-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492413003	HGWA-3	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492413004	HGWC-125	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492413005	HGWC-126	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492413006	FB-01	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492413007	HGWC-121A	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492413008	MW-32	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492413009	MW-39	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492413010	MW-41	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492413011	HGWC-120	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492413012	FD-01	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492413013	HGWC-124	EPA 9315	LAL	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492413014	HGWA-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92492413001	HGWA-122					
EPA 9315	Radium-226	-0.00628 ± 0.143 (0.392) C:79% T:NA	pCi/L		09/14/20 07:28	
EPA 9320	Radium-228	0.883 ± 0.601 (1.16) C:58% T:72%	pCi/L		09/16/20 11:38	
Total Radium Calculation	Total Radium	0.883 ± 0.744 (1.55)	pCi/L		09/17/20 11:28	
92492413002	HGWA-2					
EPA 9315	Radium-226	0.247 ± 0.197 (0.321) C:67% T:NA	pCi/L		09/14/20 07:06	
EPA 9320	Radium-228	0.531 ± 0.470 (0.952) C:59% T:82%	pCi/L		09/16/20 11:38	
Total Radium Calculation	Total Radium	0.778 ± 0.667 (1.27)	pCi/L		09/17/20 11:28	
92492413003	HGWA-3					
EPA 9315	Radium-226	0.0110 ± 0.154 (0.407) C:81% T:NA	pCi/L		09/14/20 07:12	
EPA 9320	Radium-228	0.319 ± 0.502 (1.09) C:59% T:67%	pCi/L		09/16/20 11:38	
Total Radium Calculation	Total Radium	0.330 ± 0.656 (1.50)	pCi/L		09/17/20 11:28	
92492413004	HGWC-125					
EPA 9315	Radium-226	0.342 ± 0.208 (0.292) C:84% T:NA	pCi/L		09/14/20 07:12	
EPA 9320	Radium-228	1.31 ± 0.601 (1.02) C:58% T:82%	pCi/L		09/16/20 11:39	
Total Radium Calculation	Total Radium	1.65 ± 0.809 (1.31)	pCi/L		09/17/20 11:28	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SCAN/BKG 03 RADS
 Pace Project No.: 92492413

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92492413005	HGWC-126					
EPA 9315	Radium-226	0.584 ± 0.290 (0.456) C:84% T:NA	pCi/L		09/14/20 07:26	
EPA 9320	Radium-228	1.24 ± 0.706 (1.30) C:56% T:67%	pCi/L		09/16/20 11:39	
Total Radium Calculation	Total Radium	1.82 ± 0.996 (1.76)	pCi/L		09/17/20 11:28	
92492413006	FB-01					
EPA 9315	Radium-226	0.142 ± 0.149 (0.287) C:86% T:NA	pCi/L		09/14/20 08:24	
EPA 9320	Radium-228	0.359 ± 0.465 (0.990) C:61% T:80%	pCi/L		09/16/20 11:39	
Total Radium Calculation	Total Radium	0.501 ± 0.614 (1.28)	pCi/L		09/17/20 11:28	
92492413007	HGWC-121A					
EPA 9315	Radium-226	0.153 ± 0.141 (0.251) C:89% T:NA	pCi/L		09/14/20 08:24	
EPA 9320	Radium-228	1.81 ± 0.712 (1.14) C:61% T:75%	pCi/L		09/16/20 11:39	
Total Radium Calculation	Total Radium	1.96 ± 0.853 (1.39)	pCi/L		09/17/20 11:28	
92492413008	MW-32					
EPA 9315	Radium-226	0.281 ± 0.176 (0.244) C:89% T:NA	pCi/L		09/14/20 08:24	
EPA 9320	Radium-228	-0.0335 ± 0.466 (1.08) C:65% T:82%	pCi/L		09/16/20 11:39	
Total Radium Calculation	Total Radium	0.281 ± 0.642 (1.32)	pCi/L		09/17/20 11:28	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92492413009	MW-39					
EPA 9315	Radium-226	0.500 ± 0.240 (0.304) C:91% T:NA	pCi/L		09/14/20 08:24	
EPA 9320	Radium-228	0.883 ± 0.510 (0.913) C:59% T:79%	pCi/L		09/16/20 14:42	
Total Radium Calculation	Total Radium	1.38 ± 0.750 (1.22)	pCi/L		09/17/20 14:16	
92492413010	MW-41					
EPA 9315	Radium-226	0.313 ± 0.197 (0.304) C:89% T:NA	pCi/L		09/14/20 08:24	
EPA 9320	Radium-228	1.22 ± 0.594 (1.01) C:59% T:78%	pCi/L		09/16/20 14:42	
Total Radium Calculation	Total Radium	1.53 ± 0.791 (1.31)	pCi/L		09/17/20 14:16	
92492413011	HGWC-120					
EPA 9315	Radium-226	0.357 ± 0.217 (0.331) C:83% T:NA	pCi/L		09/14/20 08:24	
EPA 9320	Radium-228	-0.169 ± 0.477 (1.17) C:57% T:67%	pCi/L		09/16/20 14:42	
Total Radium Calculation	Total Radium	0.357 ± 0.694 (1.50)	pCi/L		09/17/20 14:16	
92492413012	FD-01					
EPA 9315	Radium-226	0.102 ± 0.145 (0.312) C:89% T:NA	pCi/L		09/14/20 09:00	
EPA 9320	Radium-228	1.05 ± 0.508 (0.849) C:63% T:79%	pCi/L		09/16/20 14:42	
Total Radium Calculation	Total Radium	1.15 ± 0.653 (1.16)	pCi/L		09/17/20 14:16	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92492413013	HGWC-124					
EPA 9315	Radium-226	0.0465 ± 0.0876 (0.174) C:76% T:NA	pCi/L		09/10/20 19:37	
EPA 9320	Radium-228	0.447 ± 0.478 (0.997) C:66% T:77%	pCi/L		09/15/20 15:05	
Total Radium Calculation	Total Radium	0.494 ± 0.566 (1.17)	pCi/L		09/16/20 11:24	
92492413014	HGWA-1					
EPA 9315	Radium-226	-0.0409 ± 0.114 (0.247) C:91% T:NA	pCi/L		09/11/20 18:15	
EPA 9320	Radium-228	-0.622 ± 0.521 (1.31) C:60% T:80%	pCi/L		09/16/20 12:46	
Total Radium Calculation	Total Radium	0.000 ± 0.635 (1.56)	pCi/L		09/17/20 14:16	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-122 Lab ID: 92492413001 Collected: 08/24/20 16:52 Received: 08/25/20 11:25 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	-0.00628 ± 0.143 (0.392) C:79% T:NA	pCi/L	09/14/20 07:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.883 ± 0.601 (1.16) C:58% T:72%	pCi/L	09/16/20 11:38	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.883 ± 0.744 (1.55)	pCi/L	09/17/20 11:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Sample: HGWA-2 **Lab ID: 92492413002** Collected: 08/25/20 10:38 Received: 08/26/20 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	0.247 ± 0.197 (0.321) C:67% T:NA	pCi/L	09/14/20 07:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.531 ± 0.470 (0.952) C:59% T:82%	pCi/L	09/16/20 11:38	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.778 ± 0.667 (1.27)	pCi/L	09/17/20 11:28	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Sample: HGWA-3 **Lab ID: 92492413003** Collected: 08/25/20 09:29 Received: 08/26/20 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	0.0110 ± 0.154 (0.407) C:81% T:NA	pCi/L	09/14/20 07:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.319 ± 0.502 (1.09) C:59% T:67%	pCi/L	09/16/20 11:38	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.330 ± 0.656 (1.50)	pCi/L	09/17/20 11:28	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-125 Lab ID: 92492413004 Collected: 08/25/20 14:51 Received: 08/26/20 12:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.342 ± 0.208 (0.292) C:84% T:NA	pCi/L	09/14/20 07:12	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.31 ± 0.601 (1.02) C:58% T:82%	pCi/L	09/16/20 11:39	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.65 ± 0.809 (1.31)	pCi/L	09/17/20 11:28	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-126 Lab ID: 92492413005 Collected: 08/25/20 12:55 Received: 08/26/20 12:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.584 ± 0.290 (0.456) C:84% T:NA	pCi/L	09/14/20 07:26	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.24 ± 0.706 (1.30) C:56% T:67%	pCi/L	09/16/20 11:39	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.82 ± 0.996 (1.76)	pCi/L	09/17/20 11:28	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Sample: FB-01 **Lab ID: 92492413006** Collected: 08/25/20 16:00 Received: 08/26/20 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	0.142 ± 0.149 (0.287) C:86% T:NA	pCi/L	09/14/20 08:24	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.359 ± 0.465 (0.990) C:61% T:80%	pCi/L	09/16/20 11:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.501 ± 0.614 (1.28)	pCi/L	09/17/20 11:28	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-121A Lab ID: 92492413007 Collected: 08/26/20 15:17 Received: 08/27/20 08:56 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.153 ± 0.141 (0.251) C:89% T:NA	pCi/L	09/14/20 08:24	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.81 ± 0.712 (1.14) C:61% T:75%	pCi/L	09/16/20 11:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.96 ± 0.853 (1.39)	pCi/L	09/17/20 11:28	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Sample: MW-32 **Lab ID: 92492413008** Collected: 08/26/20 13:10 Received: 08/27/20 08:56 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	0.281 ± 0.176 (0.244) C:89% T:NA	pCi/L	09/14/20 08:24	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.0335 ± 0.466 (1.08) C:65% T:82%	pCi/L	09/16/20 11:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.281 ± 0.642 (1.32)	pCi/L	09/17/20 11:28	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Sample: MW-39 **Lab ID: 92492413009** Collected: 08/26/20 10:23 Received: 08/27/20 08:56 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	0.500 ± 0.240 (0.304) C:91% T:NA	pCi/L	09/14/20 08:24	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.883 ± 0.510 (0.913) C:59% T:79%	pCi/L	09/16/20 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.38 ± 0.750 (1.22)	pCi/L	09/17/20 14:16	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Sample: MW-41 **Lab ID: 92492413010** Collected: 08/26/20 11:37 Received: 08/27/20 08:56 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	0.313 ± 0.197 (0.304) C:89% T:NA	pCi/L	09/14/20 08:24	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.22 ± 0.594 (1.01) C:59% T:78%	pCi/L	09/16/20 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.53 ± 0.791 (1.31)	pCi/L	09/17/20 14:16	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-120 Lab ID: 92492413011 Collected: 08/26/20 16:50 Received: 08/27/20 08:56 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.357 ± 0.217 (0.331) C:83% T:NA	pCi/L	09/14/20 08:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.169 ± 0.477 (1.17) C:57% T:67%	pCi/L	09/16/20 14:42	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.357 ± 0.694 (1.50)	pCi/L	09/17/20 14:16	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Sample: FD-01 **Lab ID: 92492413012** Collected: 08/26/20 00:00 Received: 08/27/20 08:56 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	0.102 ± 0.145 (0.312) C:89% T:NA	pCi/L	09/14/20 09:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.05 ± 0.508 (0.849) C:63% T:79%	pCi/L	09/16/20 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.15 ± 0.653 (1.16)	pCi/L	09/17/20 14:16	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Sample: HGWC-124 **Lab ID: 92492413013** Collected: 08/27/20 11:17 Received: 08/28/20 11:08 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	0.0465 ± 0.0876 (0.174) C:76% T:NA	pCi/L	09/10/20 19:37	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.447 ± 0.478 (0.997) C:66% T:77%	pCi/L	09/15/20 15:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.494 ± 0.566 (1.17)	pCi/L	09/16/20 11:24	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

Sample: HGWA-1 **Lab ID: 92492413014** Collected: 08/28/20 09:26 Received: 08/31/20 12:08 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	-0.0409 ± 0.114 (0.247) C:91% T:NA	pCi/L	09/11/20 18:15	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.622 ± 0.521 (1.31) C:60% T:80%	pCi/L	09/16/20 12:46	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.000 ± 0.635 (1.56)	pCi/L	09/17/20 14:16	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

QC Batch: 412356 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92492413001, 92492413002, 92492413003, 92492413004, 92492413005, 92492413006, 92492413007, 92492413008

METHOD BLANK: 1994515 Matrix: Water

Associated Lab Samples: 92492413001, 92492413002, 92492413003, 92492413004, 92492413005, 92492413006, 92492413007, 92492413008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0596 ± 0.133 (0.265) C:74% T:NA	pCi/L	09/11/20 18:17	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

QC Batch:	412347	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92492413009, 92492413010, 92492413011, 92492413012

METHOD BLANK: 1994502 Matrix: Water

Associated Lab Samples: 92492413009, 92492413010, 92492413011, 92492413012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.314 ± 0.487 (1.05) C:61% T:69%	pCi/L	09/16/20 14:42	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

QC Batch: 412358

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92492413009, 92492413010, 92492413011, 92492413012

METHOD BLANK: 1994517

Matrix: Water

Associated Lab Samples: 92492413009, 92492413010, 92492413011, 92492413012

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0557 ± 0.119 (0.278) C:90% T:NA	pCi/L	09/14/20 08:58	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

QC Batch: 412653	Analysis Method: EPA 9320
QC Batch Method: EPA 9320	Analysis Description: 9320 Radium 228
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92492413014

METHOD BLANK: 1995813 Matrix: Water

Associated Lab Samples: 92492413014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.0793 ± 0.359 (0.855) C:71% T:76%	pCi/L	09/16/20 11:15	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

QC Batch:	412851	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92492413014

METHOD BLANK:	1996985	Matrix:	Water
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Associated Lab Samples: 92492413014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.205 ± 0.164 (0.296) C:93% T:NA	pCi/L	09/11/20 17:15	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

QC Batch: 412345	Analysis Method: EPA 9320
QC Batch Method: EPA 9320	Analysis Description: 9320 Radium 228
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92492413013

METHOD BLANK: 1994499 Matrix: Water

Associated Lab Samples: 92492413013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.357 ± 0.355 (0.727) C:71% T:84%	pCi/L	09/15/20 15:02	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

QC Batch: 412352	Analysis Method: EPA 9315
QC Batch Method: EPA 9315	Analysis Description: 9315 Total Radium
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92492413013

METHOD BLANK: 1994514 Matrix: Water

Associated Lab Samples: 92492413013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.206 ± 0.102 (0.149) C:95% T:NA	pCi/L	09/10/20 19:37	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SCAN/BKG 03 RADS
 Pace Project No.: 92492413

QC Batch: 412346 Analysis Method: EPA 9320
 QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
 Laboratory: Pace Analytical Services - Greensburg
 Associated Lab Samples: 92492413001, 92492413002, 92492413003, 92492413004, 92492413005, 92492413006, 92492413007, 92492413008

METHOD BLANK: 1994501 Matrix: Water
 Associated Lab Samples: 92492413001, 92492413002, 92492413003, 92492413004, 92492413005, 92492413006, 92492413007, 92492413008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.749 ± 0.397 (0.699) C:71% T:81%	pCi/L	09/16/20 11:37	

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QUALIFIERS

Project: HAMMOND AP-3 SCAN/BKG 03 RADS

Pace Project No.: 92492413

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-3 SCAN/BKG 03 RADS
Pace Project No.: 92492413

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92492413001	HGWA-122	EPA 9315	412356		
92492413002	HGWA-2	EPA 9315	412356		
92492413003	HGWA-3	EPA 9315	412356		
92492413004	HGWC-125	EPA 9315	412356		
92492413005	HGWC-126	EPA 9315	412356		
92492413006	FB-01	EPA 9315	412356		
92492413007	HGWC-121A	EPA 9315	412356		
92492413008	MW-32	EPA 9315	412356		
92492413009	MW-39	EPA 9315	412358		
92492413010	MW-41	EPA 9315	412358		
92492413011	HGWC-120	EPA 9315	412358		
92492413012	FD-01	EPA 9315	412358		
92492413013	HGWC-124	EPA 9315	412352		
92492413014	HGWA-1	EPA 9315	412851		
92492413001	HGWA-122	EPA 9320	412346		
92492413002	HGWA-2	EPA 9320	412346		
92492413003	HGWA-3	EPA 9320	412346		
92492413004	HGWC-125	EPA 9320	412346		
92492413005	HGWC-126	EPA 9320	412346		
92492413006	FB-01	EPA 9320	412346		
92492413007	HGWC-121A	EPA 9320	412346		
92492413008	MW-32	EPA 9320	412346		
92492413009	MW-39	EPA 9320	412347		
92492413010	MW-41	EPA 9320	412347		
92492413011	HGWC-120	EPA 9320	412347		
92492413012	FD-01	EPA 9320	412347		
92492413013	HGWC-124	EPA 9320	412345		
92492413014	HGWA-1	EPA 9320	412653		
92492413001	HGWA-122	Total Radium Calculation	414382		
92492413002	HGWA-2	Total Radium Calculation	414382		
92492413003	HGWA-3	Total Radium Calculation	414382		
92492413004	HGWC-125	Total Radium Calculation	414382		
92492413005	HGWC-126	Total Radium Calculation	414382		
92492413006	FB-01	Total Radium Calculation	414382		
92492413007	HGWC-121A	Total Radium Calculation	414382		
92492413008	MW-32	Total Radium Calculation	414382		
92492413009	MW-39	Total Radium Calculation	414421		
92492413010	MW-41	Total Radium Calculation	414421		
92492413011	HGWC-120	Total Radium Calculation	414421		
92492413012	FD-01	Total Radium Calculation	414421		
92492413013	HGWC-124	Total Radium Calculation	414119		
92492413014	HGWA-1	Total Radium Calculation	414421		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

Client Name: G. Alwood

WO#: 92492413



Courier: Fed Ex UPS USPS Client Commercial Pace Other
Tracking #: _____

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

Proj. Name: _____

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used 214

Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Cooler Temperature 5.8

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 1/25/2004

Temp should be above freezing to 6°C

Comments: _____

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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



CHAIN-OF-CUSTODY / Analytical Request Document

Section A Required Client Information
 Company: GA Power
 Address: Atlanta, GA
 Email To: SCS Contacts
 Phone: SCS Contacts
 Requested Due Date/TAT: 30 Day

Section B Required Project Information
 Report To: SCS Contacts
 Copy To: Geosynthetic Contacts
 Project Name: Plant Hammond AP-3 ScavBKG 03
 Project Number: GW6581

Section C Invoice Information
 Attention: Southern Co.
 Company Name:
 Address:
 State: GA
 Regulatory Agency: NPDES GROUND WAT^r DRINKING WATER
 UST RCRA OTHER GCR

Valid Matrix Codes
 MATRIX CODE
 Sample IDs MUST BE UNIQUE
 (A-Z, 0-9, /, -)

ITEM #	Valid Matrix Codes	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)			Residual Chlorine (Y/N)
				DATE	TIME	DATE					TIME	Fluoride	App IV Metals 6020/7470*	
1	HGWA-1	WT G					1		X X X X					
2	HGWA-2	WT G					1		X X X X					
3	HGWA-3	WT G					1		X X X X					
4	HGWA-122	WT G	8/24	1653			3		X X X X					
5	HGWA-120	WT G					3		X X X X					
6	HGWA-124	WT G					3		X X X X					
7	HGW-124	WT G					0		X X X X					
8	MW-92	WT G					3		X X X X					
9	MW-99	WT G					3		X X X X					
10	MW-41	WT G					3		X X X X					
11														
12														

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

RELINQUISHED BY / AFFILIATION
 DATE TIME ACCEPTED BY / AFFILIATION
 DATE TIME

SAMPLER NAME AND SIGNATURE
 PRINT NAME OF SAMPLER: Aaron Reeder
 SIGNATURE OF SAMPLER: [Signature]
 DATE SIGNED (MM/DD/YY): 08/24/2020

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

FALL-0-020rev07, 15-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document

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

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

Section B Required Project Information
 Report To: SCS Contacts
 Copy To: Geosynthetic Contacts
 Purchase Order No.:
 Project Name: Plant Hammond AP-3 ScarvBKG 03
 Project Number: GW5581

Section C Invoice Information
 Attention: Southern Co.
 Company Name:
 Address:
 POC Name:
 Reference:
 Project Manager:
 Price Provide #:

REGULATORY AGENCY
 NPDES GROUND WAT/ DRINKING WATER
 UST RCRA OTHER CCR

Site Location: _____ STATE: _____

Requested Analyte Filtered (Y/N)

Page: 1 of 2

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Valid Matrix Codes GAS/IC/MS/TOC WATER WASTE WATER PRODUCT SOL/DROPS SLURRY SOLID WASTE AIR OTHER Tissue	MATRIX CODE (see valid codes to list)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Y/N	Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)	PH pH = 5.17 pH = 7.14	Pace Project No/ Lab ID. 62462413							
					DATE	TIME							H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol							Other	Fluoride	App IV Metals 6020/7470*	RAD 225/228			
1	HGWA-1		WT G	G			8/25	1038				4	1	3				X	X	X	X										
2	HGWA-2		WT G	G			8/25	1038				4	1	3				X	X	X	X										
3	HGWA-3		WT G	G			8/25	0925				4	1	3				X	X	X	X										
4	HQWA-122		WT G	G								4	1	3				X	X	X	X										
5	HQWA-120		WT G	G								4	1	3				X	X	X	X										
6	HQWA-121		WT G	G								4	1	3				X	X	X	X										
7	HQWA-124		WT G	G								4	1	3				X	X	X	X										
8	MWA-99		WT G	G								4	1	3				X	X	X	X										
9	MWA-98		WT G	G								4	1	3				X	X	X	X										
10	MWA-44		WT G	G								4	1	3				X	X	X	X										
11																															
12																															

ADDITIONAL COMMENTS

REINQUISHED BY / AFFILIATION

DATE

TIME

ACCEPTED BY / AFFILIATION

DATE

TIME

Temp in °C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples In tact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Russo

SIGNATURE of SAMPLER: Chad Russo

DATE Signed (MM/DD/YY): 8/25/2020

Important Note: By signing this form you are accepting Face's net 30 day payment terms and agreeing to the charges of 1.5% per month for any invoices not paid within 30 days. F-ALL-Q-020Rev.07, 15-F-06-2007



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

Section A Required Client Information	Section B Required Project Information	Section C Invoice Information:
Company: GA Power Address: Atlanta, GA	Report To: SCS Contacts Copy To: Geosyntec Contacts	Attention: Southern Co. Company Name:
Email To: SCS Contacts Phone: [] Requested Due Date/TAT: to Day	Purchase Order No.: Project Name: Plant Hammond AP-3 Scav/BKG 03 Project Number: GWS6581	Address: Project Manager: Kevin Harding Project Number:
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WAT. <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER COM.		
STATE: GA		

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DESIGNATED WATER WASTE WATER PRODUCT DROPS/DI WATER AIR OTHER TISSE	SCS CODE DW WW SL WP OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		PRESERVED		Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	
						DATE	TIME	DATE	TIME			
1	HGWC-125			WT G	G	8/25	1451	19	5	2	3	
2	HGWC-126			WT G	G	8/25	1455	20	5	2	3	
3	FB-01			WT G	G	8/25	1600	-	5	2	3	
4	FB-01			WT G	G			-	5	2	3	

PLEASE NOTE: Dry wash, strike through any waste not sampled, and note when the last sample for the event has been taken.

ADDITIONAL COMMENTS:

Relinquished by: *Geosyntec* Date: *8/25/20* Time: *11:15*
 Accepted by: *Kevin Harding* Date: *8/25* Time: *16:15*

App. III & IV Metals: Sb, As, Ba, Br, B, Cd, Ca, Cr, Co, Fe, U, Hg, Mo, Se, Tl

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: *CHAD RUSSO*
 SIGNATURE of SAMPLER: *Chad Russo*

DATE Signed (MANDATORY): *8/25/20*

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



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

Page: _____ of _____

Section A Required Client Information Company: GA Power Address: Atlanta, GA		Section B Required Project Information Request for SCS Contacts Copy To: Geosynthetic Contacts		Section C Invoice Information Attention: Southern Co. Company Name:	
Email To: SCS Contacts Phone: Pace		Purchase Order No.: Project Name: Plant Hammond AP-3 SCARBKG 03 Project Number: GW6581		Address: Pace Quote Pace Project Manager: Kevin Herring Pace Project #	
Requested Due Date/TAT: 10 Day		Regulatory Agency: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER CCR		Site Location: STATE: GA	

ITEM #	Section D Required Client Information Valid Matrix Codes MATERIAL: WASTE WATER, WASTE WATER P, PRODUCT, DISINFECTANT, WIRE, AIR, OTHER, TISSUE	Section E CODE DW, WW, P, DS, WH, AR, OT, TS	MATRIX CODE (see lab code book)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)	pH								
					DATE	TIME							UNPRESERVED	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol					Other	Fluoride	App IV Metals 60207470*	RAD 228/228				
1	MCMA-1	WT G										4																			
2	MCMA-2	WT G										4																			
3	MCMA-3	WT G										4																			
4	MCMA-4	WT G										4																			
5	MCMA-5	WT G										4																			
6	MCMA-6	WT G										4																			
7	MCMA-7	WT G										4																			
8	MCMA-8	WT G										4																			
9	MCMA-9	WT G										4																			
10	MCMA-10	WT G										4																			
11	MCMA-11	WT G										4																			
12	MCMA-12	WT G										4																			

ADDITIONAL COMMENTS Please note dry wells, states through any wells not sampled, and note when the last sample for the event has been taken.		RELINQUISHED BY / AFFILIATION Pace Sampler Pace		DATE 8/27/05		TIME 0805		ACCEPTED BY / AFFILIATION Pace Pace		DATE 8/27/05		TIME 0856	
App IV Metals: Sb, As, Ba, Be, Cd, Cr, Co, Pb, U, Hg, Mo, Se, Ni		Pace Sampler Pace		8/27/05		0805		Pace Pace		8/27/05		0856	

SAMPLER NAME AND SIGNATURE PRINT NAME OF SAMPLER: Aaron Reeder SIGNATURE OF SAMPLER: [Signature]		DATE SIGNED (MANDATORY): 08/26/2005	
---------------------------------------------------------------------------------------------------------------	--	--------------------------------------------	--

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A	Required Client Information	Section B	Required Project Information	Section C	Invoice Information
Company: GA Power	Address: Atlanta, GA	Report To: SCS Contacts	Copy To: Geosyntec Contacts	Invoice Number: Southern Co.	Attention: Southern Co.
Project Name: SCS Contacts	Requested Due Date/TAT: 10 day	Purchase Order No.:	Project Name: Plant Hammond AP-3 Scan/BKG 03	Company Name:	Address:
From: Fax	Project Number: GW6561	Project Name: Plant Hammond AP-3 Scan/BKG 03	Requested Due Date/TAT: 10 day	Pres. Clerk:	Pres. Clerk:
Requested Due Date/TAT: 10 day	Project Number: GW6561	Requested Due Date/TAT: 10 day	Project Number: GW6561	Pres. Analyst:	Pres. Analyst:
Requested Due Date/TAT: 10 day	Project Number: GW6561	Requested Due Date/TAT: 10 day	Project Number: GW6561	Manager:	Manager:
Requested Due Date/TAT: 10 day	Project Number: GW6561	Requested Due Date/TAT: 10 day	Project Number: GW6561	Site Location:	State:

ITEM #	Section D Required Client Information	Section E Required Project Information	Section F Required Client Information	COLLECTED		DATE	TIME	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
				Collector	Analyst								
1	HQWA-1	WT G	WT G										
2	HQWA-2	WT G	WT G										
3	HQWA-3	WT G	WT G										
4	HQWA-122	WT G	WT G										
5	HQWA-120	WT G	WT G										
6	HQWA-121	WT G	WT G										
7	HQWA-124	WT G	WT G										
8	MW-32	WT G	WT G										
9	MW-39	WT G	WT G										
10	MW-41	WT G	WT G										
11													
12													

Section D - Requested Client Information

Matrix: WATER, WASTE WATER, SOIL, OIL, AIR, OTHER
 Valid Matrix Codes: DW, WT, P, SL, WF, AS, OT, IS

Section E - Required Project Information

Matrix Code: WT G, SAMPLE TYPE: G-GRAB C-COMP

Section F - Required Client Information

Analysis Test: Fluoride, App IV Metals 6020/7470*, RAD 226/228

Section G - Regulatory Agency

Regulatory Agency: NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

Section H - Sample Conditions

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

Section I - Relinquished By / Affiliation

Relinquished By: *Clad Russo / gco* Date: *8/12/10* Time: *1740*

Section J - Accepted By / Affiliation

Accepted By: *Ray Jones* Date: *8/12/10* Time: *0805*

Section K - Sampler Name and Signature

Sampler Name: *Pace* Signature: *Clad Russo* Date Signed (MM/DD/YY): *8/12/10*

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

FALL-0-020Rev.07, 15-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: _____ of _____

Section A Required Client Information Company: GA Power Address: Atlanta, GA		Section B Required Project Information Report To: SCS Contacts Copy To: Geosynetic Contacts		Section C Invoice Information Attention: Southern Co. Company Name: Address: State:	
Email To: SCS Contacts Phone: _____ Fax: _____ Requested Date Delivered: 10 Day		Purchase Order No.: Project Name: Plant Hammond AP-3 Scarv/BKG 03 Project Number: GW6581		Pace Quote Reference: _____ Pace Project Manager: Kevin Herring Pace Problem #: _____	
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER OCM			Site Location: _____ STATE: GA		

ITEM #	Section D Required Client Information Valid Matrix Codes MATERIALS: WATER, WASTE WATER, PRODUCT, OTHER SCOC: DW, WW, SL, WL, AR, OT, TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives		Analysis Test	Requested Analysis Filtered (Y/N)
				DATE	TIME			DATE	TIME		
1	HGWG-123	WT G					1			Chloride, Fluoride, Sulfate	N
2	HGWG-428	WT G					1			TDS	N
3	ER-01	WT G					3			App. III & IV Metals 6010/6020/7470	N
4	FD-01	WT G					3			RAD 228/228	N
5		WT G					5				
6							2				
7											
8											
9											
10											
11											
12											

ADDITIONAL COMMENTS
 Please note dry wells, strike through any wells not sampled, and note when the last sample for the month has been taken.

RELINQUISHED BY / AFFILIATION
 [Signature] **SCS** DATE: 8/27/20
 [Signature] **Geosynetic** DATE: 8/27/20
 [Signature] **Pool** DATE: 8/27/20

ACCEPTED BY / AFFILIATION
 [Signature] **Geosynetic** DATE: 8/27/20
 [Signature] **Pool** DATE: 8/27/20
 [Signature] **Pool** DATE: 8/27/20

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

DATE SIGNED
 DATE SIGNED (MM/DD/YYYY): 08/26/2020

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

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



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

Page: | of |

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 A-P-3 Scar/BKG 03 Project Number: GWS681	Section C Invoice Information: Attention: Southern Co. Company Name: Address: PACE QUALITY Reference: PACE PROJECT Manager: Kevin Herring PACE PRINTER #
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

ITEM #	Valid Matrix Codes Required Client Information SCS CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION		# OF CONTAINERS	PRESERVATIVES						Requested Analysis Filtered (Y/N)			Residual Chlorine (Y/N)	pH =								
				DATE	TIME	DATE	TIME		Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Fluoride			App IV Metals 6020/7470*	RAD 226/228						
1	HGWA-1	WT G	G					4	1	3																	
2	HGWA-2	WT G	G					4	1	3																	
3	HGWA-3	WT G	G					4	1	3																	
4	HGWA-122	WT G	G					4	1	3																	
5	HGWA-120	WT G	G					4	1	3																	
6	HGWA-124	WT G	G	8/27	1117			4	1	3																	
7	HGWA-124	WT G	G					4	1	3																	
8	MW-32	WT U	U					4	1	3																	
9	MW-99	WT U	U					4	1	3																	
10	MW-41	WT U	U					4	1	3																	
11																											
12																											

ADDITIONAL COMMENTS: Please note dry wets, strike through any wells not sampled, and note when the last sample for the event has been taken.

RELINQUISHED BY / AFFILIATION: *[Signature]* DATE: 8/27/05 TIME: 11:05 AM

ACCEPTED BY / AFFILIATION: *[Signature]* DATE: 8/28/05 TIME: 11:08 AM

RELINQUISHED BY / AFFILIATION: *[Signature]* DATE: 8/28/05 TIME: 4:15 PM

DATE SIGNED (MANDATORY): 8/27/05

Section D: Valid Matrix Codes
 MATRICES: DOMESTIC WATER, WASTE WATER, PRODUCT, SOIL/SOLID, OIL, WIRE, AIR, OTHER, TISSUE
 SCS CODE: DW, WW, SL, CL, WP, AR, OT, TS
SAMPLE ID
 (A-Z, 0-9 / -)
 Sample IDs MUST BE UNIQUE

REGULATORY AGENCY: NPDES, GROUND WATER, DRINKING WATER, UST, RCRA, OTHER GCM

Site Location: STATE: GA

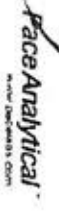
Temp in °C: _____

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 1% 30 day payment terms and agreeing to this charges of 1.5% per month for any invoices not paid within 30 days.



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

Page: 1 of 1

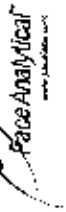
Section A: Required Client Information (Company: GA Power, Address: Atlanta, GA)
Section B: Required Project Information (Request For: SCS Contacts, Copy To: Geosyntec Contacts)
Section C: Invoice Information (Address: Southern Co., Company Name: Southern Co.)
REGULATORY AGENCY (NPDES, GROUND WATER, DRINKING WATER)

Table with columns: ITEM #, Section D (Valid Matrix Codes, Matrix Code, Sample Type), Collected (Date, Time), Sample Temp, # of Containers, Preservatives, Analysis Test, Requested Analysis Filtered (Y/N), Residual Chlorine (Y/N), Pace Project No/Lab LD, and SAMPLE CONDITIONS.

SAMPLER NAME AND SIGNATURE section with fields for PRINT NAME OF SAMPLER, SIGNATURE OF SAMPLER, DATE SIGNED, and SIGNATURE OF SAMPLER.

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 10 days.

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 9/11/2020
Worksheet: 55960
Matrix: DW

Method Blank Assessment	
MB Sample ID	1904515
MB Concentration	0.060
MB Counting Uncertainty	0.133
MB MDC	0.265
MB Numerical Performance Indicator	0.88
MB Status vs Numerical Indicator	N/A
MB Status vs MDC	Pass

Laboratory Control Sample Assessment	
LCSD (N or N)?	N
LCSS9560	LPSP55960
Count Date	9/11/2020
Spike I.D.	19-053
Decay Corrected Spike Concentration (pCi/mL)	24.044
Volumes Used (mL)	0.10
Aliquot Volume (L, g, F)	0.505
Target Conc. (pCi/L, g, F)	4.759
Uncertainty (Calculated)	0.057
Result (pCi/L, g, F)	5.342
LCSS CSD Counting Uncertainty (pCi/L, g, F)	0.688
Numerical Performance Indicator	1.60
Percent Recovery	111.84%
Status vs Numerical Indicator	N/A
Status vs Recovery	Pass
Upper % Recovery Limits	125%
Lower % Recovery Limits	75%

Duplicate Sample Assessment	
Sample I.D.	92492016012
Duplicate Sample I.D.	92492016012DUP
Sample Result (pCi/L, g, F)	4.731
Sample Result Counting Uncertainty (pCi/L, g, F)	0.626
Sample Duplicate Result (pCi/L, g, F)	5.414
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	0.692
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator	-1.435
Duplicate RPD	13.47%
Duplicate Status vs Numerical Indicator	N/A
Duplicate Status vs RPD	Pass
% RPD Limit	25%

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

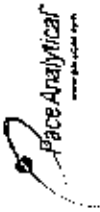
Comments:

Corrected
MAM 9/14/2020

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

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
 Analyst: LAL
 Date: 9/11/2020
 Worksheet: 55860
 Matrix: UW

Method Blank Assessment	
MS Sample ID	1894515
MB Concentration:	0.060
M/B Counting Uncertainty:	0.133
MB MDC:	0.265
MB Numerical Performance Indicator:	0.88
MS Status vs Numerical Indicator:	N/A
MS Status vs MDC:	Pass

Laboratory Control Sample Assessment		LCSD (Y or N) P	N
Count Date:		LCSD55960	LCSD55960
Spike ID:		9/14/2020	
Decay Corrected Spike Concentration (pCi/mL):		19.033	
Volume Used (mL):		24.044	
Aliquot Volume (L, g, F):		0.10	
Target Conc. (pCi/L, g, F):		0.526	
Uncertainty (Calculated):		4.759	
Result (pCi/L, g, F):		0.057	
Percent Recovery:		5.324	
Numerical Performance Indicator:		0.568	
Status vs Numerical Indicator:		1.60	
Status vs Recovery:		111.84%	
Upper % Recovery Limits:		N/A	
Lower % Recovery Limits:		Pass	
		125%	
		75%	

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCSD LSSD in the space below.
Sample ID:	92493016013	92493016015
Duplicate Sample ID:	92493016013DUP	92493016013DUP
Sample Result (pCi/L, g, F):	6.412	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.759	
Sample Duplicate Result (pCi/L, g, F):	5.632	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.718	
Are sample and/or duplicate results below RL?		See Below #
Duplicate Numerical Performance Indicator:	1.050	
Duplicate RPD:	9.13%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

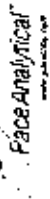
Comments:

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

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

08/20/17/16
 WMM 9/14/2020

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
 Analyst: LAL
 Date: 9/11/2020
 Worksheet: 56031
 Matrix: UJW

Method Blank Assessment	
MS Sample ID:	1996985
MB Concentration:	0.205
MB Counting Uncertainty:	0.162
MB MQC:	0.256
MB Numerical Performance Indicator:	2.48
MB Status vs Numerical Indicator:	N/A
MS Status vs MQC:	Pass

Laboratory Control Sample Assessment	
LCS# (Y or N)?	Y
LCS#56031	9/11/2020
Count Date:	19-033
Spike ID:	24-045
Decay Corrected Spike Concentration (pCi/L):	0.10
Volume Used (mL):	0.500
Aliquot Volume (L, g, F):	4.807
Target Conc. (pCi/L, g, F):	0.058
Uncertainty (Calculated):	4.231
Result (pCi/L, g, F):	0.345
LCS#CSD Counting Uncertainty (pCi/L, g, F):	-3.22
Numerical Performance Indicator:	88.02%
Percent Recovery:	N/A
Status vs Numerical Indicator:	Pass
Upper % Recovery Limit:	125%
Lower % Recovery Limit:	75%

Duplicate Sample Assessment	
Sample ID:	LCS#56031
Duplicate Sample ID:	LCS#56031
Sample Result (pCi/L, g, F):	4.314
Sample Duplicate Result (pCi/L, g, F):	0.361
Sample Duplicate Result (pCi/L, g, F):	4.231
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.345
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.325
Duplicate (Based on the LCS#CSD Percent Recoveries): Duplicate RPD:	2.94%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MQC

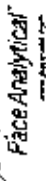
Comments:

Handwritten signature and date: LAL 9/11/2020

Sample Matrix Spike Control Assessment	
Sample Collection Date:	MS/MSD 2
Sample I.D.:	MS/MSD 1
Sample MS I.D.:	
Sample MSD I.D.:	
Spike ID:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
MS Spike Uncertainty (Calculated):	
MSD Spike Uncertainty (Calculated):	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
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 Limit:	
MS/MSD Lower % Recovery Limit:	

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: LAL
Date: 8/11/2020
Worklist: 55951
Matrix: DW

Method Blank Assessment	
MB Sample ID	1994517
MB Concentration	0.056
MB Counting Uncertainty	0.118
MB MDC	0.278
MB Numerical Performance Indicator	0.92
MB Status vs Numerical Indicator	N/A
MB Status vs. MDC	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	Count Date:	9/14/2020
Spike ID:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24,044	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.592	
Target Conc. (pCi/L, g, F):	4.809	
Uncertainty (Calculated):	0.055	
Result (pCi/L, g, F):	4.335	
LCSD Counting Uncertainty (pCi/L, g, F):	0.589	
Numerical Performance Indicator:	-0.11	
Percent Recovery:	95.35%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper vs Recovery Limits:	145%	
Lower vs Recovery Limits:	75%	

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCSD in the space below:
Sample ID:	92492413011
Duplicate Sample ID:	92492413011CUP
Sample Result (pCi/L, g, F):	0.357
Sample Duplicate Result (pCi/L, g, F):	0.211
Sample Duplicate Result (pCi/L, g, F):	0.265
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.184
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	0.647
Duplicate RPD:	49.70%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail
% RPD Limit:	35%

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

Comments:

Batch must be reprocessed if any unacceptable problems are

See 9/14/2020

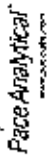
Sample Matrix Spike Control Assessment	MSMSD 1	MSMSD 2
Sample Collection Date:		
Sample MS ID:		
Sample MS ID:		
Spike ID:		
MSMSD Decay-Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc. (pCi/L, g, F):		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

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample ID:
Sample MS ID:
Sample MS ID:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Duplicate Numerical Performance Indicator:
MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:
% RPD Limit:

92492413011CUP

See 9/14/2020

Quality Control Sample Performance Assessment



Analytical MS/MS Manual: Enter All Fields Highlighted in Yellow.

Test: RA-226
Analyst: LAL
Date: 9/11/2020
Worklist: 56961
Matrix: DW

Method Blank Assessment	
MB Sample ID	1994517
MB Concentration:	0.086
MS Counting Uncertainty	0.138
MB MDC:	0.278
MB Numerical Performance Indicator:	0.92
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	PASS

Laboratory Control Sample Assessment	LCS (Y or N)?		N
	LCS55961	LCS55961	
Count Date:	9/14/2020		
Spike I.D.:	19-033		
Decay Corrected Spike Concentration (pCi/mL):	24.044		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.522		
Target Conc. (pCi/L, g, F):	4.609		
Uncertainty (Calculated):	0.056		
Result (pCi/L, g, F):	4.365		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.589		
Numerical Performance Indicator:	-0.71		
Percent Recovery:	95.35%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	PASS		
Upper % Recovery Limits:	126%		
Lower % Recovery Limits:	75%		

Duplicate Sample Assessment	Enter Duplicate sample ID's if other than LCS/LCSD in the space below:	
	Sample ID:	92492413010
Duplicate Sample ID:	92492413010DUP	
Sample Result (pCi/L, g, F):	0.313	
Sample Duplicate Result (pCi/L, g, F):	0.192	
Sample Duplicate Result (pCi/L, g, F):	0.188	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.181	
Are sample and/or duplicate results below RL?	0.939	
Duplicate Numerical Performance Indicator:	50.74%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD Limit:	Fail	
% RPD Limit:	25%	

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

Comments:

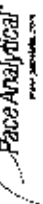
~~Quality Control Sample Performance Assessment~~ **P12**

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment	Sample I.D.	
	Sample MS I.D.	
Sample MSD I.D.		
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:		
MS/MSD Duplicate RPD:		
MS/MSD Duplicate Status vs Numerical Indicator:		
MS/MSD Duplicate Status vs RPD Limit:		

*Overall Performance
Pass 9/14/2020*

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 9/11/2020
Worklist: 55969
Matrix: DW

Method Blank Assessment	
MB Sample ID	1094514
MB Concentration	0.206
MB Counting Uncertainty	0.098
MB MDC	0.149
MB Numerical Performance Indicator	4.13
MB Status vs Numerical Indicator	N/A
MB Status vs. MDC	See Comment

Laboratory Control Sample Assessment	LCD % or N?	
	LCS5959	LCS05968
Count Date	9/11/2020	
Spike I.D.	19-003	
Decay Corrected Spike Concentration (pCi/mL)	24.045	
Volume Used (mL)	0.10	
Aliquot Volume (L, R, F)	0.507	
Target Conc. (pCi/L, g, F)	4.740	
Uncertainty (Calculated)	0.057	
Result (pCi/L, g, F)	4.372	
Uncertainty (pCi/L, g, F)	0.792	
Numerical Performance Indicator	-0.91	
% Status vs Numerical Indicator	92.23%	
Status vs Recovery	Pass	
Upper % Recovery Limits	125%	
Lower % Recovery Limits	75%	

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below	
	92492559006	92492559006DUP
Sample I.D.	92492559006	
Duplicate Sample I.D.	92492559006DUP	
Sample Result (pCi/L, g, F)	0.286	
Sample Result Counting Uncertainty (pCi/L, g, F)	0.138	
Sample Duplicate Result (pCi/L, g, F)	0.063	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	0.153	
Are sample and/or duplicate results below RL?	See Below #	
Duplicate Numerical Performance Indicator	2.147	
Duplicate RPD	128.44%	
Duplicate Status vs Numerical Indicator	Fail	
Duplicate Status vs RPD	25%	
% RPD Limit	25%	

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

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable.
***Result must be re-processed to unacceptable precision. N/A

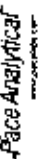
9/11/2020

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

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

JAN 9/11/2020

Quality Control Sample Performance Assessment



Test: Ra-226
 Analyst: LAL
 Date: 9/11/2020
 Worksheet: 55959
 Matrix: DW

Method Blank Assessment	MB Sample ID	MB Concentration	MB Counting Uncertainty	MB MDC	MB Numerical Performance Indicator	MB Status vs Numerical Indicator	MB Status vs. MDC
	1994514	0.206	0.098	0.149	4.13	N/A	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCSD55959	LCSD55959
Count Date:	9/11/2020	
Spike ID:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.045	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.507	
Target Conc. (pCi/L, g, F):	4.740	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	4.372	
Uncertainty (pCi/L, g, F):	0.762	
Percent Recovery:	92.23%	
Status vs Numerical Indicator:	Pass	
Upper % Recovery Limit:	125%	
Lower % Recovery Limit:	75%	

Duplicate Sample Assessment	Enter Duplicates sample IDs if other than LCSD/LCSD in the space below.	
	92492559007	92492559007DUP
Sample ID:	92492559007	
Duplicate Sample ID:	92492559007DUP	
Sample Result (pCi/L, g, F):	0.268	
Sample Duplicate Result (pCi/L, g, F):	0.118	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.234	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.201	
Are sample and/or duplicate results below RCD?	See Below #	
Duplicate Numerical Performance Indicator:	0.281	
Duplicate RPD:	13.77%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

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

Comments:

* The method blank result is below the reporting limit for this analysis and is acceptable.

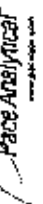
Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample ID: Sample MS ID: Sample MSD ID: Spike ID: MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (Calculated): MSD Spike Uncertainty (Calculated): Sample Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spikes 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 Limit: MS/MSD Lower % Recovery Limit:		

Matrix Spike/Matrix Spikes Duplicate Sample Assessment
Sample ID: Sample MS ID: Sample MSD ID: 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: Duplicate Numerical Performance Indicator: (Based on the Percent Recovery) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:

AMG 11/2020

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Rq-228
 Analyst: VAL
 Date: 9/10/2020
 Worksheet: 55955
 Matrix: WT

Method Blank Assessment	MB Sample ID	1994501
MB Concentration:	0.749	
MB 2 Sigma CSU:	0.387	
MB MDC:	0.698	
MB Numerical Performance Indicator:	3.70	
MB Status vs Numerical Indicator:	Fail	
MB Status vs MDC:	See Comment*	

Laboratory Control Sample Assessment	LCS# (Y or N)?	
	LCSD55955	LCSD55955
Count Date:	9/16/2020	9/16/2020
Spike ID:	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL):	38.383	38.383
Volumes Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.811	0.800
Target Conc. (pCi/L, g, F):	4.739	4.798
Uncertainty (Calculated):	0.234	0.235
Result (pCi/L, g, F):	5.520	6.376
LCS# LCS# 2 Sigma CSU (pCi/L, g, F):	1.311	1.417
Numerical Performance Indicator:	1.18	2.16
Percent Recovery:	116.90%	132.93%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limit:	135%	135%
Lower % Recovery Limit:	60%	88%

Duplicate Sample Assessment	LCS# (Y or N)?	
	LCSD55955	LCSD55955
Sample ID:	LCSD55955	LCSD55955
Duplicate Sample ID:	5590	5590
Sample Result (pCi/L, g, F):	1.311	1.311
Sample Duplicate Result (pCi/L, g, F):	6.376	6.376
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.417	1.417
Are sample and/or duplicate results below RL?	NO	NO
Duplicate Numerical Performance Indicator:	-0.860	-0.860
Duplicate Percent Recoveries:	12.84%	12.84%
Duplicate Status vs Numerical Indicator:	Pass	Pass
Duplicate Status vs RPD:	Pass	Pass
% RPD Limit:	36%	36%

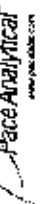
* Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:
 *The method blank result is below the reporting limit for this analysis and is acceptable.

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Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: **R3-228**
 Analyst: **VAL**
 Date: **9/14/2020**
 Worksheet: **56010**
 Matrix: **WT**

Method Blank Assessment	MB Sample ID	1995813
MB Concentration:	-0.079	
MB 2 Sigma CSU:	0.359	
MB MDC:	0.865	
MB Numerical Performance Indicator:	-0.43	
MB Status vs Numerical Indicator:	Pass	
MB Status vs MDC:	Pass	

LCSID (Y or N)?	Y
LCS56010	9/16/2020
LCS56010	20-030
Count Date:	38,384
Spike I.D.:	0.10
Decay Corrected Spike Concentration (pCi/mL):	0.810
Volume Used (mL):	4.737
Aliquot Volume (L, g, F):	0.234
Target Conc. (pCi/L, g, F):	5.008
Uncertainty (Calculated):	1.173
Result (pCi/L, g, F):	0.38
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	104.92%
Numerical Performance Indicator:	N/A
Percent Recovery:	Pass
Status vs Numerical Indicator:	135%
Upper % Recovery Limits:	60%
Lower % Recovery Limits:	

LCSID (Y or N)?	Y
LCS56010	9/16/2020
LCS56010	20-030
Count Date:	38,384
Spike I.D.:	0.10
Decay Corrected Spike Concentration (pCi/mL):	0.810
Volume Used (mL):	4.737
Aliquot Volume (L, g, F):	0.234
Target Conc. (pCi/L, g, F):	5.008
Uncertainty (Calculated):	1.173
Result (pCi/L, g, F):	0.38
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	104.92%
Numerical Performance Indicator:	N/A
Percent Recovery:	Pass
Status vs Numerical Indicator:	135%
Upper % Recovery Limits:	60%
Lower % Recovery Limits:	

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 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

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

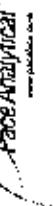
** Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDL.

Comments:

9-17-20

R3-228_56010_WT.xls
R3-228 (R086-B D4S-Sept19).xls
Duan.17.20

Quality Control Sample Performance Assessment



Test: Pa-228
 Analyst: VAL
 Date: 9/10/2020
 Worksheet: 55956
 Matrix: WWT

Method Blank Assessment

MB Sample ID	1994202
MB Concentration:	0.314
MB 2 Sigma CSU	0.487
MB HBC:	1.054
MB Numerical Performance Indicator:	1.16
MB Status vs Numerical Indicator:	Pass
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment

LCSD ID or N?	Y
LCSD55956	9/16/2020
LCSD55955	20-030
Count Data:	36,382
Spike ID:	0.10
Decay Corrected Spike Concentration (pCi/mL):	0.813
Volume Used (mL):	4.719
Aliquot Volume (L, g, F):	0.231
Target Conc (pCi/L, g, F):	5.086
Uncertainty (Calculated):	1.251
Result (pCi/L, g, F):	0.57
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	107.76%
Numerical Performance Indicator:	Pass
Percent Recovery:	135%
Status vs Numerical Indicator:	60%
Upper % Recovery Limit:	
Lower % Recovery Limit:	

Duplicate Sample Assessment

LCSD ID	Y
LCSD55956	9/16/2020
LCSD55955	20-030
Sample ID - Duplicate Sample ID:	38,382
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.10
Sample Duplicate Result (pCi/L, g, F):	0.813
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	4.719
Are samples within duplicate results below RPD?	0.231
Duplicate Numerical Performance Indicator:	5.086
Duplicate Percent Recoveries:	1.251
Duplicate Status vs Numerical Indicator:	0.57
Duplicate Status vs RPD:	107.76%
% RPD Limit:	Pass
	135%
	60%

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

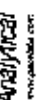
* Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

9/17/20

WJ

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 9/9/2020
Worksheet: 55854
Matrix: WT

Method Blank Assessment

MB Sample ID	1994409
MB Concentration:	0.357
MB 2 Sigma CSU:	0.366
MB MDC:	0.727
MB Numerical Performance Indicator:	1.97
MB Status vs Numerical Indicator:	Pass
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment

Count Date:	LCSD CV or NIV	Y
9/15/2020	LCSD65954	
20-030		20-030
38 394		38 394
0.10		0.10
0.829		0.829
4.752		4.632
0.223		0.227
5.042		4.838
1.200		1.149
0.46		0.34
106.10%		104.44%
N/A		N/A
Pass		Pass
135%		134%
50%		50%

Duplicate Sample Assessment

Sample ID:	LC855954	Enter Duplicate sample IDs if other than LCSD/LCSD in the space below.
Duplicate Sample ID:	LCSD056954	
Sample Result (pCi/L, g, F):	5.042	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.200	
Sample Duplicate Result (pCi/L, g, F):	4.838	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.149	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.241	
(Based on the LCSD Percent Recoveries) Duplicate RPD:	1.57%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

Sample Matrix Spike Control Assessment

Sample Collection Date:	MS/MSD 1	MS/MSD 2
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 (g, F):		
MS Target Conc (pCi/L, g, F):		
MSD Aliquot (g, F):		
MSD Target Conc (pCi/L, g, F):		
MSD Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.	
Sample MS I.D.	
Sample MSD I.D.	
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:

TH

Dr. G. K. W.

September 2020

November 02, 2020

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

RE: Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between September 16, 2020 and September 29, 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,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Pace Analytical Services Charlotte

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

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

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712

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

Pace Analytical Services Peachtree Corners

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

North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92495904001	HGWA-1	Water	09/15/20 14:01	09/16/20 11:14
92495904002	HGWA-2	Water	09/15/20 10:58	09/16/20 11:14
92495904003	HGWA-3	Water	09/15/20 11:45	09/16/20 11:14
92495904004	HGWA-122	Water	09/15/20 15:41	09/16/20 11:14
92495904005	HGWA-43D	Water	09/16/20 11:58	09/17/20 09:45
92495904006	HGWA-44D	Water	09/16/20 15:18	09/17/20 09:45
92495904007	HGWC-126	Water	09/18/20 15:39	09/21/20 09:25
92495904008	FB-03	Water	09/18/20 16:50	09/21/20 09:25
92495904009	HGWC-120	Water	09/21/20 13:48	09/22/20 09:25
92495904010	FD-03	Water	09/21/20 00:00	09/22/20 09:25
92495904011	HGWC-125	Water	09/21/20 12:07	09/22/20 09:25
92495904012	HGWA-45D	Water	09/25/20 13:50	09/28/20 09:40
92495904013	MW-46D	Water	09/25/20 11:10	09/28/20 09:40
92495904014	HGWC-121A	Water	09/28/20 16:04	09/29/20 08:55
92495904015	HGWC-124	Water	09/28/20 18:00	09/29/20 08:55
92495904016	MW-32	Water	09/28/20 15:44	09/29/20 08:55
92495904017	MW-39	Water	09/28/20 17:27	09/29/20 08:55
92495904018	MW-41	Water	09/28/20 19:05	09/29/20 08:55

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92495904001	HGWA-1	EPA 6010D	DRB	6
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92495904002	HGWA-2	EPA 6010D	DRB	6
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92495904003	HGWA-3	EPA 6010D	DRB	6
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92495904004	HGWA-122	EPA 6010D	DRB	6
		EPA 6020B	CW1	9
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92495904005	HGWA-43D	EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
92495904006	HGWA-44D	EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		SM 2320B-2011	ECH	3
	SM 4500-S2D-2011	NAL	1	

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92495904007	HGWC-126	EPA 300.0 Rev 2.1 1993	BRJ	3
		EPA 6010D	DRB	6
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
92495904008	FB-03	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	6
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
92495904009	HGWC-120	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	9
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
92495904010	FD-03	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	9
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
92495904011	HGWC-125	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	6
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
92495904012	HGWA-45D	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	6
		EPA 6020B	KH	13
		EPA 7470A	VB	1
		SM 2320B-2011	ECH	3

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92495904013	MW-46D	EPA 6010D	DRB	6
		EPA 6020B	KH	9
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92495904014	HGWC-121A	EPA 6010D	DRB	6
		EPA 6020B	CW1	9
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92495904015	HGWC-124	EPA 6010D	DRB	6
		EPA 6020B	CW1	9
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92495904016	MW-32	EPA 6010D	DRB	6
		EPA 6020B	CW1	9
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92495904017	MW-39	EPA 6010D	DRB	6
		EPA 6020B	CW1	9
		SM 2450C-2011	AW1	1
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3
92495904018	MW-41	EPA 6010D	DRB	6
		EPA 6020B	CW1	9
		SM 2450C-2011	AW1	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM 2320B-2011	ECH	3
		SM 4500-S2D-2011	NAL	1
		EPA 300.0 Rev 2.1 1993	BRJ	3

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92495904001	HGWA-1					
	pH	7.15	Std. Units		09/29/20 14:01	
EPA 6010D	Calcium	103	mg/L	1.0	09/23/20 17:49	
EPA 6010D	Iron	0.087	mg/L	0.040	09/23/20 17:49	
EPA 6010D	Magnesium	4.3	mg/L	0.050	09/23/20 17:49	
EPA 6010D	Manganese	0.18	mg/L	0.040	09/23/20 17:49	
EPA 6010D	Potassium	0.34	mg/L	0.20	09/23/20 17:49	B
EPA 6010D	Sodium	21.1	mg/L	1.0	09/23/20 17:49	
EPA 6020B	Barium	0.035	mg/L	0.010	09/23/20 17:15	
EPA 6020B	Boron	0.017J	mg/L	0.10	09/23/20 17:15	
EPA 6020B	Lithium	0.00087J	mg/L	0.030	09/23/20 17:15	
SM 2450C-2011	Total Dissolved Solids	265	mg/L	10.0	09/17/20 15:18	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	307	mg/L	5.0	09/24/20 19:36	
SM 2320B-2011	Alkalinity, Total as CaCO3	307	mg/L	5.0	09/24/20 19:36	
EPA 300.0 Rev 2.1 1993	Chloride	13.4	mg/L	1.0	09/18/20 21:31	
EPA 300.0 Rev 2.1 1993	Fluoride	0.082J	mg/L	0.10	09/18/20 21:31	
EPA 300.0 Rev 2.1 1993	Sulfate	47.3	mg/L	1.0	09/18/20 21:31	
92495904002	HGWA-2					
	pH	5.22	Std. Units		09/29/20 14:01	
EPA 6010D	Calcium	21.1	mg/L	1.0	09/23/20 17:53	
EPA 6010D	Iron	0.78	mg/L	0.040	09/23/20 17:53	
EPA 6010D	Magnesium	2.5	mg/L	0.050	09/23/20 17:53	
EPA 6010D	Manganese	0.61	mg/L	0.040	09/23/20 17:53	
EPA 6010D	Potassium	0.89	mg/L	0.20	09/23/20 17:53	B
EPA 6010D	Sodium	7.4	mg/L	1.0	09/23/20 17:53	
EPA 6020B	Barium	0.12	mg/L	0.010	09/23/20 17:21	
EPA 6020B	Beryllium	0.00013J	mg/L	0.0030	09/23/20 17:21	
EPA 6020B	Boron	0.044J	mg/L	0.10	09/23/20 17:21	
EPA 6020B	Cobalt	0.021	mg/L	0.0050	09/23/20 17:21	
EPA 6020B	Lead	0.000080J	mg/L	0.0050	09/23/20 17:21	
EPA 6020B	Lithium	0.0015J	mg/L	0.030	09/23/20 17:21	
SM 2450C-2011	Total Dissolved Solids	124	mg/L	10.0	09/17/20 15:18	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	26.1	mg/L	5.0	09/24/20 13:36	
SM 2320B-2011	Alkalinity, Total as CaCO3	26.1	mg/L	5.0	09/24/20 13:36	
EPA 300.0 Rev 2.1 1993	Chloride	5.0	mg/L	1.0	09/18/20 21:46	
EPA 300.0 Rev 2.1 1993	Sulfate	51.5	mg/L	1.0	09/18/20 21:46	
92495904003	HGWA-3					
	pH	7.29	Std. Units		09/29/20 14:01	
EPA 6010D	Calcium	73.1	mg/L	1.0	09/23/20 17:57	
EPA 6010D	Iron	0.26	mg/L	0.040	09/23/20 17:57	
EPA 6010D	Magnesium	4.6	mg/L	0.050	09/23/20 17:57	
EPA 6010D	Manganese	0.22	mg/L	0.040	09/23/20 17:57	
EPA 6010D	Potassium	0.46	mg/L	0.20	09/23/20 17:57	B
EPA 6010D	Sodium	4.9	mg/L	1.0	09/23/20 17:57	
EPA 6020B	Barium	0.12	mg/L	0.010	09/23/20 17:27	
EPA 6020B	Boron	0.0071J	mg/L	0.10	09/23/20 17:27	
EPA 6020B	Lead	0.000042J	mg/L	0.0050	09/23/20 17:27	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92495904003	HGWA-3					
EPA 6020B	Lithium	0.0026J	mg/L	0.030	09/23/20 17:27	
SM 2450C-2011	Total Dissolved Solids	258	mg/L	10.0	09/17/20 15:19	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	187	mg/L	5.0	09/24/20 13:43	
SM 2320B-2011	Alkalinity, Total as CaCO3	187	mg/L	5.0	09/24/20 13:43	
EPA 300.0 Rev 2.1 1993	Chloride	6.0	mg/L	1.0	09/18/20 22:01	
EPA 300.0 Rev 2.1 1993	Sulfate	44.7	mg/L	1.0	09/18/20 22:01	
92495904004	HGWA-122					
	pH	6.68	Std. Units		09/29/20 14:01	
EPA 6010D	Calcium	75.8	mg/L	1.0	09/25/20 18:33	M1
EPA 6010D	Iron	0.031J	mg/L	0.040	09/25/20 18:33	
EPA 6010D	Magnesium	5.6	mg/L	0.050	09/25/20 18:33	
EPA 6010D	Manganese	0.0055J	mg/L	0.040	09/25/20 18:33	
EPA 6010D	Potassium	0.90	mg/L	0.20	09/25/20 18:33	
EPA 6010D	Sodium	7.1	mg/L	1.0	09/25/20 18:33	
EPA 6020B	Antimony	0.0010J	mg/L	0.0030	09/23/20 19:07	
EPA 6020B	Barium	0.039	mg/L	0.010	09/23/20 19:07	
EPA 6020B	Boron	0.22	mg/L	0.10	09/23/20 19:07	
EPA 6020B	Chromium	0.00067J	mg/L	0.010	09/23/20 19:07	
EPA 6020B	Lead	0.000043J	mg/L	0.0050	09/23/20 19:07	
EPA 6020B	Molybdenum	0.0045J	mg/L	0.010	09/23/20 19:07	
SM 2450C-2011	Total Dissolved Solids	267	mg/L	10.0	09/17/20 15:19	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	202	mg/L	5.0	09/24/20 14:52	
SM 2320B-2011	Alkalinity, Total as CaCO3	202	mg/L	5.0	09/24/20 14:52	
EPA 300.0 Rev 2.1 1993	Chloride	3.6	mg/L	1.0	09/18/20 23:45	
EPA 300.0 Rev 2.1 1993	Fluoride	0.096J	mg/L	0.10	09/18/20 23:45	
EPA 300.0 Rev 2.1 1993	Sulfate	41.4	mg/L	1.0	09/18/20 23:45	
92495904005	HGWA-43D					
	pH	7.52	Std. Units		09/29/20 14:01	
EPA 6010D	Calcium	56.0	mg/L	1.0	09/23/20 18:49	
EPA 6010D	Iron	0.020J	mg/L	0.040	09/23/20 18:49	
EPA 6010D	Magnesium	18.3	mg/L	0.050	09/23/20 18:49	
EPA 6010D	Manganese	0.010J	mg/L	0.040	09/23/20 18:49	
EPA 6010D	Potassium	0.97	mg/L	0.20	09/23/20 18:49	B
EPA 6010D	Sodium	14.0	mg/L	1.0	09/23/20 18:49	
EPA 6020B	Antimony	0.00051J	mg/L	0.0030	09/23/20 18:54	
EPA 6020B	Barium	0.26	mg/L	0.010	09/23/20 18:54	
EPA 6020B	Boron	0.061J	mg/L	0.10	09/23/20 18:54	
EPA 6020B	Lead	0.000050J	mg/L	0.0050	09/23/20 18:54	
EPA 6020B	Lithium	0.0018J	mg/L	0.030	09/23/20 18:54	
EPA 6020B	Molybdenum	0.0044J	mg/L	0.010	09/23/20 18:54	
SM 2450C-2011	Total Dissolved Solids	272	mg/L	10.0	09/17/20 15:18	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	251	mg/L	5.0	09/28/20 15:11	
SM 2320B-2011	Alkalinity, Total as CaCO3	251	mg/L	5.0	09/28/20 15:11	
EPA 300.0 Rev 2.1 1993	Chloride	4.1	mg/L	1.0	09/19/20 21:36	
EPA 300.0 Rev 2.1 1993	Fluoride	0.22	mg/L	0.10	09/19/20 21:36	
EPA 300.0 Rev 2.1 1993	Sulfate	43.0	mg/L	1.0	09/19/20 21:36	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92495904006	HGWA-44D					
	pH	7.83	Std. Units		09/29/20 14:01	
EPA 6010D	Calcium	30.0	mg/L	1.0	09/23/20 18:53	
EPA 6010D	Iron	0.42	mg/L	0.040	09/23/20 18:53	
EPA 6010D	Magnesium	15.1	mg/L	0.050	09/23/20 18:53	
EPA 6010D	Manganese	0.020J	mg/L	0.040	09/23/20 18:53	
EPA 6010D	Potassium	3.2	mg/L	0.20	09/23/20 18:53	
EPA 6010D	Sodium	50.3	mg/L	1.0	09/23/20 18:53	
EPA 6020B	Antimony	0.00049J	mg/L	0.0030	09/23/20 19:00	
EPA 6020B	Barium	0.24	mg/L	0.010	09/23/20 19:00	
EPA 6020B	Boron	0.23	mg/L	0.10	09/23/20 19:00	
EPA 6020B	Chromium	0.0012J	mg/L	0.010	09/23/20 19:00	
EPA 6020B	Lead	0.00021J	mg/L	0.0050	09/23/20 19:00	
EPA 6020B	Lithium	0.014J	mg/L	0.030	09/23/20 19:00	
EPA 6020B	Molybdenum	0.0019J	mg/L	0.010	09/23/20 19:00	
SM 2450C-2011	Total Dissolved Solids	270	mg/L	10.0	09/17/20 15:18	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	294	mg/L	5.0	09/28/20 15:19	
SM 2320B-2011	Alkalinity, Total as CaCO3	294	mg/L	5.0	09/28/20 15:19	
SM 4500-S2D-2011	Sulfide	0.11	mg/L	0.10	09/22/20 14:17	
EPA 300.0 Rev 2.1 1993	Chloride	4.1	mg/L	1.0	09/19/20 21:36	
EPA 300.0 Rev 2.1 1993	Fluoride	0.22	mg/L	0.10	09/19/20 21:36	
EPA 300.0 Rev 2.1 1993	Sulfate	43.0	mg/L	1.0	09/19/20 21:36	
92495904007	HGWC-126					
	pH	6.97	Std. Units		09/29/20 14:01	
EPA 6010D	Calcium	119	mg/L	1.0	09/25/20 20:19	
EPA 6010D	Iron	1.4	mg/L	0.040	09/25/20 20:19	
EPA 6010D	Magnesium	22.0	mg/L	0.050	09/25/20 20:19	
EPA 6010D	Manganese	0.15	mg/L	0.040	09/25/20 20:19	
EPA 6010D	Potassium	0.91	mg/L	0.20	09/25/20 20:19	
EPA 6010D	Sodium	28.5	mg/L	1.0	09/25/20 20:19	
EPA 6020B	Barium	0.21	mg/L	0.010	09/25/20 19:45	
EPA 6020B	Boron	0.041J	mg/L	0.10	09/25/20 19:45	
EPA 6020B	Lithium	0.0035J	mg/L	0.030	09/25/20 19:45	
SM 2450C-2011	Total Dissolved Solids	452	mg/L	20.0	09/23/20 13:16	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	451	mg/L	5.0	09/30/20 20:45	
SM 2320B-2011	Alkalinity, Total as CaCO3	451	mg/L	5.0	09/30/20 20:45	
SM 4500-S2D-2011	Sulfide	0.068J	mg/L	0.10	09/22/20 14:48	
EPA 300.0 Rev 2.1 1993	Chloride	8.4	mg/L	1.0	09/24/20 10:20	
EPA 300.0 Rev 2.1 1993	Fluoride	0.43	mg/L	0.10	09/24/20 10:20	
EPA 300.0 Rev 2.1 1993	Sulfate	62.7	mg/L	1.0	09/24/20 10:20	
92495904008	FB-03					
EPA 6010D	Potassium	0.062J	mg/L	0.20	09/25/20 20:23	
EPA 6020B	Boron	0.011J	mg/L	0.10	09/25/20 19:50	
92495904009	HGWC-120					
	pH	6.98	Std. Units		09/29/20 14:01	
EPA 6010D	Calcium	152	mg/L	1.0	09/25/20 21:50	
EPA 6010D	Iron	0.39	mg/L	0.040	09/25/20 21:50	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92495904009	HGWC-120					
EPA 6010D	Magnesium	19.9	mg/L	0.050	09/25/20 21:50	
EPA 6010D	Manganese	1.3	mg/L	0.040	09/25/20 21:50	
EPA 6010D	Potassium	7.4	mg/L	0.20	09/25/20 21:50	
EPA 6010D	Sodium	9.9	mg/L	1.0	09/25/20 21:50	
EPA 6020B	Barium	0.046	mg/L	0.010	09/30/20 18:57	
EPA 6020B	Boron	0.93	mg/L	0.10	09/30/20 18:57	
EPA 6020B	Chromium	0.00065J	mg/L	0.010	09/30/20 18:57	
EPA 6020B	Cobalt	0.0041J	mg/L	0.0050	09/30/20 18:57	
EPA 6020B	Lithium	0.023J	mg/L	0.030	09/30/20 18:57	
EPA 6020B	Molybdenum	0.043	mg/L	0.010	09/30/20 18:57	
SM 2450C-2011	Total Dissolved Solids	272	mg/L	10.0	09/24/20 10:28	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	599	mg/L	5.0	09/30/20 18:44	
SM 2320B-2011	Alkalinity, Total as CaCO3	599	mg/L	5.0	09/30/20 18:44	
EPA 300.0 Rev 2.1 1993	Chloride	2.4	mg/L	1.0	09/24/20 19:43	
EPA 300.0 Rev 2.1 1993	Fluoride	0.33	mg/L	0.10	09/24/20 19:43	
EPA 300.0 Rev 2.1 1993	Sulfate	225	mg/L	3.0	09/25/20 13:37	
92495904010	FD-03					
EPA 6010D	Calcium	156	mg/L	1.0	09/25/20 21:55	
EPA 6010D	Iron	0.40	mg/L	0.040	09/25/20 21:55	
EPA 6010D	Magnesium	20.4	mg/L	0.050	09/25/20 21:55	
EPA 6010D	Manganese	1.4	mg/L	0.040	09/25/20 21:55	
EPA 6010D	Potassium	7.6	mg/L	0.20	09/25/20 21:55	
EPA 6010D	Sodium	10.2	mg/L	1.0	09/25/20 21:55	
EPA 6020B	Barium	0.047	mg/L	0.010	09/30/20 19:03	
EPA 6020B	Boron	0.92	mg/L	0.10	09/30/20 19:03	
EPA 6020B	Cobalt	0.0041J	mg/L	0.0050	09/30/20 19:03	
EPA 6020B	Lithium	0.023J	mg/L	0.030	09/30/20 19:03	
EPA 6020B	Molybdenum	0.044	mg/L	0.010	09/30/20 19:03	
SM 2450C-2011	Total Dissolved Solids	270	mg/L	10.0	09/24/20 10:28	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	311	mg/L	5.0	10/01/20 16:22	
SM 2320B-2011	Alkalinity, Total as CaCO3	311	mg/L	5.0	10/01/20 16:22	
EPA 300.0 Rev 2.1 1993	Chloride	2.4	mg/L	1.0	09/24/20 19:58	
EPA 300.0 Rev 2.1 1993	Fluoride	0.36	mg/L	0.10	09/24/20 19:58	
EPA 300.0 Rev 2.1 1993	Sulfate	226	mg/L	3.0	09/25/20 13:51	
92495904011	HGWC-125					
	pH	6.22	Std. Units		09/29/20 14:01	
EPA 6010D	Calcium	155	mg/L	1.0	09/25/20 21:59	
EPA 6010D	Iron	0.13	mg/L	0.040	09/25/20 21:59	
EPA 6010D	Magnesium	24.3	mg/L	0.050	09/25/20 21:59	
EPA 6010D	Manganese	2.3	mg/L	0.040	09/25/20 21:59	
EPA 6010D	Potassium	3.8	mg/L	0.20	09/25/20 21:59	
EPA 6010D	Sodium	22.0	mg/L	1.0	09/25/20 21:59	
EPA 6020B	Barium	0.042	mg/L	0.010	09/30/20 19:09	
EPA 6020B	Boron	1.4	mg/L	0.10	09/30/20 19:09	
EPA 6020B	Cobalt	0.012	mg/L	0.0050	09/30/20 19:09	
EPA 6020B	Lithium	0.0038J	mg/L	0.030	09/30/20 19:09	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92495904011	HGWC-125					
SM 2450C-2011	Total Dissolved Solids	956	mg/L	20.0	09/24/20 10:28	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	205	mg/L	5.0	09/30/20 19:13	
SM 2320B-2011	Alkalinity, Total as CaCO3	205	mg/L	5.0	09/30/20 19:13	
EPA 300.0 Rev 2.1 1993	Chloride	12.1	mg/L	1.0	09/24/20 20:12	
EPA 300.0 Rev 2.1 1993	Fluoride	0.11	mg/L	0.10	09/24/20 20:12	
EPA 300.0 Rev 2.1 1993	Sulfate	352	mg/L	5.0	09/25/20 14:05	
92495904012	HGWA-45D					
	Performed by	CUSTOME			09/29/20 14:01	
		R				
	pH	7.57	Std. Units		09/29/20 14:01	
EPA 6010D	Calcium	56.8	mg/L	1.0	10/05/20 19:27	
EPA 6010D	Iron	0.48	mg/L	0.040	10/05/20 19:27	
EPA 6010D	Magnesium	19.4	mg/L	0.050	10/05/20 19:27	
EPA 6010D	Manganese	0.053	mg/L	0.040	10/05/20 19:27	
EPA 6010D	Potassium	2.1	mg/L	0.20	10/05/20 19:27	
EPA 6010D	Sodium	19.0	mg/L	1.0	10/05/20 19:27	
EPA 6020B	Barium	0.49	mg/L	0.010	10/06/20 19:05	
EPA 6020B	Boron	0.16	mg/L	0.10	10/06/20 19:05	
EPA 6020B	Lithium	0.0049J	mg/L	0.030	10/06/20 19:05	
EPA 6020B	Molybdenum	0.0014J	mg/L	0.010	10/06/20 19:05	
SM 2450C-2011	Total Dissolved Solids	263	mg/L	10.0	10/01/20 15:25	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	272	mg/L	5.0	10/08/20 22:15	
SM 2320B-2011	Alkalinity, Total as CaCO3	272	mg/L	5.0	10/08/20 22:15	
SM 4500-S2D-2011	Sulfide	0.68	mg/L	0.10	09/29/20 13:52	
EPA 300.0 Rev 2.1 1993	Chloride	3.6	mg/L	1.0	10/01/20 09:40	
EPA 300.0 Rev 2.1 1993	Fluoride	0.21	mg/L	0.10	10/01/20 09:40	
EPA 300.0 Rev 2.1 1993	Sulfate	6.8	mg/L	1.0	10/01/20 09:40	
92495904013	MW-46D					
	Performed by	CUSTOME			09/29/20 14:01	
		R				
	pH	7.56	Std. Units		09/29/20 14:01	
EPA 6010D	Calcium	78.3	mg/L	1.0	10/05/20 19:32	
EPA 6010D	Iron	0.42	mg/L	0.040	10/05/20 19:32	
EPA 6010D	Magnesium	16.5	mg/L	0.050	10/05/20 19:32	
EPA 6010D	Manganese	0.31	mg/L	0.040	10/05/20 19:32	
EPA 6010D	Potassium	3.8	mg/L	0.20	10/05/20 19:32	
EPA 6010D	Sodium	53.6	mg/L	1.0	10/05/20 19:32	
EPA 6020B	Barium	0.040	mg/L	0.010	10/06/20 19:11	
EPA 6020B	Boron	0.51	mg/L	0.10	10/06/20 19:11	
EPA 6020B	Chromium	0.00075J	mg/L	0.010	10/06/20 19:11	
EPA 6020B	Cobalt	0.00041J	mg/L	0.0050	10/06/20 19:11	
EPA 6020B	Lead	0.000048J	mg/L	0.0050	10/06/20 19:11	
EPA 6020B	Lithium	0.015J	mg/L	0.030	10/06/20 19:11	
EPA 6020B	Molybdenum	0.027	mg/L	0.010	10/06/20 19:11	
SM 2450C-2011	Total Dissolved Solids	449	mg/L	10.0	10/01/20 15:25	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	238	mg/L	5.0	10/08/20 22:23	
SM 2320B-2011	Alkalinity, Total as CaCO3	238	mg/L	5.0	10/08/20 22:23	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92495904013	MW-46D					
SM 4500-S2D-2011	Sulfide	0.30	mg/L	0.10	09/29/20 13:53	
EPA 300.0 Rev 2.1 1993	Chloride	3.7	mg/L	1.0	10/01/20 09:55	
EPA 300.0 Rev 2.1 1993	Fluoride	0.68	mg/L	0.10	10/01/20 09:55	
EPA 300.0 Rev 2.1 1993	Sulfate	149	mg/L	3.0	10/01/20 18:07	
92495904014	HGWC-121A					
	Performed by	CUSTOME			09/29/20 14:01	
		R				
	pH	6.93	Std. Units		09/29/20 14:01	
EPA 6010D	Calcium	167	mg/L	1.0	10/05/20 20:03	
EPA 6010D	Iron	0.044	mg/L	0.040	10/05/20 20:03	
EPA 6010D	Magnesium	23.6	mg/L	0.050	10/05/20 20:03	
EPA 6010D	Manganese	0.68	mg/L	0.040	10/05/20 20:03	
EPA 6010D	Potassium	1.2	mg/L	0.20	10/05/20 20:03	
EPA 6010D	Sodium	35.3	mg/L	1.0	10/05/20 20:03	
EPA 6020B	Barium	0.056	mg/L	0.010	10/05/20 19:54	
EPA 6020B	Boron	2.3	mg/L	0.50	10/07/20 11:12	
EPA 6020B	Lithium	0.0076J	mg/L	0.030	10/05/20 19:54	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	376	mg/L	5.0	10/09/20 11:39	
SM 2320B-2011	Alkalinity, Total as CaCO3	376	mg/L	5.0	10/09/20 11:39	
EPA 300.0 Rev 2.1 1993	Chloride	23.2	mg/L	1.0	10/01/20 10:10	
EPA 300.0 Rev 2.1 1993	Fluoride	0.15	mg/L	0.10	10/01/20 10:10	
EPA 300.0 Rev 2.1 1993	Sulfate	182	mg/L	4.0	10/01/20 18:22	
92495904015	HGWC-124					
	Performed by	CUSTOME			09/29/20 14:01	
		R				
	pH	7.27	Std. Units		09/29/20 14:01	
EPA 6010D	Calcium	107	mg/L	1.0	10/05/20 20:07	
EPA 6010D	Iron	0.48	mg/L	0.040	10/05/20 20:07	
EPA 6010D	Magnesium	9.6	mg/L	0.050	10/05/20 20:07	
EPA 6010D	Manganese	0.24	mg/L	0.040	10/05/20 20:07	
EPA 6010D	Potassium	0.94	mg/L	0.20	10/05/20 20:07	
EPA 6010D	Sodium	5.6	mg/L	1.0	10/05/20 20:07	
EPA 6020B	Barium	0.071	mg/L	0.010	10/05/20 20:00	
EPA 6020B	Boron	0.43	mg/L	0.10	10/07/20 11:17	
EPA 6020B	Lead	0.000075J	mg/L	0.0050	10/05/20 20:00	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	10/05/20 20:00	
EPA 6020B	Molybdenum	0.00090J	mg/L	0.010	10/05/20 20:00	
SM 2450C-2011	Total Dissolved Solids	176	mg/L	10.0	10/01/20 15:27	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	240	mg/L	5.0	10/09/20 11:51	
SM 2320B-2011	Alkalinity, Total as CaCO3	240	mg/L	5.0	10/09/20 11:51	
EPA 300.0 Rev 2.1 1993	Chloride	2.5	mg/L	1.0	10/01/20 10:25	
EPA 300.0 Rev 2.1 1993	Sulfate	86.2	mg/L	1.0	10/01/20 10:25	
92495904016	MW-32					
	Performed by	CUSTOME			09/29/20 14:01	
		R				
	pH	6.90	Std. Units		09/29/20 14:01	

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92495904016	MW-32					
EPA 6010D	Calcium	173	mg/L	1.0	10/05/20 20:11	
EPA 6010D	Iron	0.021J	mg/L	0.040	10/05/20 20:11	
EPA 6010D	Magnesium	20.8	mg/L	0.050	10/05/20 20:11	
EPA 6010D	Manganese	1.6	mg/L	0.040	10/05/20 20:11	
EPA 6010D	Potassium	7.7	mg/L	0.20	10/05/20 20:11	
EPA 6010D	Sodium	8.0	mg/L	1.0	10/05/20 20:11	
EPA 6020B	Barium	0.053	mg/L	0.010	10/05/20 20:06	
EPA 6020B	Boron	1.3	mg/L	0.50	10/07/20 11:23	
EPA 6020B	Chromium	0.00058J	mg/L	0.010	10/05/20 20:06	
EPA 6020B	Cobalt	0.0047J	mg/L	0.0050	10/05/20 20:06	
EPA 6020B	Lithium	0.032	mg/L	0.030	10/05/20 20:06	
EPA 6020B	Molybdenum	0.062	mg/L	0.010	10/05/20 20:06	
SM 2450C-2011	Total Dissolved Solids	272	mg/L	10.0	10/02/20 17:25	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	315	mg/L	5.0	10/09/20 12:00	
SM 2320B-2011	Alkalinity, Total as CaCO3	315	mg/L	5.0	10/09/20 12:00	
EPA 300.0 Rev 2.1 1993	Chloride	2.5	mg/L	1.0	10/01/20 10:40	
EPA 300.0 Rev 2.1 1993	Fluoride	0.33	mg/L	0.10	10/01/20 10:40	
EPA 300.0 Rev 2.1 1993	Sulfate	245	mg/L	5.0	10/01/20 19:06	
92495904017	MW-39					
	Performed by	CUSTOME			09/29/20 14:01	
		R				
	pH	7.00	Std. Units		09/29/20 14:01	
EPA 6010D	Calcium	185	mg/L	1.0	10/05/20 20:16	
EPA 6010D	Iron	0.033J	mg/L	0.040	10/05/20 20:16	
EPA 6010D	Magnesium	22.9	mg/L	0.050	10/05/20 20:16	
EPA 6010D	Manganese	1.5	mg/L	0.040	10/05/20 20:16	
EPA 6010D	Potassium	8.1	mg/L	0.20	10/05/20 20:16	
EPA 6010D	Sodium	8.3	mg/L	1.0	10/05/20 20:16	
EPA 6020B	Barium	0.058	mg/L	0.010	10/05/20 20:12	
EPA 6020B	Boron	1.3	mg/L	0.50	10/07/20 11:29	
EPA 6020B	Cobalt	0.0026J	mg/L	0.0050	10/05/20 20:12	
EPA 6020B	Lithium	0.034	mg/L	0.030	10/05/20 20:12	
EPA 6020B	Molybdenum	0.062	mg/L	0.010	10/05/20 20:12	
SM 2450C-2011	Total Dissolved Solids	272	mg/L	10.0	10/02/20 17:25	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	323	mg/L	5.0	10/09/20 12:08	
SM 2320B-2011	Alkalinity, Total as CaCO3	323	mg/L	5.0	10/09/20 12:08	
EPA 300.0 Rev 2.1 1993	Chloride	2.4	mg/L	1.0	10/01/20 10:55	
EPA 300.0 Rev 2.1 1993	Fluoride	0.33	mg/L	0.10	10/01/20 10:55	
EPA 300.0 Rev 2.1 1993	Sulfate	239	mg/L	5.0	10/01/20 19:21	
92495904018	MW-41					
	Performed by	CUSTOME			09/29/20 14:01	
		R				
	pH	7.00	Std. Units		09/29/20 14:01	
EPA 6010D	Calcium	173	mg/L	1.0	10/05/20 20:20	
EPA 6010D	Iron	0.16	mg/L	0.040	10/05/20 20:20	
EPA 6010D	Magnesium	21.4	mg/L	0.050	10/05/20 20:20	
EPA 6010D	Manganese	0.85	mg/L	0.040	10/05/20 20:20	

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92495904018	MW-41					
EPA 6010D	Potassium	6.7	mg/L	0.20	10/05/20 20:20	
EPA 6010D	Sodium	8.1	mg/L	1.0	10/05/20 20:20	
EPA 6020B	Barium	0.071	mg/L	0.010	10/05/20 20:17	
EPA 6020B	Boron	1.2	mg/L	0.50	10/07/20 11:46	
EPA 6020B	Cobalt	0.00066J	mg/L	0.0050	10/05/20 20:17	
EPA 6020B	Lithium	0.028J	mg/L	0.030	10/05/20 20:17	
EPA 6020B	Molybdenum	0.036	mg/L	0.010	10/05/20 20:17	
SM 2450C-2011	Total Dissolved Solids	392	mg/L	10.0	10/02/20 17:25	
SM 2320B-2011	Alkalinity,Bicarbonate (CaCO3)	313	mg/L	5.0	10/08/20 20:19	
SM 2320B-2011	Alkalinity, Total as CaCO3	313	mg/L	5.0	10/08/20 20:19	M1
EPA 300.0 Rev 2.1 1993	Chloride	2.5	mg/L	1.0	10/01/20 12:09	
EPA 300.0 Rev 2.1 1993	Fluoride	0.25	mg/L	0.10	10/01/20 12:09	
EPA 300.0 Rev 2.1 1993	Sulfate	154	mg/L	5.0	10/01/20 19:36	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Sample: HGWA-1 Lab ID: 92495904001 Collected: 09/15/20 14:01 Received: 09/16/20 11:14 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.15	Std. Units			1		09/29/20 14:01		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	103	mg/L	1.0	0.070	1	09/22/20 20:12	09/23/20 17:49	7440-70-2	
Iron	0.087	mg/L	0.040	0.016	1	09/22/20 20:12	09/23/20 17:49	7439-89-6	
Magnesium	4.3	mg/L	0.050	0.0076	1	09/22/20 20:12	09/23/20 17:49	7439-95-4	
Manganese	0.18	mg/L	0.040	0.0017	1	09/22/20 20:12	09/23/20 17:49	7439-96-5	
Potassium	0.34	mg/L	0.20	0.056	1	09/22/20 20:12	09/23/20 17:49	7440-09-7	B
Sodium	21.1	mg/L	1.0	0.26	1	09/22/20 20:12	09/23/20 17:49	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/22/20 20:07	09/23/20 17:15	7440-36-0	
Barium	0.035	mg/L	0.010	0.00071	1	09/22/20 20:07	09/23/20 17:15	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/22/20 20:07	09/23/20 17:15	7440-41-7	
Boron	0.017J	mg/L	0.10	0.0052	1	09/22/20 20:07	09/23/20 17:15	7440-42-8	
Chromium	ND	mg/L	0.010	0.00055	1	09/22/20 20:07	09/23/20 17:15	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/22/20 20:07	09/23/20 17:15	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/22/20 20:07	09/23/20 17:15	7439-92-1	
Lithium	0.00087J	mg/L	0.030	0.00081	1	09/22/20 20:07	09/23/20 17:15	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/22/20 20:07	09/23/20 17:15	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	265	mg/L	10.0	10.0	1		09/17/20 15:18		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	307	mg/L	5.0	5.0	1		09/24/20 19:36		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/24/20 19:36		
Alkalinity, Total as CaCO ₃	307	mg/L	5.0	5.0	1		09/24/20 19:36		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		09/22/20 14:10	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	13.4	mg/L	1.0	0.60	1		09/18/20 21:31	16887-00-6	
Fluoride	0.082J	mg/L	0.10	0.050	1		09/18/20 21:31	16984-48-8	
Sulfate	47.3	mg/L	1.0	0.50	1		09/18/20 21:31	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Sample: HGWA-2		Lab ID: 92495904002		Collected: 09/15/20 10:58		Received: 09/16/20 11:14		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	5.22	Std. Units			1		09/29/20 14:01		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	21.1	mg/L	1.0	0.070	1	09/22/20 20:12	09/23/20 17:53	7440-70-2	
Iron	0.78	mg/L	0.040	0.016	1	09/22/20 20:12	09/23/20 17:53	7439-89-6	
Magnesium	2.5	mg/L	0.050	0.0076	1	09/22/20 20:12	09/23/20 17:53	7439-95-4	
Manganese	0.61	mg/L	0.040	0.0017	1	09/22/20 20:12	09/23/20 17:53	7439-96-5	
Potassium	0.89	mg/L	0.20	0.056	1	09/22/20 20:12	09/23/20 17:53	7440-09-7	B
Sodium	7.4	mg/L	1.0	0.26	1	09/22/20 20:12	09/23/20 17:53	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/22/20 20:07	09/23/20 17:21	7440-36-0	
Barium	0.12	mg/L	0.010	0.00071	1	09/22/20 20:07	09/23/20 17:21	7440-39-3	
Beryllium	0.00013J	mg/L	0.0030	0.000046	1	09/22/20 20:07	09/23/20 17:21	7440-41-7	
Boron	0.044J	mg/L	0.10	0.0052	1	09/22/20 20:07	09/23/20 17:21	7440-42-8	
Chromium	ND	mg/L	0.010	0.00055	1	09/22/20 20:07	09/23/20 17:21	7440-47-3	
Cobalt	0.021	mg/L	0.0050	0.00038	1	09/22/20 20:07	09/23/20 17:21	7440-48-4	
Lead	0.000080J	mg/L	0.0050	0.000036	1	09/22/20 20:07	09/23/20 17:21	7439-92-1	
Lithium	0.0015J	mg/L	0.030	0.00081	1	09/22/20 20:07	09/23/20 17:21	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/22/20 20:07	09/23/20 17:21	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	124	mg/L	10.0	10.0	1		09/17/20 15:18		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	26.1	mg/L	5.0	5.0	1		09/24/20 13:36		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/24/20 13:36		
Alkalinity, Total as CaCO3	26.1	mg/L	5.0	5.0	1		09/24/20 13:36		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011									
Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		09/22/20 14:11	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	5.0	mg/L	1.0	0.60	1		09/18/20 21:46	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/18/20 21:46	16984-48-8	
Sulfate	51.5	mg/L	1.0	0.50	1		09/18/20 21:46	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Sample: HGWA-3		Lab ID: 92495904003		Collected: 09/15/20 11:45		Received: 09/16/20 11:14		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.29	Std. Units			1		09/29/20 14:01		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	73.1	mg/L	1.0	0.070	1	09/22/20 20:12	09/23/20 17:57	7440-70-2	
Iron	0.26	mg/L	0.040	0.016	1	09/22/20 20:12	09/23/20 17:57	7439-89-6	
Magnesium	4.6	mg/L	0.050	0.0076	1	09/22/20 20:12	09/23/20 17:57	7439-95-4	
Manganese	0.22	mg/L	0.040	0.0017	1	09/22/20 20:12	09/23/20 17:57	7439-96-5	
Potassium	0.46	mg/L	0.20	0.056	1	09/22/20 20:12	09/23/20 17:57	7440-09-7	B
Sodium	4.9	mg/L	1.0	0.26	1	09/22/20 20:12	09/23/20 17:57	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/22/20 20:07	09/23/20 17:27	7440-36-0	
Barium	0.12	mg/L	0.010	0.00071	1	09/22/20 20:07	09/23/20 17:27	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/22/20 20:07	09/23/20 17:27	7440-41-7	
Boron	0.0071J	mg/L	0.10	0.0052	1	09/22/20 20:07	09/23/20 17:27	7440-42-8	
Chromium	ND	mg/L	0.010	0.00055	1	09/22/20 20:07	09/23/20 17:27	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/22/20 20:07	09/23/20 17:27	7440-48-4	
Lead	0.000042J	mg/L	0.0050	0.000036	1	09/22/20 20:07	09/23/20 17:27	7439-92-1	
Lithium	0.0026J	mg/L	0.030	0.00081	1	09/22/20 20:07	09/23/20 17:27	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/22/20 20:07	09/23/20 17:27	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	258	mg/L	10.0	10.0	1		09/17/20 15:19		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	187	mg/L	5.0	5.0	1		09/24/20 13:43		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/24/20 13:43		
Alkalinity, Total as CaCO ₃	187	mg/L	5.0	5.0	1		09/24/20 13:43		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011									
Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		09/22/20 14:13	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	6.0	mg/L	1.0	0.60	1		09/18/20 22:01	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/18/20 22:01	16984-48-8	
Sulfate	44.7	mg/L	1.0	0.50	1		09/18/20 22:01	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Sample: HGWA-122 Lab ID: 92495904004 Collected: 09/15/20 15:41 Received: 09/16/20 11:14 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.68	Std. Units			1		09/29/20 14:01		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	75.8	mg/L	1.0	0.070	1	09/24/20 14:17	09/25/20 18:33	7440-70-2	M1
Iron	0.031J	mg/L	0.040	0.016	1	09/24/20 14:17	09/25/20 18:33	7439-89-6	
Magnesium	5.6	mg/L	0.050	0.0076	1	09/24/20 14:17	09/25/20 18:33	7439-95-4	
Manganese	0.0055J	mg/L	0.040	0.0017	1	09/24/20 14:17	09/25/20 18:33	7439-96-5	
Potassium	0.90	mg/L	0.20	0.056	1	09/24/20 14:17	09/25/20 18:33	7440-09-7	
Sodium	7.1	mg/L	1.0	0.26	1	09/24/20 14:17	09/25/20 18:33	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0010J	mg/L	0.0030	0.00028	1	09/23/20 13:53	09/23/20 19:07	7440-36-0	
Barium	0.039	mg/L	0.010	0.00071	1	09/23/20 13:53	09/23/20 19:07	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/23/20 13:53	09/23/20 19:07	7440-41-7	
Boron	0.22	mg/L	0.10	0.0052	1	09/23/20 13:53	09/23/20 19:07	7440-42-8	
Chromium	0.00067J	mg/L	0.010	0.00055	1	09/23/20 13:53	09/23/20 19:07	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/23/20 13:53	09/23/20 19:07	7440-48-4	
Lead	0.000043J	mg/L	0.0050	0.000036	1	09/23/20 13:53	09/23/20 19:07	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/23/20 13:53	09/23/20 19:07	7439-93-2	
Molybdenum	0.0045J	mg/L	0.010	0.00069	1	09/23/20 13:53	09/23/20 19:07	7439-98-7	
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		09/17/20 15:19		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	202	mg/L	5.0	5.0	1		09/24/20 14:52		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/24/20 14:52		
Alkalinity, Total as CaCO ₃	202	mg/L	5.0	5.0	1		09/24/20 14:52		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011									
Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		09/22/20 14:16	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	3.6	mg/L	1.0	0.60	1		09/18/20 23:45	16887-00-6	
Fluoride	0.096J	mg/L	0.10	0.050	1		09/18/20 23:45	16984-48-8	
Sulfate	41.4	mg/L	1.0	0.50	1		09/18/20 23:45	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Sample: HGWA-43D Lab ID: 92495904005 Collected: 09/16/20 11:58 Received: 09/17/20 09:45 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.52	Std. Units			1		09/29/20 14:01		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	56.0	mg/L	1.0	0.070	1	09/22/20 20:12	09/23/20 18:49	7440-70-2	
Iron	0.020J	mg/L	0.040	0.016	1	09/22/20 20:12	09/23/20 18:49	7439-89-6	
Magnesium	18.3	mg/L	0.050	0.0076	1	09/22/20 20:12	09/23/20 18:49	7439-95-4	
Manganese	0.010J	mg/L	0.040	0.0017	1	09/22/20 20:12	09/23/20 18:49	7439-96-5	
Potassium	0.97	mg/L	0.20	0.056	1	09/22/20 20:12	09/23/20 18:49	7440-09-7	B
Sodium	14.0	mg/L	1.0	0.26	1	09/22/20 20:12	09/23/20 18:49	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00051J	mg/L	0.0030	0.00028	1	09/22/20 20:07	09/23/20 18:54	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/22/20 20:07	09/23/20 18:54	7440-38-2	
Barium	0.26	mg/L	0.010	0.00071	1	09/22/20 20:07	09/23/20 18:54	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/22/20 20:07	09/23/20 18:54	7440-41-7	
Boron	0.061J	mg/L	0.10	0.0052	1	09/22/20 20:07	09/23/20 18:54	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/22/20 20:07	09/23/20 18:54	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/22/20 20:07	09/23/20 18:54	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/22/20 20:07	09/23/20 18:54	7440-48-4	
Lead	0.000050J	mg/L	0.0050	0.000036	1	09/22/20 20:07	09/23/20 18:54	7439-92-1	
Lithium	0.0018J	mg/L	0.030	0.00081	1	09/22/20 20:07	09/23/20 18:54	7439-93-2	
Molybdenum	0.0044J	mg/L	0.010	0.00069	1	09/22/20 20:07	09/23/20 18:54	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/22/20 20:07	09/23/20 18:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/22/20 20:07	09/23/20 18:54	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	10/13/20 08:00	10/13/20 13:02	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	272	mg/L	10.0	10.0	1		09/17/20 15:18		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	251	mg/L	5.0	5.0	1		09/28/20 15:11		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/28/20 15:11		
Alkalinity, Total as CaCO ₃	251	mg/L	5.0	5.0	1		09/28/20 15:11		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		09/22/20 14:17	18496-25-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Sample: HGWA-43D **Lab ID: 92495904005** Collected: 09/16/20 11:58 Received: 09/17/20 09:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
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		09/19/20 21:36	16887-00-6	
Fluoride	0.22	mg/L	0.10	0.050	1		09/19/20 21:36	16984-48-8	
Sulfate	43.0	mg/L	1.0	0.50	1		09/19/20 21:36	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Sample: HGWA-44D **Lab ID: 92495904006** Collected: 09/16/20 15:18 Received: 09/17/20 09:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	7.83	Std. Units			1		09/29/20 14:01		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	30.0	mg/L	1.0	0.070	1	09/22/20 20:12	09/23/20 18:53	7440-70-2	
Iron	0.42	mg/L	0.040	0.016	1	09/22/20 20:12	09/23/20 18:53	7439-89-6	
Magnesium	15.1	mg/L	0.050	0.0076	1	09/22/20 20:12	09/23/20 18:53	7439-95-4	
Manganese	0.020J	mg/L	0.040	0.0017	1	09/22/20 20:12	09/23/20 18:53	7439-96-5	
Potassium	3.2	mg/L	0.20	0.056	1	09/22/20 20:12	09/23/20 18:53	7440-09-7	
Sodium	50.3	mg/L	1.0	0.26	1	09/22/20 20:12	09/23/20 18:53	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00049J	mg/L	0.0030	0.00028	1	09/22/20 20:07	09/23/20 19:00	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/22/20 20:07	09/23/20 19:00	7440-38-2	
Barium	0.24	mg/L	0.010	0.00071	1	09/22/20 20:07	09/23/20 19:00	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/22/20 20:07	09/23/20 19:00	7440-41-7	
Boron	0.23	mg/L	0.10	0.0052	1	09/22/20 20:07	09/23/20 19:00	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/22/20 20:07	09/23/20 19:00	7440-43-9	
Chromium	0.0012J	mg/L	0.010	0.00055	1	09/22/20 20:07	09/23/20 19:00	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/22/20 20:07	09/23/20 19:00	7440-48-4	
Lead	0.00021J	mg/L	0.0050	0.000036	1	09/22/20 20:07	09/23/20 19:00	7439-92-1	
Lithium	0.014J	mg/L	0.030	0.00081	1	09/22/20 20:07	09/23/20 19:00	7439-93-2	
Molybdenum	0.0019J	mg/L	0.010	0.00069	1	09/22/20 20:07	09/23/20 19:00	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/22/20 20:07	09/23/20 19:00	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/22/20 20:07	09/23/20 19:00	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	10/13/20 08:00	10/13/20 13:04	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		09/17/20 15:18		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	294	mg/L	5.0	5.0	1		09/28/20 15:19		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/28/20 15:19		
Alkalinity, Total as CaCO ₃	294	mg/L	5.0	5.0	1		09/28/20 15:19		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	0.11	mg/L	0.10	0.050	1		09/22/20 14:17	18496-25-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Sample: HGWA-44D		Lab ID: 92495904006		Collected: 09/16/20 15:18	Received: 09/17/20 09:45	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	4.1	mg/L	1.0	0.60	1		09/19/20 21:36	16887-00-6	
Fluoride	0.22	mg/L	0.10	0.050	1		09/19/20 21:36	16984-48-8	
Sulfate	43.0	mg/L	1.0	0.50	1		09/19/20 21:36	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Sample: HGWC-126 Lab ID: 92495904007 Collected: 09/18/20 15:39 Received: 09/21/20 09:25 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.97	Std. Units			1		09/29/20 14:01		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	119	mg/L	1.0	0.070	1	09/24/20 14:17	09/25/20 20:19	7440-70-2	
Iron	1.4	mg/L	0.040	0.016	1	09/24/20 14:17	09/25/20 20:19	7439-89-6	
Magnesium	22.0	mg/L	0.050	0.0076	1	09/24/20 14:17	09/25/20 20:19	7439-95-4	
Manganese	0.15	mg/L	0.040	0.0017	1	09/24/20 14:17	09/25/20 20:19	7439-96-5	
Potassium	0.91	mg/L	0.20	0.056	1	09/24/20 14:17	09/25/20 20:19	7440-09-7	
Sodium	28.5	mg/L	1.0	0.26	1	09/24/20 14:17	09/25/20 20:19	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/24/20 14:23	09/25/20 19:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/24/20 14:23	09/25/20 19:45	7440-38-2	
Barium	0.21	mg/L	0.010	0.00071	1	09/24/20 14:23	09/25/20 19:45	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/24/20 14:23	09/25/20 19:45	7440-41-7	
Boron	0.041J	mg/L	0.10	0.0052	1	09/24/20 14:23	09/25/20 19:45	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/24/20 14:23	09/25/20 19:45	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/24/20 14:23	09/25/20 19:45	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/24/20 14:23	09/25/20 19:45	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/24/20 14:23	09/25/20 19:45	7439-92-1	
Lithium	0.0035J	mg/L	0.030	0.00081	1	09/24/20 14:23	09/25/20 19:45	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/24/20 14:23	09/25/20 19:45	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/24/20 14:23	09/25/20 19:45	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/24/20 14:23	09/25/20 19:45	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	10/28/20 07:30	10/28/20 12:27	7439-97-6	H1,H2
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	452	mg/L	20.0	20.0	1		09/23/20 13:16		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	451	mg/L	5.0	5.0	1		09/30/20 20:45		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/30/20 20:45		
Alkalinity, Total as CaCO3	451	mg/L	5.0	5.0	1		09/30/20 20:45		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	0.068J	mg/L	0.10	0.050	1		09/22/20 14:48	18496-25-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Sample: HGWC-126 **Lab ID: 92495904007** Collected: 09/18/20 15:39 Received: 09/21/20 09:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	8.4	mg/L	1.0	0.60	1		09/24/20 10:20	16887-00-6	
Fluoride	0.43	mg/L	0.10	0.050	1		09/24/20 10:20	16984-48-8	
Sulfate	62.7	mg/L	1.0	0.50	1		09/24/20 10:20	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Sample: FB-03		Lab ID: 92495904008		Collected: 09/18/20 16:50		Received: 09/21/20 09:25		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
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	09/24/20 14:17	09/25/20 20:23	7440-70-2		
Iron	ND	mg/L	0.040	0.016	1	09/24/20 14:17	09/25/20 20:23	7439-89-6		
Magnesium	ND	mg/L	0.050	0.0076	1	09/24/20 14:17	09/25/20 20:23	7439-95-4		
Manganese	ND	mg/L	0.040	0.0017	1	09/24/20 14:17	09/25/20 20:23	7439-96-5		
Potassium	0.062J	mg/L	0.20	0.056	1	09/24/20 14:17	09/25/20 20:23	7440-09-7		
Sodium	ND	mg/L	1.0	0.26	1	09/24/20 14:17	09/25/20 20:23	7440-23-5		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	09/24/20 14:23	09/25/20 19:50	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	09/24/20 14:23	09/25/20 19:50	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	09/24/20 14:23	09/25/20 19:50	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	09/24/20 14:23	09/25/20 19:50	7440-41-7		
Boron	0.011J	mg/L	0.10	0.0052	1	09/24/20 14:23	09/25/20 19:50	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	09/24/20 14:23	09/25/20 19:50	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	09/24/20 14:23	09/25/20 19:50	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	09/24/20 14:23	09/25/20 19:50	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	09/24/20 14:23	09/25/20 19:50	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	09/24/20 14:23	09/25/20 19:50	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	09/24/20 14:23	09/25/20 19:50	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	09/24/20 14:23	09/25/20 19:50	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	09/24/20 14:23	09/25/20 19:50	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	10/28/20 07:30	10/28/20 12:30	7439-97-6	H1,H2	
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		09/23/20 13:16			
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/30/20 14:46			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/30/20 14:46			
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		09/30/20 14:46			
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		09/22/20 14:49	18496-25-8		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		09/24/20 10:35	16887-00-6		

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: FB-03 Lab ID: 92495904008 Collected: 09/18/20 16:50 Received: 09/21/20 09:25 Matrix: Water									
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		09/24/20 10:35	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		09/24/20 10:35	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Sample: HGWC-120		Lab ID: 92495904009		Collected: 09/21/20 13:48		Received: 09/22/20 09:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.98	Std. Units			1		09/29/20 14:01		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	152	mg/L	1.0	0.070	1	09/24/20 14:20	09/25/20 21:50	7440-70-2	
Iron	0.39	mg/L	0.040	0.016	1	09/24/20 14:20	09/25/20 21:50	7439-89-6	
Magnesium	19.9	mg/L	0.050	0.0076	1	09/24/20 14:20	09/25/20 21:50	7439-95-4	
Manganese	1.3	mg/L	0.040	0.0017	1	09/24/20 14:20	09/25/20 21:50	7439-96-5	
Potassium	7.4	mg/L	0.20	0.056	1	09/24/20 14:20	09/25/20 21:50	7440-09-7	
Sodium	9.9	mg/L	1.0	0.26	1	09/24/20 14:20	09/25/20 21:50	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/29/20 14:13	09/30/20 18:57	7440-36-0	
Barium	0.046	mg/L	0.010	0.00071	1	09/29/20 14:13	09/30/20 18:57	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/29/20 14:13	09/30/20 18:57	7440-41-7	
Boron	0.93	mg/L	0.10	0.0052	1	09/29/20 14:13	09/30/20 18:57	7440-42-8	
Chromium	0.00065J	mg/L	0.010	0.00055	1	09/29/20 14:13	09/30/20 18:57	7440-47-3	
Cobalt	0.0041J	mg/L	0.0050	0.00038	1	09/29/20 14:13	09/30/20 18:57	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/29/20 14:13	09/30/20 18:57	7439-92-1	
Lithium	0.023J	mg/L	0.030	0.00081	1	09/29/20 14:13	09/30/20 18:57	7439-93-2	
Molybdenum	0.043	mg/L	0.010	0.00069	1	09/29/20 14:13	09/30/20 18:57	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	272	mg/L	10.0	10.0	1		09/24/20 10:28		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	599	mg/L	5.0	5.0	1		09/30/20 18:44		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/30/20 18:44		
Alkalinity, Total as CaCO ₃	599	mg/L	5.0	5.0	1		09/30/20 18:44		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011									
Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		09/24/20 11:48	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.4	mg/L	1.0	0.60	1		09/24/20 19:43	16887-00-6	
Fluoride	0.33	mg/L	0.10	0.050	1		09/24/20 19:43	16984-48-8	
Sulfate	225	mg/L	3.0	1.5	3		09/25/20 13:37	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Sample: FD-03		Lab ID: 92495904010		Collected: 09/21/20 00:00	Received: 09/22/20 09:25	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	156	mg/L	1.0	0.070	1	09/24/20 14:20	09/25/20 21:55	7440-70-2		
Iron	0.40	mg/L	0.040	0.016	1	09/24/20 14:20	09/25/20 21:55	7439-89-6		
Magnesium	20.4	mg/L	0.050	0.0076	1	09/24/20 14:20	09/25/20 21:55	7439-95-4		
Manganese	1.4	mg/L	0.040	0.0017	1	09/24/20 14:20	09/25/20 21:55	7439-96-5		
Potassium	7.6	mg/L	0.20	0.056	1	09/24/20 14:20	09/25/20 21:55	7440-09-7		
Sodium	10.2	mg/L	1.0	0.26	1	09/24/20 14:20	09/25/20 21:55	7440-23-5		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	09/29/20 14:13	09/30/20 19:03	7440-36-0		
Barium	0.047	mg/L	0.010	0.00071	1	09/29/20 14:13	09/30/20 19:03	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	09/29/20 14:13	09/30/20 19:03	7440-41-7		
Boron	0.92	mg/L	0.10	0.0052	1	09/29/20 14:13	09/30/20 19:03	7440-42-8		
Chromium	ND	mg/L	0.010	0.00055	1	09/29/20 14:13	09/30/20 19:03	7440-47-3		
Cobalt	0.0041J	mg/L	0.0050	0.00038	1	09/29/20 14:13	09/30/20 19:03	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	09/29/20 14:13	09/30/20 19:03	7439-92-1		
Lithium	0.023J	mg/L	0.030	0.00081	1	09/29/20 14:13	09/30/20 19:03	7439-93-2		
Molybdenum	0.044	mg/L	0.010	0.00069	1	09/29/20 14:13	09/30/20 19:03	7439-98-7		
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		09/24/20 10:28			
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	311	mg/L	5.0	5.0	1		10/01/20 16:22			
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/01/20 16:22			
Alkalinity, Total as CaCO ₃	311	mg/L	5.0	5.0	1		10/01/20 16:22			
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville								
Sulfide	ND	mg/L	0.10	0.050	1		09/24/20 11:48	18496-25-8		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	2.4	mg/L	1.0	0.60	1		09/24/20 19:58	16887-00-6		
Fluoride	0.36	mg/L	0.10	0.050	1		09/24/20 19:58	16984-48-8		
Sulfate	226	mg/L	3.0	1.5	3		09/25/20 13:51	14808-79-8		

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Sample: HGWC-125		Lab ID: 92495904011		Collected: 09/21/20 12:07		Received: 09/22/20 09:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
pH	6.22	Std. Units			1		09/29/20 14:01		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	155	mg/L	1.0	0.070	1	09/24/20 14:20	09/25/20 21:59	7440-70-2	
Iron	0.13	mg/L	0.040	0.016	1	09/24/20 14:20	09/25/20 21:59	7439-89-6	
Magnesium	24.3	mg/L	0.050	0.0076	1	09/24/20 14:20	09/25/20 21:59	7439-95-4	
Manganese	2.3	mg/L	0.040	0.0017	1	09/24/20 14:20	09/25/20 21:59	7439-96-5	
Potassium	3.8	mg/L	0.20	0.056	1	09/24/20 14:20	09/25/20 21:59	7440-09-7	
Sodium	22.0	mg/L	1.0	0.26	1	09/24/20 14:20	09/25/20 21:59	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	09/29/20 14:13	09/30/20 19:09	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/29/20 14:13	09/30/20 19:09	7440-38-2	
Barium	0.042	mg/L	0.010	0.00071	1	09/29/20 14:13	09/30/20 19:09	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/29/20 14:13	09/30/20 19:09	7440-41-7	
Boron	1.4	mg/L	0.10	0.0052	1	09/29/20 14:13	09/30/20 19:09	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/29/20 14:13	09/30/20 19:09	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/29/20 14:13	09/30/20 19:09	7440-47-3	
Cobalt	0.012	mg/L	0.0050	0.00038	1	09/29/20 14:13	09/30/20 19:09	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/29/20 14:13	09/30/20 19:09	7439-92-1	
Lithium	0.0038J	mg/L	0.030	0.00081	1	09/29/20 14:13	09/30/20 19:09	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/29/20 14:13	09/30/20 19:09	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/29/20 14:13	09/30/20 19:09	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/29/20 14:13	09/30/20 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	10/28/20 07:30	10/28/20 12:32	7439-97-6	H1,H2
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	956	mg/L	20.0	20.0	1		09/24/20 10:28		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	205	mg/L	5.0	5.0	1		09/30/20 19:13		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/30/20 19:13		
Alkalinity, Total as CaCO3	205	mg/L	5.0	5.0	1		09/30/20 19:13		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011									
Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		09/24/20 11:48	18496-25-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Sample: HGWC-125 **Lab ID: 92495904011** Collected: 09/21/20 12:07 Received: 09/22/20 09:25 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	12.1	mg/L	1.0	0.60	1		09/24/20 20:12	16887-00-6	
Fluoride	0.11	mg/L	0.10	0.050	1		09/24/20 20:12	16984-48-8	
Sulfate	352	mg/L	5.0	2.5	5		09/25/20 14:05	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Sample: HGWA-45D		Lab ID: 92495904012		Collected: 09/25/20 13:50		Received: 09/28/20 09:40		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		09/29/20 14:01		
pH	7.57	Std. Units			1		09/29/20 14:01		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	56.8	mg/L	1.0	0.070	1	10/01/20 18:49	10/05/20 19:27	7440-70-2	
Iron	0.48	mg/L	0.040	0.016	1	10/01/20 18:49	10/05/20 19:27	7439-89-6	
Magnesium	19.4	mg/L	0.050	0.0076	1	10/01/20 18:49	10/05/20 19:27	7439-95-4	
Manganese	0.053	mg/L	0.040	0.0017	1	10/01/20 18:49	10/05/20 19:27	7439-96-5	
Potassium	2.1	mg/L	0.20	0.056	1	10/01/20 18:49	10/05/20 19:27	7440-09-7	
Sodium	19.0	mg/L	1.0	0.26	1	10/01/20 18:49	10/05/20 19:27	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/06/20 19:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 19:05	7440-38-2	
Barium	0.49	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 19:05	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 19:05	7440-41-7	
Boron	0.16	mg/L	0.10	0.0052	1	10/02/20 15:00	10/06/20 19:05	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 19:05	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 19:05	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 19:05	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 19:05	7439-92-1	
Lithium	0.0049J	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 19:05	7439-93-2	
Molybdenum	0.0014J	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 19:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	10/02/20 15:00	10/06/20 19:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	10/02/20 15:00	10/06/20 19:05	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	10/13/20 08:00	10/13/20 13:07	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	263	mg/L	10.0	10.0	1		10/01/20 15:25		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	272	mg/L	5.0	5.0	1		10/08/20 22:15		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 22:15		
Alkalinity, Total as CaCO ₃	272	mg/L	5.0	5.0	1		10/08/20 22:15		

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Sample: HGWA-45D		Lab ID: 92495904012		Collected: 09/25/20 13:50	Received: 09/28/20 09:40	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide Water		Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville							
Sulfide	0.68	mg/L	0.10	0.050	1		09/29/20 13:52	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	3.6	mg/L	1.0	0.60	1		10/01/20 09:40	16887-00-6	
Fluoride	0.21	mg/L	0.10	0.050	1		10/01/20 09:40	16984-48-8	
Sulfate	6.8	mg/L	1.0	0.50	1		10/01/20 09:40	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Sample: MW-46D		Lab ID: 92495904013		Collected: 09/25/20 11:10		Received: 09/28/20 09:40		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		09/29/20 14:01		
pH	7.56	Std. Units			1		09/29/20 14:01		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	78.3	mg/L	1.0	0.070	1	10/01/20 18:49	10/05/20 19:32	7440-70-2	
Iron	0.42	mg/L	0.040	0.016	1	10/01/20 18:49	10/05/20 19:32	7439-89-6	
Magnesium	16.5	mg/L	0.050	0.0076	1	10/01/20 18:49	10/05/20 19:32	7439-95-4	
Manganese	0.31	mg/L	0.040	0.0017	1	10/01/20 18:49	10/05/20 19:32	7439-96-5	
Potassium	3.8	mg/L	0.20	0.056	1	10/01/20 18:49	10/05/20 19:32	7440-09-7	
Sodium	53.6	mg/L	1.0	0.26	1	10/01/20 18:49	10/05/20 19:32	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/06/20 19:11	7440-36-0	
Barium	0.040	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 19:11	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 19:11	7440-41-7	
Boron	0.51	mg/L	0.10	0.0052	1	10/02/20 15:00	10/06/20 19:11	7440-42-8	
Chromium	0.00075J	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 19:11	7440-47-3	
Cobalt	0.00041J	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 19:11	7440-48-4	
Lead	0.000048J	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 19:11	7439-92-1	
Lithium	0.015J	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 19:11	7439-93-2	
Molybdenum	0.027	mg/L	0.010	0.00069	1	10/02/20 15:00	10/06/20 19:11	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	449	mg/L	10.0	10.0	1		10/01/20 15:25		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	238	mg/L	5.0	5.0	1		10/08/20 22:23		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 22:23		
Alkalinity, Total as CaCO ₃	238	mg/L	5.0	5.0	1		10/08/20 22:23		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	0.30	mg/L	0.10	0.050	1		09/29/20 13:53	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	3.7	mg/L	1.0	0.60	1		10/01/20 09:55	16887-00-6	
Fluoride	0.68	mg/L	0.10	0.050	1		10/01/20 09:55	16984-48-8	
Sulfate	149	mg/L	3.0	1.5	3		10/01/20 18:07	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Sample: HGWC-121A Lab ID: 92495904014 Collected: 09/28/20 16:04 Received: 09/29/20 08:55 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		09/29/20 14:01		
pH	6.93	Std. Units			1		09/29/20 14:01		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	167	mg/L	1.0	0.070	1	10/01/20 18:49	10/05/20 20:03	7440-70-2	
Iron	0.044	mg/L	0.040	0.016	1	10/01/20 18:49	10/05/20 20:03	7439-89-6	
Magnesium	23.6	mg/L	0.050	0.0076	1	10/01/20 18:49	10/05/20 20:03	7439-95-4	
Manganese	0.68	mg/L	0.040	0.0017	1	10/01/20 18:49	10/05/20 20:03	7439-96-5	
Potassium	1.2	mg/L	0.20	0.056	1	10/01/20 18:49	10/05/20 20:03	7440-09-7	
Sodium	35.3	mg/L	1.0	0.26	1	10/01/20 18:49	10/05/20 20:03	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/05/20 19:54	7440-36-0	
Barium	0.056	mg/L	0.010	0.00071	1	10/02/20 15:00	10/05/20 19:54	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/05/20 19:54	7440-41-7	
Boron	2.3	mg/L	0.50	0.026	5	10/02/20 15:00	10/07/20 11:12	7440-42-8	
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/05/20 19:54	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/05/20 19:54	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/05/20 19:54	7439-92-1	
Lithium	0.0076J	mg/L	0.030	0.00081	1	10/02/20 15:00	10/05/20 19:54	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	10/02/20 15:00	10/05/20 19:54	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		10/01/20 15:27		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	376	mg/L	5.0	5.0	1		10/09/20 11:39		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/09/20 11:39		
Alkalinity, Total as CaCO ₃	376	mg/L	5.0	5.0	1		10/09/20 11:39		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		10/01/20 12:53	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	23.2	mg/L	1.0	0.60	1		10/01/20 10:10	16887-00-6	
Fluoride	0.15	mg/L	0.10	0.050	1		10/01/20 10:10	16984-48-8	
Sulfate	182	mg/L	4.0	2.0	4		10/01/20 18:22	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Sample: HGWC-124 Lab ID: 92495904015 Collected: 09/28/20 18:00 Received: 09/29/20 08:55 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		09/29/20 14:01		
pH	7.27	Std. Units			1		09/29/20 14:01		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	107	mg/L	1.0	0.070	1	10/01/20 18:49	10/05/20 20:07	7440-70-2	
Iron	0.48	mg/L	0.040	0.016	1	10/01/20 18:49	10/05/20 20:07	7439-89-6	
Magnesium	9.6	mg/L	0.050	0.0076	1	10/01/20 18:49	10/05/20 20:07	7439-95-4	
Manganese	0.24	mg/L	0.040	0.0017	1	10/01/20 18:49	10/05/20 20:07	7439-96-5	
Potassium	0.94	mg/L	0.20	0.056	1	10/01/20 18:49	10/05/20 20:07	7440-09-7	
Sodium	5.6	mg/L	1.0	0.26	1	10/01/20 18:49	10/05/20 20:07	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/05/20 20:00	7440-36-0	
Barium	0.071	mg/L	0.010	0.00071	1	10/02/20 15:00	10/05/20 20:00	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/05/20 20:00	7440-41-7	
Boron	0.43	mg/L	0.10	0.0052	1	10/02/20 15:00	10/07/20 11:17	7440-42-8	
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/05/20 20:00	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/05/20 20:00	7440-48-4	
Lead	0.000075J	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/05/20 20:00	7439-92-1	
Lithium	0.0011J	mg/L	0.030	0.00081	1	10/02/20 15:00	10/05/20 20:00	7439-93-2	
Molybdenum	0.00090J	mg/L	0.010	0.00069	1	10/02/20 15:00	10/05/20 20:00	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	176	mg/L	10.0	10.0	1		10/01/20 15:27		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	240	mg/L	5.0	5.0	1		10/09/20 11:51		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/09/20 11:51		
Alkalinity, Total as CaCO ₃	240	mg/L	5.0	5.0	1		10/09/20 11:51		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		10/01/20 12:54	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	2.5	mg/L	1.0	0.60	1		10/01/20 10:25	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		10/01/20 10:25	16984-48-8	
Sulfate	86.2	mg/L	1.0	0.50	1		10/01/20 10:25	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Sample: MW-32		Lab ID: 92495904016		Collected: 09/28/20 15:44		Received: 09/29/20 08:55		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		09/29/20 14:01		
pH	6.90	Std. Units			1		09/29/20 14:01		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	173	mg/L	1.0	0.070	1	10/01/20 18:49	10/05/20 20:11	7440-70-2	
Iron	0.021J	mg/L	0.040	0.016	1	10/01/20 18:49	10/05/20 20:11	7439-89-6	
Magnesium	20.8	mg/L	0.050	0.0076	1	10/01/20 18:49	10/05/20 20:11	7439-95-4	
Manganese	1.6	mg/L	0.040	0.0017	1	10/01/20 18:49	10/05/20 20:11	7439-96-5	
Potassium	7.7	mg/L	0.20	0.056	1	10/01/20 18:49	10/05/20 20:11	7440-09-7	
Sodium	8.0	mg/L	1.0	0.26	1	10/01/20 18:49	10/05/20 20:11	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/05/20 20:06	7440-36-0	
Barium	0.053	mg/L	0.010	0.00071	1	10/02/20 15:00	10/05/20 20:06	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/05/20 20:06	7440-41-7	
Boron	1.3	mg/L	0.50	0.026	5	10/02/20 15:00	10/07/20 11:23	7440-42-8	
Chromium	0.00058J	mg/L	0.010	0.00055	1	10/02/20 15:00	10/05/20 20:06	7440-47-3	
Cobalt	0.0047J	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/05/20 20:06	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/05/20 20:06	7439-92-1	
Lithium	0.032	mg/L	0.030	0.00081	1	10/02/20 15:00	10/05/20 20:06	7439-93-2	
Molybdenum	0.062	mg/L	0.010	0.00069	1	10/02/20 15:00	10/05/20 20:06	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	272	mg/L	10.0	10.0	1		10/02/20 17:25		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	315	mg/L	5.0	5.0	1		10/09/20 12:00		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/09/20 12:00		
Alkalinity, Total as CaCO ₃	315	mg/L	5.0	5.0	1		10/09/20 12:00		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011									
Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		10/01/20 12:54	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.5	mg/L	1.0	0.60	1		10/01/20 10:40	16887-00-6	
Fluoride	0.33	mg/L	0.10	0.050	1		10/01/20 10:40	16984-48-8	
Sulfate	245	mg/L	5.0	2.5	5		10/01/20 19:06	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Sample: MW-39		Lab ID: 92495904017		Collected: 09/28/20 17:27		Received: 09/29/20 08:55		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		09/29/20 14:01		
pH	7.00	Std. Units			1		09/29/20 14:01		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	185	mg/L	1.0	0.070	1	10/01/20 18:49	10/05/20 20:16	7440-70-2	
Iron	0.033J	mg/L	0.040	0.016	1	10/01/20 18:49	10/05/20 20:16	7439-89-6	
Magnesium	22.9	mg/L	0.050	0.0076	1	10/01/20 18:49	10/05/20 20:16	7439-95-4	
Manganese	1.5	mg/L	0.040	0.0017	1	10/01/20 18:49	10/05/20 20:16	7439-96-5	
Potassium	8.1	mg/L	0.20	0.056	1	10/01/20 18:49	10/05/20 20:16	7440-09-7	
Sodium	8.3	mg/L	1.0	0.26	1	10/01/20 18:49	10/05/20 20:16	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/05/20 20:12	7440-36-0	
Barium	0.058	mg/L	0.010	0.00071	1	10/02/20 15:00	10/05/20 20:12	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/05/20 20:12	7440-41-7	
Boron	1.3	mg/L	0.50	0.026	5	10/02/20 15:00	10/07/20 11:29	7440-42-8	
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/05/20 20:12	7440-47-3	
Cobalt	0.0026J	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/05/20 20:12	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/05/20 20:12	7439-92-1	
Lithium	0.034	mg/L	0.030	0.00081	1	10/02/20 15:00	10/05/20 20:12	7439-93-2	
Molybdenum	0.062	mg/L	0.010	0.00069	1	10/02/20 15:00	10/05/20 20:12	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	272	mg/L	10.0	10.0	1		10/02/20 17:25		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	323	mg/L	5.0	5.0	1		10/09/20 12:08		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/09/20 12:08		
Alkalinity, Total as CaCO ₃	323	mg/L	5.0	5.0	1		10/09/20 12:08		
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		10/01/20 12:55	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	2.4	mg/L	1.0	0.60	1		10/01/20 10:55	16887-00-6	
Fluoride	0.33	mg/L	0.10	0.050	1		10/01/20 10:55	16984-48-8	
Sulfate	239	mg/L	5.0	2.5	5		10/01/20 19:21	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Sample: MW-41 Lab ID: 92495904018 Collected: 09/28/20 19:05 Received: 09/29/20 08:55 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		09/29/20 14:01		
pH	7.00	Std. Units			1		09/29/20 14:01		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	173	mg/L	1.0	0.070	1	10/01/20 18:49	10/05/20 20:20	7440-70-2	
Iron	0.16	mg/L	0.040	0.016	1	10/01/20 18:49	10/05/20 20:20	7439-89-6	
Magnesium	21.4	mg/L	0.050	0.0076	1	10/01/20 18:49	10/05/20 20:20	7439-95-4	
Manganese	0.85	mg/L	0.040	0.0017	1	10/01/20 18:49	10/05/20 20:20	7439-96-5	
Potassium	6.7	mg/L	0.20	0.056	1	10/01/20 18:49	10/05/20 20:20	7440-09-7	
Sodium	8.1	mg/L	1.0	0.26	1	10/01/20 18:49	10/05/20 20:20	7440-23-5	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	10/02/20 15:00	10/05/20 20:17	7440-36-0	
Barium	0.071	mg/L	0.010	0.00071	1	10/02/20 15:00	10/05/20 20:17	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/05/20 20:17	7440-41-7	
Boron	1.2	mg/L	0.50	0.026	5	10/02/20 15:00	10/07/20 11:46	7440-42-8	
Chromium	ND	mg/L	0.010	0.00055	1	10/02/20 15:00	10/05/20 20:17	7440-47-3	
Cobalt	0.00066J	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/05/20 20:17	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/05/20 20:17	7439-92-1	
Lithium	0.028J	mg/L	0.030	0.00081	1	10/02/20 15:00	10/05/20 20:17	7439-93-2	
Molybdenum	0.036	mg/L	0.010	0.00069	1	10/02/20 15:00	10/05/20 20:17	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	392	mg/L	10.0	10.0	1		10/02/20 17:25		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	313	mg/L	5.0	5.0	1		10/08/20 20:19		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		10/08/20 20:19		
Alkalinity, Total as CaCO ₃	313	mg/L	5.0	5.0	1		10/08/20 20:19		M1
4500S2D Sulfide Water									
Analytical Method: SM 4500-S2D-2011 Pace Analytical Services - Asheville									
Sulfide	ND	mg/L	0.10	0.050	1		10/01/20 12:55	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	2.5	mg/L	1.0	0.60	1		10/01/20 12:09	16887-00-6	
Fluoride	0.25	mg/L	0.10	0.050	1		10/01/20 12:09	16984-48-8	
Sulfate	154	mg/L	5.0	2.5	5		10/01/20 19:36	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 568201 Analysis Method: EPA 6010D
 QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
 Laboratory: Pace Analytical Services - Peachtree Corners, GA
 Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904005, 92495904006

METHOD BLANK: 3010803 Matrix: Water
 Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904005, 92495904006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	09/23/20 17:40	
Iron	mg/L	ND	0.040	0.016	09/23/20 17:40	
Magnesium	mg/L	ND	0.050	0.0076	09/23/20 17:40	
Manganese	mg/L	ND	0.040	0.0017	09/23/20 17:40	
Potassium	mg/L	0.14J	0.20	0.056	09/23/20 17:40	
Sodium	mg/L	ND	1.0	0.26	09/23/20 17:40	

LABORATORY CONTROL SAMPLE: 3010804

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.96J	96	80-120	
Iron	mg/L	1	0.97	97	80-120	
Magnesium	mg/L	1	0.99	99	80-120	
Manganese	mg/L	1	0.98	98	80-120	
Potassium	mg/L	1	1.1	105	80-120	
Sodium	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010805 3010806

Parameter	Units	3010805		3010806		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	20.4	1	21.1	21.9	69	147	75-125	4	20	M1
Iron	mg/L	0.028J	1	0.96	0.97	93	95	75-125	2	20	
Magnesium	mg/L	0.88	1	1.8	1.8	94	97	75-125	2	20	
Manganese	mg/L	0.0083J	1	0.95	0.96	94	95	75-125	1	20	
Potassium	mg/L	0.28	1	1.2	1.2	92	94	75-125	2	20	
Sodium	mg/L	7.7	1	8.5	8.9	83	118	75-125	4	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 568747 Analysis Method: EPA 6010D
 QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
 Laboratory: Pace Analytical Services - Peachtree Corners, GA
 Associated Lab Samples: 92495904004, 92495904007, 92495904008

METHOD BLANK: 3013294 Matrix: Water

Associated Lab Samples: 92495904004, 92495904007, 92495904008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	09/25/20 18:16	
Iron	mg/L	ND	0.040	0.016	09/25/20 18:16	
Magnesium	mg/L	ND	0.050	0.0076	09/25/20 18:16	
Manganese	mg/L	ND	0.040	0.0017	09/25/20 18:16	
Potassium	mg/L	ND	0.20	0.056	09/25/20 18:16	
Sodium	mg/L	ND	1.0	0.26	09/25/20 18:16	

LABORATORY CONTROL SAMPLE: 3013295

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.98J	98	80-120	
Iron	mg/L	1	0.97	97	80-120	
Magnesium	mg/L	1	1.0	100	80-120	
Manganese	mg/L	1	1.0	101	80-120	
Potassium	mg/L	1	1.0	105	80-120	
Sodium	mg/L	1	1.1	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3013296 3013297

Parameter	Units	3013296		3013297		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	75.8	1	74.9	75.7	-84	-9	75-125	1	20	M1
Iron	mg/L	0.031J	1	0.94	0.96	91	93	75-125	2	20	
Magnesium	mg/L	5.6	1	6.4	6.4	81	89	75-125	1	20	
Manganese	mg/L	0.0055J	1	0.95	0.97	94	97	75-125	3	20	
Potassium	mg/L	0.90	1	1.8	1.9	93	99	75-125	3	20	
Sodium	mg/L	7.1	1	8.0	8.0	82	87	75-125	1	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch:	568748	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495904009, 92495904010, 92495904011

METHOD BLANK: 3013298 Matrix: Water

Associated Lab Samples: 92495904009, 92495904010, 92495904011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	09/25/20 20:40	
Iron	mg/L	ND	0.040	0.016	09/25/20 20:40	
Magnesium	mg/L	ND	0.050	0.0076	09/25/20 20:40	
Manganese	mg/L	ND	0.040	0.0017	09/25/20 20:40	
Potassium	mg/L	0.12J	0.20	0.056	09/25/20 20:40	
Sodium	mg/L	ND	1.0	0.26	09/25/20 20:40	

LABORATORY CONTROL SAMPLE: 3013299

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.95J	95	80-120	
Iron	mg/L	1	0.93	93	80-120	
Magnesium	mg/L	1	0.95	95	80-120	
Manganese	mg/L	1	0.96	96	80-120	
Potassium	mg/L	1	1.1	107	80-120	
Sodium	mg/L	1	1.1	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3013300 3013301

Parameter	Units	3013300		3013301		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	75.3	1	1	79.7	76.2	438	83	75-125	5	20 M1
Iron	mg/L	ND	1	1	0.96	0.93	95	92	75-125	3	20
Magnesium	mg/L	8.6	1	1	10	9.5	138	94	75-125	4	20 M1
Manganese	mg/L	0.0077J	1	1	0.99	0.96	98	95	75-125	3	20
Potassium	mg/L	0.91	1	1	2.0	2.0	110	110	75-125	0	20
Sodium	mg/L	8.4	1	1	9.8	9.4	137	92	75-125	5	20 M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 570395 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92495904012, 92495904013, 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

METHOD BLANK: 3021771 Matrix: Water
Associated Lab Samples: 92495904012, 92495904013, 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	10/05/20 18:52	
Iron	mg/L	ND	0.040	0.016	10/05/20 18:52	
Magnesium	mg/L	ND	0.050	0.0076	10/05/20 18:52	
Manganese	mg/L	ND	0.040	0.0017	10/05/20 18:52	
Potassium	mg/L	ND	0.20	0.056	10/05/20 18:52	
Sodium	mg/L	ND	1.0	0.26	10/05/20 18:52	

LABORATORY CONTROL SAMPLE: 3021772

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	102	80-120	
Iron	mg/L	1	0.99	99	80-120	
Magnesium	mg/L	1	1.0	101	80-120	
Manganese	mg/L	1	0.99	99	80-120	
Potassium	mg/L	1	1.0	104	80-120	
Sodium	mg/L	1	1.1	110	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3021773 3021774

Parameter	Units	3021773		3021774		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	72.8	1	73.5	75.1	70	232	75-125	2	20	M1
Iron	mg/L	0.39	1	1.4	1.5	103	107	75-125	3	20	
Magnesium	mg/L	12.8	1	13.8	14.1	96	132	75-125	3	20	M1
Manganese	mg/L	8.6	1	9.5	9.7	86	110	75-125	2	20	
Potassium	mg/L	0.72	1	1.8	1.8	110	108	75-125	1	20	
Sodium	mg/L	8.1	1	9.1	9.3	95	124	75-125	3	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 568198 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904005, 92495904006

METHOD BLANK: 3010799 Matrix: Water
Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904005, 92495904006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	09/23/20 17:04	
Arsenic	mg/L	ND	0.0050	0.00078	09/23/20 17:04	
Barium	mg/L	ND	0.010	0.00071	09/23/20 17:04	
Beryllium	mg/L	ND	0.0030	0.000046	09/23/20 17:04	
Boron	mg/L	ND	0.10	0.0052	09/23/20 17:04	
Cadmium	mg/L	ND	0.0025	0.00012	09/23/20 17:04	
Chromium	mg/L	ND	0.010	0.00055	09/23/20 17:04	
Cobalt	mg/L	ND	0.0050	0.00038	09/23/20 17:04	
Lead	mg/L	ND	0.0050	0.000036	09/23/20 17:04	
Lithium	mg/L	ND	0.030	0.00081	09/23/20 17:04	
Molybdenum	mg/L	ND	0.010	0.00069	09/23/20 17:04	
Selenium	mg/L	ND	0.010	0.0016	09/23/20 17:04	
Thallium	mg/L	ND	0.0010	0.00014	09/23/20 17:04	

LABORATORY CONTROL SAMPLE: 3010800

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	0.096	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	104	80-120	
Cadmium	mg/L	0.1	0.096	96	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.10	100	80-120	
Molybdenum	mg/L	0.1	0.096	96	80-120	
Selenium	mg/L	0.1	0.090	90	80-120	
Thallium	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3010801 3010802

Parameter	Units	92495900004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L				0.10	0.10				1	20	
Arsenic	mg/L	ND	0.1	0.1	0.098	0.097	97	97	75-125	1	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Parameter	Units	3010801		3010802		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495900004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.024	0.1	0.1	0.12	0.12	100	100	75-125	0	20		
Beryllium	mg/L	ND	0.1	0.1	0.094	0.093	94	93	75-125	1	20		
Boron	mg/L	0.013J	1	1	0.97	0.98	96	96	75-125	0	20		
Cadmium	mg/L	ND	0.1	0.1	0.096	0.095	96	95	75-125	0	20		
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20		
Cobalt	mg/L	ND	0.1	0.1	0.098	0.098	98	97	75-125	0	20		
Lead	mg/L	0.000049J	0.1	0.1	0.095	0.097	95	97	75-125	2	20		
Lithium	mg/L	ND	0.1	0.1	0.092	0.092	91	92	75-125	0	20		
Molybdenum	mg/L	ND	0.1	0.1	0.093	0.094	93	94	75-125	1	20		
Selenium	mg/L	ND	0.1	0.1	0.094	0.095	94	95	75-125	1	20		
Thallium	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	1	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 568417 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495904004

METHOD BLANK: 3011604 Matrix: Water
Associated Lab Samples: 92495904004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	09/23/20 18:33	
Barium	mg/L	ND	0.010	0.00071	09/23/20 18:33	
Beryllium	mg/L	ND	0.0030	0.000046	09/23/20 18:33	
Boron	mg/L	ND	0.10	0.0052	09/23/20 18:33	
Chromium	mg/L	ND	0.010	0.00055	09/23/20 18:33	
Cobalt	mg/L	ND	0.0050	0.00038	09/23/20 18:33	
Lead	mg/L	ND	0.0050	0.000036	09/23/20 18:33	
Lithium	mg/L	ND	0.030	0.00081	09/23/20 18:33	
Molybdenum	mg/L	ND	0.010	0.00069	09/23/20 18:33	

LABORATORY CONTROL SAMPLE: 3011605

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	105	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.10	102	80-120	
Boron	mg/L	1	1.0	104	80-120	
Chromium	mg/L	0.1	0.10	105	80-120	
Cobalt	mg/L	0.1	0.10	105	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	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011606 3011607

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92495876001 Result	Spike Conc.	Spike Conc.	Result							Result
Antimony	mg/L	ND	0.1	0.1	0.10	0.099	101	99	75-125	2	20	
Barium	mg/L	0.030	0.1	0.1	0.13	0.13	96	95	75-125	1	20	
Beryllium	mg/L	0.00012J	0.1	0.1	0.098	0.095	98	95	75-125	2	20	
Boron	mg/L	0.0065J	1	1	1.0	0.98	100	97	75-125	3	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	103	103	75-125	0	20	
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	101	101	75-125	1	20	
Lead	mg/L	0.00065J	0.1	0.1	0.098	0.099	97	99	75-125	2	20	
Lithium	mg/L	0.0014J	0.1	0.1	0.10	0.10	101	100	75-125	0	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 568749 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495904007, 92495904008

METHOD BLANK: 3013302 Matrix: Water

Associated Lab Samples: 92495904007, 92495904008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	09/25/20 18:19	
Arsenic	mg/L	ND	0.0050	0.00078	09/25/20 18:19	
Barium	mg/L	ND	0.010	0.00071	09/25/20 18:19	
Beryllium	mg/L	ND	0.0030	0.000046	09/25/20 18:19	
Boron	mg/L	ND	0.10	0.0052	09/25/20 18:19	
Cadmium	mg/L	ND	0.0025	0.00012	09/25/20 18:19	
Chromium	mg/L	ND	0.010	0.00055	09/25/20 18:19	
Cobalt	mg/L	ND	0.0050	0.00038	09/25/20 18:19	
Lead	mg/L	ND	0.0050	0.000036	09/25/20 18:19	
Lithium	mg/L	ND	0.030	0.00081	09/25/20 18:19	
Molybdenum	mg/L	ND	0.010	0.00069	09/25/20 18:19	
Selenium	mg/L	ND	0.010	0.0016	09/25/20 18:19	
Thallium	mg/L	ND	0.0010	0.00014	09/25/20 18:19	

LABORATORY CONTROL SAMPLE: 3013303

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	105	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.097	97	80-120	
Boron	mg/L	1	0.97	97	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.098	98	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.10	103	80-120	
Molybdenum	mg/L	0.1	0.10	103	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3013304 3013305

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92495894014	Result	Spike Conc.	Spike Conc.							
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	104	108	75-125	4	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.11	101	106	75-125	5	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Parameter	Units	3013304		3013305		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495894014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.099	0.1	0.1	0.18	0.19	85	89	75-125	2	20		
Beryllium	mg/L	ND	0.1	0.1	0.096	0.099	96	99	75-125	4	20		
Boron	mg/L	2.0	1	1	3.0	3.1	102	106	75-125	2	20		
Cadmium	mg/L	ND	0.1	0.1	0.097	0.10	97	104	75-125	7	20		
Chromium	mg/L	ND	0.1	0.1	0.10	0.11	101	108	75-125	7	20		
Cobalt	mg/L	ND	0.1	0.1	0.098	0.10	98	101	75-125	4	20		
Lead	mg/L	ND	0.1	0.1	0.097	0.10	97	101	75-125	4	20		
Lithium	mg/L	0.0032J	0.1	0.1	0.095	0.099	92	96	75-125	4	20		
Molybdenum	mg/L	0.014	0.1	0.1	0.12	0.12	105	109	75-125	4	20		
Selenium	mg/L	ND	0.1	0.1	0.097	0.10	97	103	75-125	7	20		
Thallium	mg/L	ND	0.1	0.1	0.094	0.099	94	99	75-125	5	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 569670 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495904009, 92495904010, 92495904011

METHOD BLANK: 3017842 Matrix: Water

Associated Lab Samples: 92495904009, 92495904010, 92495904011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	09/30/20 17:26	
Arsenic	mg/L	ND	0.0050	0.00078	09/30/20 17:26	
Barium	mg/L	ND	0.010	0.00071	09/30/20 17:26	
Beryllium	mg/L	ND	0.0030	0.000046	09/30/20 17:26	
Boron	mg/L	ND	0.10	0.0052	09/30/20 17:26	
Cadmium	mg/L	ND	0.0025	0.00012	09/30/20 17:26	
Chromium	mg/L	ND	0.010	0.00055	09/30/20 17:26	
Cobalt	mg/L	ND	0.0050	0.00038	09/30/20 17:26	
Lead	mg/L	ND	0.0050	0.000036	09/30/20 17:26	
Lithium	mg/L	ND	0.030	0.00081	09/30/20 17:26	
Molybdenum	mg/L	ND	0.010	0.00069	09/30/20 17:26	
Selenium	mg/L	ND	0.010	0.0016	09/30/20 17:26	
Thallium	mg/L	ND	0.0010	0.00014	09/30/20 17:26	

LABORATORY CONTROL SAMPLE: 3017843

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	102	80-120	
Arsenic	mg/L	0.1	0.095	95	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.097	97	80-120	
Boron	mg/L	1	0.98	98	80-120	
Cadmium	mg/L	0.1	0.096	96	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.095	95	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.093	93	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017844 3017845

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495894020	Result	Spike Conc.	Spike Conc.								
Antimony	mg/L	0.00029J	0.1	0.1	0.099	0.10	99	102	75-125	3	20		
Arsenic	mg/L	0.39	0.1	0.1	0.48	0.48	88	90	75-125	1	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Parameter	Units	3017844		3017845		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92495894020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.052	0.1	0.1	0.15	0.15	98	101	75-125	2	20		
Beryllium	mg/L	0.00011J	0.1	0.1	0.087	0.090	87	90	75-125	4	20		
Boron	mg/L	1.6	1	1	2.4	2.5	79	89	75-125	4	20		
Cadmium	mg/L	ND	0.1	0.1	0.094	0.094	94	94	75-125	0	20		
Chromium	mg/L	0.00056J	0.1	0.1	0.093	0.094	93	93	75-125	1	20		
Cobalt	mg/L	0.0032J	0.1	0.1	0.094	0.096	91	92	75-125	2	20		
Lead	mg/L	0.00015J	0.1	0.1	0.093	0.093	93	92	75-125	0	20		
Lithium	mg/L	0.028J	0.1	0.1	0.12	0.12	87	89	75-125	2	20		
Molybdenum	mg/L	0.032	0.1	0.1	0.13	0.13	95	99	75-125	3	20		
Selenium	mg/L	0.0016J	0.1	0.1	0.094	0.10	92	98	75-125	6	20		
Thallium	mg/L	0.00036J	0.1	0.1	0.095	0.096	94	95	75-125	1	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 570626 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495904012, 92495904013

METHOD BLANK: 3022872 Matrix: Water

Associated Lab Samples: 92495904012, 92495904013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	10/06/20 17:21	
Arsenic	mg/L	ND	0.0050	0.00078	10/06/20 17:21	
Barium	mg/L	ND	0.010	0.00071	10/06/20 17:21	
Beryllium	mg/L	ND	0.0030	0.000046	10/06/20 17:21	
Boron	mg/L	ND	0.10	0.0052	10/06/20 17:21	
Cadmium	mg/L	ND	0.0025	0.00012	10/06/20 17:21	
Chromium	mg/L	ND	0.010	0.00055	10/06/20 17:21	
Cobalt	mg/L	ND	0.0050	0.00038	10/06/20 17:21	
Lead	mg/L	ND	0.0050	0.000036	10/06/20 17:21	
Lithium	mg/L	ND	0.030	0.00081	10/06/20 17:21	
Molybdenum	mg/L	ND	0.010	0.00069	10/06/20 17:21	
Selenium	mg/L	ND	0.010	0.0016	10/06/20 17:21	
Thallium	mg/L	ND	0.0010	0.00014	10/06/20 17:21	

LABORATORY CONTROL SAMPLE: 3022873

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	0.097	97	80-120	
Barium	mg/L	0.1	0.10	101	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	0.1	0.096	96	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.10	100	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	
Selenium	mg/L	0.1	0.094	94	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3022874 3022875

Parameter	Units	92496914020 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Antimony	mg/L	ND	0.1	0.1	0.12	0.12	115	116	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	2	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Parameter	Units	3022874		3022875		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92496914020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.15	0.1	0.1	0.25	0.25	102	99	75-125	1	20		
Beryllium	mg/L	0.00010J	0.1	0.1	0.095	0.096	95	96	75-125	1	20		
Boron	mg/L	0.17	1	1	1.1	1.1	94	95	75-125	1	20		
Cadmium	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	2	20		
Chromium	mg/L	0.00063J	0.1	0.1	0.10	0.10	100	100	75-125	0	20		
Cobalt	mg/L	ND	0.1	0.1	0.097	0.099	97	98	75-125	1	20		
Lead	mg/L	0.00014J	0.1	0.1	0.094	0.096	94	96	75-125	2	20		
Lithium	mg/L	0.019J	0.1	0.1	0.11	0.11	92	96	75-125	3	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	99	100	75-125	1	20		
Selenium	mg/L	ND	0.1	0.1	0.093	0.095	93	95	75-125	3	20		
Thallium	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 570627 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

METHOD BLANK: 3022878 Matrix: Water
Associated Lab Samples: 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	10/05/20 18:29	
Barium	mg/L	ND	0.010	0.00071	10/05/20 18:29	
Beryllium	mg/L	ND	0.0030	0.000046	10/05/20 18:29	
Boron	mg/L	ND	0.10	0.0052	10/05/20 18:29	
Chromium	mg/L	ND	0.010	0.00055	10/05/20 18:29	
Cobalt	mg/L	ND	0.0050	0.00038	10/05/20 18:29	
Lead	mg/L	ND	0.0050	0.000036	10/05/20 18:29	
Lithium	mg/L	ND	0.030	0.00081	10/05/20 18:29	
Molybdenum	mg/L	ND	0.010	0.00069	10/05/20 18:29	

LABORATORY CONTROL SAMPLE: 3022879

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	100	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	1.0	101	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.10	102	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3022880 3022881

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92498084008 Result	Spike Conc.	Spike Conc.	Result							Result
Antimony	mg/L	ND	0.1	0.1	0.10	0.095	102	95	75-125	7	20	
Barium	mg/L	0.026	0.1	0.1	0.13	0.12	101	91	75-125	9	20	
Beryllium	mg/L	ND	0.1	0.1	0.099	0.096	99	96	75-125	4	20	
Boron	mg/L	0.053	1	1	1.1	1.1	105	103	75-125	2	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.096	103	95	75-125	8	20	
Cobalt	mg/L	ND	0.1	0.1	0.10	0.093	100	93	75-125	7	20	
Lead	mg/L	ND	0.1	0.1	0.099	0.094	99	94	75-125	5	20	
Lithium	mg/L	ND	0.1	0.1	0.10	0.096	100	96	75-125	4	20	
Molybdenum	mg/L	0.0089J	0.1	0.1	0.11	0.10	100	93	75-125	7	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 572608 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92495904005, 92495904006, 92495904012

METHOD BLANK: 3032633 Matrix: Water
Associated Lab Samples: 92495904005, 92495904006, 92495904012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	10/13/20 12:38	

LABORATORY CONTROL SAMPLE: 3032634

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: 3032635 3032636

Parameter	Units	3032635		3032636		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0026	97	102	75-125	5	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch:	576048	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92495904007, 92495904008, 92495904011

METHOD BLANK: 3048763 Matrix: Water

Associated Lab Samples: 92495904007, 92495904008, 92495904011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	10/28/20 12:22	

LABORATORY CONTROL SAMPLE: 3048764

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3048765 3048766

Parameter	Units	3048765		3048766		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	92501792002 ND	0.0025	0.0025	0.0024	0.0024	97	97	75-125	0	20

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 567147 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: 92495904004

METHOD BLANK: 3005362 Matrix: Water
Associated Lab Samples: 92495904004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/17/20 15:18	

LABORATORY CONTROL SAMPLE: 3005363

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	384	96	84-108	

SAMPLE DUPLICATE: 3005364

Parameter	Units	92495870005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

SAMPLE DUPLICATE: 3005365

Parameter	Units	92495900007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1890	1860	2	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 567872

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: 92495904001, 92495904002, 92495904003, 92495904005, 92495904006

METHOD BLANK: 3009209

Matrix: Water

Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904005, 92495904006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/17/20 15:18	

LABORATORY CONTROL SAMPLE: 3009210

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	384	96	84-108	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 568395	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: 92495904007, 92495904008

METHOD BLANK: 3011476 Matrix: Water

Associated Lab Samples: 92495904007, 92495904008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/23/20 13:15	

LABORATORY CONTROL SAMPLE: 3011477

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	375	94	84-108	

SAMPLE DUPLICATE: 3011478

Parameter	Units	92495894018 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	382	404	6	10	

SAMPLE DUPLICATE: 3011479

Parameter	Units	92495870020 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	93.0	91.0	2	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch:	568648	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: 92495904009, 92495904010, 92495904011

METHOD BLANK: 3012738 Matrix: Water

Associated Lab Samples: 92495904009, 92495904010, 92495904011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	09/24/20 10:26	

LABORATORY CONTROL SAMPLE: 3012739

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	390	98	84-108	

SAMPLE DUPLICATE: 3012740

Parameter	Units	92497007001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	207	204	1	10	

SAMPLE DUPLICATE: 3012944

Parameter	Units	92496771001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	158	157	1	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 570219	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: 92495904012, 92495904013

METHOD BLANK: 3020458 Matrix: Water

Associated Lab Samples: 92495904012, 92495904013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	10/01/20 15:22	

LABORATORY CONTROL SAMPLE: 3020459

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	412	103	84-108	

SAMPLE DUPLICATE: 3020460

Parameter	Units	92497125005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	134	142	6	10	

SAMPLE DUPLICATE: 3020461

Parameter	Units	92497146006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	878	918	4	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 570220

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: 92495904014, 92495904015

METHOD BLANK: 3020462

Matrix: Water

Associated Lab Samples: 92495904014, 92495904015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	10/01/20 15:26	

LABORATORY CONTROL SAMPLE: 3020463

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	411	103	84-108	

SAMPLE DUPLICATE: 3020464

Parameter	Units	92496524014 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	188	205	9	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 570638 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: 92495904016, 92495904017, 92495904018

METHOD BLANK: 3022933 Matrix: Water
Associated Lab Samples: 92495904016, 92495904017, 92495904018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	10/02/20 17:24	

LABORATORY CONTROL SAMPLE: 3022934

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

SAMPLE DUPLICATE: 3022936

Parameter	Units	92497532034 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

SAMPLE DUPLICATE: 3023295

Parameter	Units	92497532027 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	243	245	1	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 568673

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904004, 92495904005, 92495904006

METHOD BLANK: 3012830

Matrix: Water

Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904004, 92495904005, 92495904006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	09/24/20 13:03	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	09/24/20 13:03	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	5.0	09/24/20 13:03	

LABORATORY CONTROL SAMPLE: 3012831

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	51.0	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3012832 3012833

Parameter	Units	92495900001		3012833		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO ₃	mg/L	307	50	50	358	359	102	104	80-120	0	25

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3012834 3012835

Parameter	Units	92495900007		3012835		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO ₃	mg/L	ND	50	50	42.7	42.2	85	84	80-120	1	25

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 568970

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495904007, 92495904008

METHOD BLANK: 3014490

Matrix: Water

Associated Lab Samples: 92495904007, 92495904008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	09/30/20 11:38	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	09/30/20 11:38	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	5.0	09/30/20 11:38	

LABORATORY CONTROL SAMPLE: 3014491

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	52.5	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3014492 3014493

Parameter	Units	92495894013		3014492		3014493		% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					MSD % Rec
Alkalinity, Total as CaCO ₃	mg/L	231	50	50	274	281	86	100	80-120	3	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3014494 3014495

Parameter	Units	92495894018		3014494		3014495		% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					MSD % Rec
Alkalinity, Total as CaCO ₃	mg/L	288	50	50	343	338	111	100	80-120	2	25	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 569912

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495904009, 92495904011

METHOD BLANK: 3018962

Matrix: Water

Associated Lab Samples: 92495904009, 92495904011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	09/30/20 15:43	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	09/30/20 15:43	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	5.0	09/30/20 15:43	

LABORATORY CONTROL SAMPLE: 3018963

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	50.4	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3018964 3018965

Parameter	Units	92497388001		3018965		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Alkalinity, Total as CaCO ₃	mg/L	2670	50	50	2540	2630	-256	-85	80-120	3	25 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3018966 3018967

Parameter	Units	92496574002		3018967		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Alkalinity, Total as CaCO ₃	mg/L	66.3	50	50	117	119	101	105	80-120	2	25

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 570242

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495904010

METHOD BLANK: 3020557

Matrix: Water

Associated Lab Samples: 92495904010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	10/01/20 14:25	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	10/01/20 14:25	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	5.0	10/01/20 14:25	

LABORATORY CONTROL SAMPLE: 3020558

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	48.2	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020559 3020560

Parameter	Units	92496574010		3020559		3020560		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result				
Alkalinity, Total as CaCO ₃	mg/L	20.2	50	70.4	50	71.4	100	102	80-120	1	25

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020561 3020562

Parameter	Units	92496574018		3020561		3020562		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result				
Alkalinity, Total as CaCO ₃	mg/L	ND	50	51.4	50	51.5	103	103	80-120	0	25

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 571506

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495904012, 92495904013

METHOD BLANK: 3026929

Matrix: Water

Associated Lab Samples: 92495904012, 92495904013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	5.0	10/08/20 14:21	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	5.0	10/08/20 14:21	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	5.0	10/08/20 14:21	

LABORATORY CONTROL SAMPLE: 3026930

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	50.1	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3026931 3026932

Parameter	Units	92497532022		3026932		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Alkalinity, Total as CaCO ₃	mg/L	231	50	50	288	286	114	110	80-120	1	25

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3026933 3026934

Parameter	Units	92497532028		3026934		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Alkalinity, Total as CaCO ₃	mg/L	90.3	50	50	141	143	101	104	80-120	1	25

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 571655 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

METHOD BLANK: 3027877 Matrix: Water
Associated Lab Samples: 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	10/08/20 18:28	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	10/08/20 18:28	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	10/08/20 18:28	

LABORATORY CONTROL SAMPLE: 3027878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3027879 3027880

Parameter	Units	92497913003 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	57.8	50	50	108	109	100	103	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3029635 3029636

Parameter	Units	92495904018 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	313	50	50	353	358	79	90	80-120	2	25 M1	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 568020 Analysis Method: SM 4500-S2D-2011
QC Batch Method: SM 4500-S2D-2011 Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904004, 92495904005, 92495904006

METHOD BLANK: 3009676 Matrix: Water
Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904004, 92495904005, 92495904006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	09/22/20 14:09	

LABORATORY CONTROL SAMPLE: 3009677

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.52	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009678 3009679

Parameter	Units	92495900001		3009679		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Sulfide	mg/L	ND	0.5	0.52	0.52	98	98	80-120	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009680 3009681

Parameter	Units	92495900002		3009681		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Sulfide	mg/L	ND	0.5	0.39	0.39	77	77	80-120	0	10 M1	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 568022 Analysis Method: SM 4500-S2D-2011
QC Batch Method: SM 4500-S2D-2011 Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92495904007, 92495904008

METHOD BLANK: 3009689 Matrix: Water
Associated Lab Samples: 92495904007, 92495904008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	09/22/20 14:40	

LABORATORY CONTROL SAMPLE: 3009690

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.53	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009691 3009692

Parameter	Units	92495894013		3009691		3009692		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Sulfide	mg/L	ND	0.5	0.5	0.50	0.50	94	94	80-120	0	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009693 3009694

Parameter	Units	92495894014		3009693		3009694		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Sulfide	mg/L	ND	0.5	0.5	0.51	0.51	98	98	80-120	0	10		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 568633 Analysis Method: SM 4500-S2D-2011
QC Batch Method: SM 4500-S2D-2011 Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92495904009, 92495904010, 92495904011

METHOD BLANK: 3012716 Matrix: Water
Associated Lab Samples: 92495904009, 92495904010, 92495904011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	09/24/20 11:36	

LABORATORY CONTROL SAMPLE: 3012717

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.51	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3012718 3012719

Parameter	Units	92496675001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Sulfide	mg/L	ND	0.5	0.5	0.49	0.49	96	96	80-120	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3012720 3012721

Parameter	Units	92496675002 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Sulfide	mg/L	ND	0.5	0.5	0.45	0.45	83	83	80-120	0	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 569580 Analysis Method: SM 4500-S2D-2011
QC Batch Method: SM 4500-S2D-2011 Analysis Description: 4500S2D Sulfide Water
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92495904012, 92495904013

METHOD BLANK: 3017581 Matrix: Water
Associated Lab Samples: 92495904012, 92495904013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	09/29/20 13:47	

LABORATORY CONTROL SAMPLE: 3017582

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.5	0.53	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3017583 3017584

Parameter	Units	3017583		3017584		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Sulfide	mg/L	ND	0.5	0.5	0.18	0.19	31	32	80-120	2	10 M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 570214 Analysis Method: SM 4500-S2D-2011
 QC Batch Method: SM 4500-S2D-2011 Analysis Description: 4500S2D Sulfide Water
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

METHOD BLANK: 3020426 Matrix: Water
 Associated Lab Samples: 92495904014, 92495904015, 92495904016, 92495904017, 92495904018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	0.050	10/01/20 12:47	

LABORATORY CONTROL SAMPLE: 3020427

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020428 3020429

Parameter	Units	3020428		3020429		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92497738004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Sulfide	mg/L	ND	0.5	0.5	0.55	0.55	108	108	80-120	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020430 3020431

Parameter	Units	3020430		3020431		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92497738003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Sulfide	mg/L	ND	0.5	0.5	0.56	0.56	109	109	80-120	0	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 567529 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904004

METHOD BLANK: 3007534 Matrix: Water
Associated Lab Samples: 92495904001, 92495904002, 92495904003, 92495904004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/18/20 16:46	
Fluoride	mg/L	ND	0.10	0.050	09/18/20 16:46	
Sulfate	mg/L	ND	1.0	0.50	09/18/20 16:46	

LABORATORY CONTROL SAMPLE: 3007535

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	2.7	106	90-110	
Sulfate	mg/L	50	52.4	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3007536 3007537

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92496029001	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	13.6	50	50	68.1	69.2	109	111	90-110	2	10	M1	
Fluoride	mg/L	0.10	2.5	2.5	2.8	2.9	109	112	90-110	3	10	M1	
Sulfate	mg/L	7.4	50	50	62.2	63.3	110	112	90-110	2	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3007538 3007539

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495653005	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	5.5	50	50	58.5	62.8	106	115	90-110	7	10	M1	
Fluoride	mg/L	0.057J	2.5	2.5	2.8	3.0	108	116	90-110	7	10	M1	
Sulfate	mg/L	241	50	50	287	291	91	100	90-110	2	10		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 567607 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92495904005, 92495904006

METHOD BLANK: 3008004 Matrix: Water
Associated Lab Samples: 92495904005, 92495904006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/19/20 15:23	
Fluoride	mg/L	ND	0.10	0.050	09/19/20 15:23	
Sulfate	mg/L	ND	1.0	0.50	09/19/20 15:23	

LABORATORY CONTROL SAMPLE: 3008005

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.3	105	90-110	
Fluoride	mg/L	2.5	2.7	106	90-110	
Sulfate	mg/L	50	52.5	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3008006 3008007

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495653007	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	4.4	50	50	57.4	58.2	106	108	90-110	1	10		
Fluoride	mg/L	0.13	2.5	2.5	2.8	2.8	107	109	90-110	1	10		
Sulfate	mg/L	334	50	50	389	385	111	103	90-110	1	10	M6	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3008008 3008009

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495964005	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	7.9	50	50	61.3	62.0	107	108	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.7	2.7	107	108	90-110	1	10		
Sulfate	mg/L	256	50	50	298	299	85	87	90-110	0	10	M6	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

QC Batch: 568377 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92495904007, 92495904008

METHOD BLANK: 3011350 Matrix: Water
Associated Lab Samples: 92495904007, 92495904008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/24/20 06:58	
Fluoride	mg/L	ND	0.10	0.050	09/24/20 06:58	
Sulfate	mg/L	ND	1.0	0.50	09/24/20 06:58	

LABORATORY CONTROL SAMPLE: 3011351

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	102	90-110	
Sulfate	mg/L	50	50.1	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011352 3011353

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495656005	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	1.9	50	50	55.8	56.2	108	109	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.8	2.8	109	110	90-110	1	10		
Sulfate	mg/L	5.9	50	50	59.3	59.6	107	108	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011354 3011355

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92496524001	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	2.6	50	50	56.8	57.6	108	110	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.7	2.8	108	110	90-110	2	10		
Sulfate	mg/L	1.0	50	50	54.0	54.8	106	108	90-110	1	10		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch: 568379 Analysis Method: EPA 300.0 Rev 2.1 1993
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
 Laboratory: Pace Analytical Services - Asheville
 Associated Lab Samples: 92495904009, 92495904010, 92495904011

METHOD BLANK: 3011360 Matrix: Water
 Associated Lab Samples: 92495904009, 92495904010, 92495904011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/24/20 14:11	
Fluoride	mg/L	ND	0.10	0.050	09/24/20 14:11	
Sulfate	mg/L	ND	1.0	0.50	09/24/20 14:11	

LABORATORY CONTROL SAMPLE: 3011361

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	2.7	109	90-110	
Sulfate	mg/L	50	50.7	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011362 3011363

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495870024	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	0.64J	50	50	54.6	55.2	108	109	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.8	2.8	110	110	90-110	0	10		
Sulfate	mg/L	0.90J	50	50	53.7	54.3	106	107	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011364 3011365

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92495900019	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	236	50	50	284	284	96	95	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.5	2.4	2.5	96	100	90-110	4	10		
Sulfate	mg/L	1010	50	50	1040	1040	78	68	90-110	1	10 M6		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

QC Batch:	570137	Analysis Method:	EPA 300.0 Rev 2.1 1993
QC Batch Method:	EPA 300.0 Rev 2.1 1993	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Asheville
Associated Lab Samples:	92495904012, 92495904013, 92495904014, 92495904015, 92495904016, 92495904017, 92495904018		

METHOD BLANK:	3020267	Matrix:	Water
Associated Lab Samples:	92495904012, 92495904013, 92495904014, 92495904015, 92495904016, 92495904017, 92495904018		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	10/01/20 07:56	
Fluoride	mg/L	ND	0.10	0.050	10/01/20 07:56	
Sulfate	mg/L	ND	1.0	0.50	10/01/20 07:56	

LABORATORY CONTROL SAMPLE: 3020268						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	53.3	107	90-110	
Fluoride	mg/L	2.5	2.7	109	90-110	
Sulfate	mg/L	50	53.4	107	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020269												3020270	
Parameter	Units	92495894028 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
Chloride	mg/L	542	50	50	583	587	82	89	90-110	1	10	M6	
Fluoride	mg/L	0.41	2.5	2.5	3.2	3.1	110	109	90-110	1	10		
Sulfate	mg/L	3480	50	50	3520	3530	86	111	90-110	0	10	M6	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020271												3020272	
Parameter	Units	92496914018 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	56.0	56.5	109	110	90-110	1	10		
Fluoride	mg/L	0.063J	2.5	2.5	2.8	2.8	109	111	90-110	2	10	M1	
Sulfate	mg/L	110	50	50	160	161	101	103	90-110	1	10		

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QUALIFIERS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

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.

H1 Analysis conducted outside the EPA method holding time.

H2 Extraction or preparation conducted outside 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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92495904001	HGWA-1				
92495904002	HGWA-2				
92495904003	HGWA-3				
92495904004	HGWA-122				
92495904005	HGWA-43D				
92495904006	HGWA-44D				
92495904007	HGWC-126				
92495904009	HGWC-120				
92495904011	HGWC-125				
92495904012	HGWA-45D				
92495904013	MW-46D				
92495904014	HGWC-121A				
92495904015	HGWC-124				
92495904016	MW-32				
92495904017	MW-39				
92495904018	MW-41				
92495904001	HGWA-1	EPA 3010A	568201	EPA 6010D	568230
92495904002	HGWA-2	EPA 3010A	568201	EPA 6010D	568230
92495904003	HGWA-3	EPA 3010A	568201	EPA 6010D	568230
92495904004	HGWA-122	EPA 3010A	568747	EPA 6010D	568813
92495904005	HGWA-43D	EPA 3010A	568201	EPA 6010D	568230
92495904006	HGWA-44D	EPA 3010A	568201	EPA 6010D	568230
92495904007	HGWC-126	EPA 3010A	568747	EPA 6010D	568813
92495904008	FB-03	EPA 3010A	568747	EPA 6010D	568813
92495904009	HGWC-120	EPA 3010A	568748	EPA 6010D	568812
92495904010	FD-03	EPA 3010A	568748	EPA 6010D	568812
92495904011	HGWC-125	EPA 3010A	568748	EPA 6010D	568812
92495904012	HGWA-45D	EPA 3010A	570395	EPA 6010D	570414
92495904013	MW-46D	EPA 3010A	570395	EPA 6010D	570414
92495904014	HGWC-121A	EPA 3010A	570395	EPA 6010D	570414
92495904015	HGWC-124	EPA 3010A	570395	EPA 6010D	570414
92495904016	MW-32	EPA 3010A	570395	EPA 6010D	570414
92495904017	MW-39	EPA 3010A	570395	EPA 6010D	570414
92495904018	MW-41	EPA 3010A	570395	EPA 6010D	570414
92495904001	HGWA-1	EPA 3005A	568198	EPA 6020B	568229
92495904002	HGWA-2	EPA 3005A	568198	EPA 6020B	568229
92495904003	HGWA-3	EPA 3005A	568198	EPA 6020B	568229
92495904004	HGWA-122	EPA 3005A	568417	EPA 6020B	568454
92495904005	HGWA-43D	EPA 3005A	568198	EPA 6020B	568229
92495904006	HGWA-44D	EPA 3005A	568198	EPA 6020B	568229
92495904007	HGWC-126	EPA 3005A	568749	EPA 6020B	568811
92495904008	FB-03	EPA 3005A	568749	EPA 6020B	568811
92495904009	HGWC-120	EPA 3005A	569670	EPA 6020B	569718

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92495904010	FD-03	EPA 3005A	569670	EPA 6020B	569718
92495904011	HGWC-125	EPA 3005A	569670	EPA 6020B	569718
92495904012	HGWA-45D	EPA 3005A	570626	EPA 6020B	570683
92495904013	MW-46D	EPA 3005A	570626	EPA 6020B	570683
92495904014	HGWC-121A	EPA 3005A	570627	EPA 6020B	570682
92495904015	HGWC-124	EPA 3005A	570627	EPA 6020B	570682
92495904016	MW-32	EPA 3005A	570627	EPA 6020B	570682
92495904017	MW-39	EPA 3005A	570627	EPA 6020B	570682
92495904018	MW-41	EPA 3005A	570627	EPA 6020B	570682
92495904005	HGWA-43D	EPA 7470A	572608	EPA 7470A	572822
92495904006	HGWA-44D	EPA 7470A	572608	EPA 7470A	572822
92495904007	HGWC-126	EPA 7470A	576048	EPA 7470A	576319
92495904008	FB-03	EPA 7470A	576048	EPA 7470A	576319
92495904011	HGWC-125	EPA 7470A	576048	EPA 7470A	576319
92495904012	HGWA-45D	EPA 7470A	572608	EPA 7470A	572822
92495904001	HGWA-1	SM 2450C-2011	567872		
92495904002	HGWA-2	SM 2450C-2011	567872		
92495904003	HGWA-3	SM 2450C-2011	567872		
92495904004	HGWA-122	SM 2450C-2011	567147		
92495904005	HGWA-43D	SM 2450C-2011	567872		
92495904006	HGWA-44D	SM 2450C-2011	567872		
92495904007	HGWC-126	SM 2450C-2011	568395		
92495904008	FB-03	SM 2450C-2011	568395		
92495904009	HGWC-120	SM 2450C-2011	568648		
92495904010	FD-03	SM 2450C-2011	568648		
92495904011	HGWC-125	SM 2450C-2011	568648		
92495904012	HGWA-45D	SM 2450C-2011	570219		
92495904013	MW-46D	SM 2450C-2011	570219		
92495904014	HGWC-121A	SM 2450C-2011	570220		
92495904015	HGWC-124	SM 2450C-2011	570220		
92495904016	MW-32	SM 2450C-2011	570638		
92495904017	MW-39	SM 2450C-2011	570638		
92495904018	MW-41	SM 2450C-2011	570638		
92495904001	HGWA-1	SM 2320B-2011	568673		
92495904002	HGWA-2	SM 2320B-2011	568673		
92495904003	HGWA-3	SM 2320B-2011	568673		
92495904004	HGWA-122	SM 2320B-2011	568673		
92495904005	HGWA-43D	SM 2320B-2011	568673		
92495904006	HGWA-44D	SM 2320B-2011	568673		
92495904007	HGWC-126	SM 2320B-2011	568970		
92495904008	FB-03	SM 2320B-2011	568970		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92495904

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92495904009	HGWC-120	SM 2320B-2011	569912		
92495904010	FD-03	SM 2320B-2011	570242		
92495904011	HGWC-125	SM 2320B-2011	569912		
92495904012	HGWA-45D	SM 2320B-2011	571506		
92495904013	MW-46D	SM 2320B-2011	571506		
92495904014	HGWC-121A	SM 2320B-2011	571655		
92495904015	HGWC-124	SM 2320B-2011	571655		
92495904016	MW-32	SM 2320B-2011	571655		
92495904017	MW-39	SM 2320B-2011	571655		
92495904018	MW-41	SM 2320B-2011	571655		
92495904001	HGWA-1	SM 4500-S2D-2011	568020		
92495904002	HGWA-2	SM 4500-S2D-2011	568020		
92495904003	HGWA-3	SM 4500-S2D-2011	568020		
92495904004	HGWA-122	SM 4500-S2D-2011	568020		
92495904005	HGWA-43D	SM 4500-S2D-2011	568020		
92495904006	HGWA-44D	SM 4500-S2D-2011	568020		
92495904007	HGWC-126	SM 4500-S2D-2011	568022		
92495904008	FB-03	SM 4500-S2D-2011	568022		
92495904009	HGWC-120	SM 4500-S2D-2011	568633		
92495904010	FD-03	SM 4500-S2D-2011	568633		
92495904011	HGWC-125	SM 4500-S2D-2011	568633		
92495904012	HGWA-45D	SM 4500-S2D-2011	569580		
92495904013	MW-46D	SM 4500-S2D-2011	569580		
92495904014	HGWC-121A	SM 4500-S2D-2011	570214		
92495904015	HGWC-124	SM 4500-S2D-2011	570214		
92495904016	MW-32	SM 4500-S2D-2011	570214		
92495904017	MW-39	SM 4500-S2D-2011	570214		
92495904018	MW-41	SM 4500-S2D-2011	570214		
92495904001	HGWA-1	EPA 300.0 Rev 2.1 1993	567529		
92495904002	HGWA-2	EPA 300.0 Rev 2.1 1993	567529		
92495904003	HGWA-3	EPA 300.0 Rev 2.1 1993	567529		
92495904004	HGWA-122	EPA 300.0 Rev 2.1 1993	567529		
92495904005	HGWA-43D	EPA 300.0 Rev 2.1 1993	567607		
92495904006	HGWA-44D	EPA 300.0 Rev 2.1 1993	567607		
92495904007	HGWC-126	EPA 300.0 Rev 2.1 1993	568377		
92495904008	FB-03	EPA 300.0 Rev 2.1 1993	568377		
92495904009	HGWC-120	EPA 300.0 Rev 2.1 1993	568379		
92495904010	FD-03	EPA 300.0 Rev 2.1 1993	568379		
92495904011	HGWC-125	EPA 300.0 Rev 2.1 1993	568379		
92495904012	HGWA-45D	EPA 300.0 Rev 2.1 1993	570137		
92495904013	MW-46D	EPA 300.0 Rev 2.1 1993	570137		
92495904014	HGWC-121A	EPA 300.0 Rev 2.1 1993	570137		

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92495904

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92495904015	HGWC-124	EPA 300.0 Rev 2.1 1993	570137		
92495904016	MW-32	EPA 300.0 Rev 2.1 1993	570137		
92495904017	MW-39	EPA 300.0 Rev 2.1 1993	570137		
92495904018	MW-41	EPA 300.0 Rev 2.1 1993	570137		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: GA Power

WO#: **92495904**



Courier: Fed Ex UPS USPS Client Commercial Pace
Tracking #: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used 214 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 0.8 Biological Tissue is Frozen: Yes No
Temp should be above freezing to 6°C

Date and initials of person examining contents: 9/16/2004

Comments: _____

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

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: _____

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



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
 12/17/07
 2

Section A Required Client Information Company: GA Power Address: Atlanta, GA		Section B Required Project Information Report To: SCS Contacts Copy To: Geosynthetic Contacts		Section C Invoice Information Attention: Sullivan Co. Company Name: Sullivan Co. Address: [Blank] Phone: [Blank] Fax: [Blank] Project Name: Plant Hammond AP-3 Semipermanal/BKG 04 Project Number: GWS6581 Purchase Order No.: [Blank]	
Email To: SCS Contacts		Purchase Order No.:		Address:	
Phone: [Blank]		Project Name: Plant Hammond AP-3 Semipermanal/BKG 04		Address:	
Requested Due Date/TAT: to day		Project Number: GWS6581		Address:	
		Requested Date/Time: 10/23/07 10:08:39-5/10/08-2		Address:	
		Requested Date/Time: 10/23/07 10:08:39-5/10/08-2		Address:	

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE (see valid codes to list)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH = 7.15 pH = 5.22 pH = 6.01								
			DATE	TIME								DATE	TIME						
1	HGWA-1	WT G	9-15-10	11:18	-	7	Unpreserved	Chloride, Fluoride, Sulfate	X	X	X	X	X	X	X	X	X	X	X
2	HGWA-2	WT G	9-15-10	11:58	-	7	H ₂ SO ₄	TDS	X	X	X	X	X	X	X	X	X	X	X
3	HGWA-3	WT G	-	-	-	7	HNO ₃	App. III&IV Metals 6010/6020*	X	X	X	X	X	X	X	X	X	X	X
4	HGWA-152	WT G	-	-	-	7	HCl	RAD 226/228	X	X	X	X	X	X	X	X	X	X	X
5	HGWA-190	WT G	-	-	-	7	NaOH	Major Ions**	X	X	X	X	X	X	X	X	X	X	X
6	HGWA-121A	WT G	-	-	-	7	Na ₂ S ₂ O ₃		X	X	X	X	X	X	X	X	X	X	X
7	HGWA-124	WT G	-	-	-	7	Methanol		X	X	X	X	X	X	X	X	X	X	X
8	HGWA-32	WT G	-	-	-	7	Other		X	X	X	X	X	X	X	X	X	X	X
9	HGWA-30	WT G	-	-	-	7			X	X	X	X	X	X	X	X	X	X	X
10	HGWA-41	WT G	-	-	-	7			X	X	X	X	X	X	X	X	X	X	X
11	HGWA-45D	WT G	-	-	-	7			X	X	X	X	X	X	X	X	X	X	X
12	HGWA-89	WT G	-	-	-	7			X	X	X	X	X	X	X	X	X	X	X

ADDITIONAL COMMENTS Please note dry wells, tanks through any wells not sampled, and note when the last sample for the event has been taken. *App. III&IV Metals= Sn, Ba, Bi, Ca, Cr, Co, Fe, U, Mo **Major ions= Alk, Bicarb Alk, Fe, Mg, Mn, K, Na, Sulfate		RELIQUISHED BY/AFFILIATION WMSH THORNTON/GRD Mable Thompson/GRD John Hill/GRD		DATE 9-15-10 9/15/10 9/16/10		TIME 17:05 18:20 11:13		ACCEPTED BY/AFFILIATION WMSH THORNTON/GRD Mable Thompson/GRD John Hill/GRD		DATE 9/15/10 9/15/10 9/16/10		TIME 17:05 18:20 11:14	
SAMPLER NAME AND SIGNATURE WMSH THORNTON		SIGNATURE OF SAMPLER:		DATE SIGNED (MM/DD/YY): 9-15-10		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 pay charges of 1.5% per month for any amounts not paid within 30 days



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: GA Power Address: Atlanta, GA Email To: SCS Contacts Phone: Fax Requested Date Analyzed: 18 Day	Section B Required Project Information: Report To: SCS Contacts Copy To: Geosynetic Contacts Purchase Order No.: Project Name: Plant Hammond AP-3 Semianual/BH-G 04 Project Number: GWS591
Section C Invoice Information: Attention: Southern Co. Company Name: Address: State: City: Zip: Project Manager: Kevin Herring Project Number: 10839-S/10839-2	REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER COM

ITEM #	Section D Required Client Information Valid Matrix Codes MATERIAL: DOMESTIC WASTE, WASTE WATER, WASTE WATER, INDUSTRIAL WASTE, SURFACED, WASTE WATER, AIR, OTHER, ISSUED	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Preservatives	Requested Analysis Filtered (Y/N)						Residual Chlorine (Y/N)		
												Chloride, Fluoride, Sulfate	TDS	App. III&IV Metals 6010/6020*	RAD 226/228	Major Ions**	Y		N	Y
1	HGMWA-1	WT G	G	9/15	1145	9/15/20	1820		3			X	X	X	X	X	X	N	N	
2	HGMWA-2	WT G	G	9/15	1145	9/15/20	1820		3			X	X	X	X	X	X	N	N	
3	HGMWA-3	WT G	G	9/15	1145	9/15/20	1820		3			X	X	X	X	X	X	N	N	
4	HGMWA-122	WT G	G	9/15	1541	9/15/20	1450		3			X	X	X	X	X	X	N	N	
5	HGMWA-120	WT G	G	9/15	1541	9/15/20	1450		3			X	X	X	X	X	X	N	N	
6	HGMWA-121A	WT G	G	9/15	1541	9/15/20	1450		3			X	X	X	X	X	X	N	N	
7	HGMWA-122	WT G	G	9/15	1541	9/15/20	1450		3			X	X	X	X	X	X	N	N	
8	HGMWA-120	WT G	G	9/15	1541	9/15/20	1450		3			X	X	X	X	X	X	N	N	
9	HGMWA-121A	WT G	G	9/15	1541	9/15/20	1450		3			X	X	X	X	X	X	N	N	
10	HGMWA-122	WT G	G	9/15	1541	9/15/20	1450		3			X	X	X	X	X	X	N	N	
11	HGMWA-120	WT G	G	9/15	1541	9/15/20	1450		3			X	X	X	X	X	X	N	N	
12	HGMWA-121A	WT G	G	9/15	1541	9/15/20	1450		3			X	X	X	X	X	X	N	N	

REINQUISHED BY / AFFILIATION
 Date: 9/15/20 Time: 1820
 Signature: *Mad Ruser*
 Title: *Env. Mgr*

ACCEPTED BY / AFFILIATION
 Date: 9/16/20 Time: 1450
 Signature: *Kevin Herring*
 Title: *Project Manager*

SAMPLER NAME AND SIGNATURE
 Name: *Mad Ruser*
 Signature: *Mad Ruser*
 Date Signed: 9/15/20

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

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

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

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



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

Section A Required Client Information:
Company: GA Power
Address: Atlanta GA
Email To: SCS Contacts
Phone: Fax
Requested Date/Time: 10 Day

Section B Required Project Information:
Report To: SCS Contacts
Copy To: Geosynetic Contacts
Purchase Order No.:
Project Name: Plant Hammond AP-3-Semiannual/BKG 04
Project Number: GW6581

Section C Invoice Information:
Attention: Southern Co.
Company Name:
Address:
City:
State:
Zip Code:
Reference: Kevin Herring
Phone:
Fax:
Major Project #: 10839-4/10839-2
Voice Project:

REGULATORY AGENCY
 NPDES GROUND WATER
 UST RCRA
 OTHER COM
 Site Location: GA
 STATE: GA

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE (see valid codes to list) SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test					Residual Chlorine (Y/N)	pH =	pH =	pH =					
								H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Chloride	Fluoride	Sulfate	TDS	Full App. III&IV Metals 6010/6020/7					HAD 226/228	Major ions**			
1	HGMW-125 A-Z-04 / -2 Sample IDs MUST BE UNIQUE	9/16	11:58	9/16	13:05	1955	3																					
2	HGMW-426	9/16	11:58	9/16	13:05	1955	3																					
3	MMW-43D	9/16	11:58	9/16	13:05	1955	3																					
4	MMW-44D	9/16	11:58	9/16	13:05	1955	3																					
5	MMW-45D	9/16	11:58	9/16	13:05	1955	3																					
6	FB-03	9/16	11:58	9/16	13:05	1955	3																					

ADDITIONAL COMMENTS
Please note dry wells, states through any wells not sampled, and note when the last sample for the event has been taken.
Full App III & IV Metals: So, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mn, Se, Tl
Major ions: AR, Bi, Cd, Al, Fe, Hg, Ni, K, Na, Sulfide
One sample per submitted for HGMWA-1, HGMWA-2, HGMWA-3, MMW-43D, MMW-44D but they will be reported for AP-42/3 SOCs

REQUISITIONED BY / AFFILIATION
Chad Russel / GSC

DATE
9/16/20

TIME
0945

ACCEPTED BY / AFFILIATION
Chad Russel

DATE
9/16/20

TIME
1305

TEMPERATURE
4.11

SAMPLER NAME AND SIGNATURE
Chad Russel

DATE SIGNED (MM/DD/YY)
9/16/2020

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

Page: 1 of 1

*Important Note: By signing this form you are accepting Pace's MET 30 day payment terms and agreeing to the charges of 15% per month for any invoices not paid within 30 days.

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

CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 1

Section A Required Client Information: Company: GA Power Address: Atlanta, GA		Section B Required Project Information: Report to: SCS Contacts Copy To: Geosyntec Contacts		Section C Invoice Information: Attention: Southern Co. Company Name: Address: Phone: Fax: Reference: Kevin Herring Plant Project Manager Plant Site #: 10839-41/0839-2	
Requested Date : to Day	Requested Date : to Day	Plant Name : Plant Hammond AP-3 Semianual/BKG 04	Project Name : Project Number: GWM6581	Purchase Order No.:	Project Number : GWM6581
Request Type : <input type="checkbox"/> SCS Contacts <input type="checkbox"/> Fax	Request Type : <input type="checkbox"/> SCS Contacts <input type="checkbox"/> Fax	Plant Address : Project Number: GWM6581	Plant Address : Project Number: GWM6581	Plant Address : Project Number: GWM6581	Plant Address : Project Number: GWM6581

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS						Analysis Test		Residual Chlorine (Y/N)	pH =		
			DATE	TIME				Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other			Chloride	Fluoride
1	HGWC-125	WT G			9/18	1539	-	7	3	3	3	1	X	X	X	X	X	N	6.97
2	HGWC-126	WT G			9/18		-	7	3	3	3	1	X	X	X	X	X	N	6.97
3	MM-43U	WT G					-	7	3	3	3	1	X	X	X	X	X	N	
4	MM-44D	WT G					-	7	3	3	3	1	X	X	X	X	X	N	
5	MM-45D	WT G					-	7	3	3	3	1	X	X	X	X	X	N	
6	FB-03	WT G			9/18	1655	-	7	3	3	3	1	X	X	X	X	X	N	

ADDITIONAL COMMENTS: Please note dry wells, stake through dry wells not sampled, and note when the last sample for the event has been taken. *Full App. III & IV Metals-So, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mn, Ni, Se, Ti. **Major ions= Alk, Bicarb, ASk, Fe, Mg, Mn, K, Na, Sulfide

RELINQUISHED BY / AFFILIATION: Gad Kuznetsov 9/21/20	DATE: 9/21/20	TIME: 0925	ACCEPTED BY / AFFILIATION: Nalia Makhun 9/21/20	DATE: 9/21/20	TIME: 1910
RELINQUISHED BY / AFFILIATION: Gad Kuznetsov 9/21/20	DATE: 9/21/20	TIME: 1208	ACCEPTED BY / AFFILIATION: Gad Kuznetsov 9/21/20	DATE: 9/21/20	TIME: 1910

SAMPLER NAME AND SIGNATURE:
PRINT NAME of SAMPLER: Gad Kuznetsov
SIGNATURE of SAMPLER: [Signature]
DATE Signed (MM/DD/YYYY): 9/18/2020

SAMPLE CONDITIONS:
Temp in °C: [Blank]
Received on Ice (Y/N): [Blank]
Custody Sealed Cooler (Y/N): [Blank]
Samples Intact (Y/N): [Blank]



CHAIN-OF-CUSTODY / Analytical Request Document

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

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

Section B Required Project Information:
 Report To: SCS Contacts
 Copy To: Geosyntec Contacts

Section C Invoicing Information:
 Attention: Southern Co.
 Company Name:
 Address:
 P.O. Box:
 Reference:
 Project Name: Kevin Herring
 Manager:
 Phone/Fax #: 10839-5/10839-2

Page: 1 of 2

Section D Required Client Information:
 Valid Matrix Codes:
 MATRIX CODE (see valid codes to left)
 SAMPLE TYPE (G=GRAB C=COMP)
 DATE TIME DATE TIME
 SAMPLE TEMP AT COLLECTION
 # OF CONTAINERS
 Unpreserved
 H₂SO₄
 HNO₃
 HCl
 NaOH
 Na₂S₂O₃
 Methanol
 Other
 Analysis Test Y/N
 Chloride, Fluoride, Sulfate
 TDS
 App. III&IV Metals 6010/6020*
 RAD 226/228
 Major ions**
 Requested Analysis Filtered (Y/N)
 Residual Chlorine (Y/N)
 Pace Project No. Lab I.D. 02445904

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP) DATE TIME DATE TIME SAMPLE TEMP AT COLLECTION # OF CONTAINERS Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other Analysis Test Y/N Chloride, Fluoride, Sulfate TDS App. III&IV Metals 6010/6020* RAD 226/228 Major ions** Requested Analysis Filtered (Y/N) Residual Chlorine (Y/N) Pace Project No. Lab I.D.	MATRIX CODE	SAMPLE TYPE	COLLECTED		DATE	TIME	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLER NAME AND SIGNATURE	DATE SIGNED (MM/DD/YY)	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (N/A)	
				DATE	TIME														
1	HGWVA-1	WT G	G																
2	HGWVA-2	WT G	G																
3	HGWVA-3	WT G	G																
4	HGWVA-122	WT G	G																
5	HGWVA-120	WT G	G	9/21	1348			20	7 3	3									
6	HGWVA-121A	WT G	G						7 3	3									
7	HGWVA-124	WT G	G						7 3	3									
8	MWV-32	WT G	G						7 3	3									
9	MWV-30	WT G	G						7 3	3									
10	MWV-41	WT G	G						7 3	3									
11	MWV-46D	WT G	G						7 3	3									
12	FD-03	WT G	G						7 3	3									

Section D Additional Comments:
 Please note dry wells, status through any wells not sampled, and note when the last sample for this event has been taken.
 Yrpp, B&V Metals - Sp, Ba, Br, Ca, Cr, Co, Pb, U, Mo
 **Major ions = Al, Bicarb Alk, Fe, Mg, Mn, K, Na, Sulfate
 One sample set submitted for HGWVA-1, HGWVA-2, HGWVA-3 but results will be reported for AP-1/2/3 SDCs

REQUISITIONED BY / AFFILIATION: Chad Ruggs
 DATE: 9/20/20
 TIME: 2:10
 ACCEPTED BY / AFFILIATION: Nolin M...
 DATE: 9/21/20
 TIME: 11:10

SAMPLER NAME AND SIGNATURE: Chad Ruggs
 PRINT NAME OF SAMPLER: Chad Ruggs
 SIGNATURE OF SAMPLER: [Signature]
 DATE SIGNED (MM/DD/YY): 9/21/2020

Temp in °C: 4.1
 Received on Ice (Y/N): Y
 Custody Sealed Cooler (Y/N): N
 Samples Intact (N/A): Y



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: GA Power Address: Atlanta GA		Section B Required Project Information: Report to: SCS Contacts Cop/ To: Geosynthetic Contacts		Section C Invoice Information: Attention: Southern Co. Company Name: Address:	
Email To: SCS Contacts Phone: Fax Requested Dur Dates/TAT: to Day		Purchase Order No.: Project Name: Plant Hammond AP-3 Semiannual/BKG 04 Project Number: GW6591		Address: POC Name: POC Project Manager: POC Phone #: 10839-4/10839-2	
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER CCR			Site Location STATE: GA		

ITEM #	Section D Requested Client Information: Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)	pH = 6.22 Pace Project No./Lab ID. A21165004			
			DATE	TIME			H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol					Other		
1	HQWC-125	WT G	9/21	2:07	20	7	3	3	1	1	1	1	1	X	X	X	X	X	X
2	HQWC-126	WT G				7	3	3	1	1	1	1	1	X	X	X	X	X	X
3	MM-430	WT G				7	3	3	1	1	1	1	1	X	X	X	X	X	X
4	MM-420	WT G				7	3	3	1	1	1	1	1	X	X	X	X	X	X
5	MM-450	WT G				7	3	3	1	1	1	1	1	X	X	X	X	X	X
6	FB-03	WT G				7	3	3	1	1	1	1	1	X	X	X	X	X	X
7																			
8																			
9																			
10																			
11																			
12																			

REQUISITIONED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Bob Rogers / GPO	9/21	1:10	Nolia / GPO	9/21	2:10	
Milton / GPO	9/22	09:25	Y / GPO	9/22	9:25	
Kevin / Pace	9/22	12:16	Shane / Pace	9/22	12:15	

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Chad Russo SIGNATURE of SAMPLER: <i>Chad Russo</i>		DATE Signed (MM/DD/YY): 9/21/2007
Temp in °C: 41		Received on Ice (Y/N): Y
Custody Sealed Cooler (Y/N): N		Samples Intact (Y/N): Y

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 2

Section A Required Client Information Company: GA Power Address: Atlanta, GA		Section B Required Project Information Report to: SCS Contacts Copy to: Geosynthetic Contacts		Section C Invoice Information Company Name: Southern Co. Address:	
Email to: SCS Contacts Phone: <input type="checkbox"/> Fax: <input type="checkbox"/>		Purchase Order No.:		Address:	
Requested Due Date/TAT: 10 Day		Project Name: Plant Hamstead AP-3 Semianual/BKG 04		Person Date: <input type="checkbox"/>	
		Project Number: GWS581		Station: <input type="checkbox"/>	
				State Project Manager: Kevin Herring	
				Price Invoice #: 10839-446666-2-10839-2	
				Requested Analyte Filtered (Y/N)	
				Site Location: <input type="checkbox"/> STATE: CA	
				REGULATORY AGENCY: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WAT <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER COR	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	SCS CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Analysis Test	Y/N	Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No/ Lab ID.
1	HGMG-425	WT	0	WT	0						1		Chloride, Fluoride, Sulfate	X			
2	HGMG-426	WT	0	WT	0						1		TDS	X			
3	MM-450	WT	0	WT	0						1		Full App. III&IV Metals 6010/6020/7	X			
4	FB-02	WT	0	WT	0						1		RAD 226/228	X			
6	HGMG-450	WT	6	WT	6	19	7	3	3		3		Major ions**	X			
6																	
7																	
8																	
9																	
10																	
11																	
12																	

PLEASE NOTE: Dry weight, unless otherwise noted, is not analyzed, and results when the test sample for the event has been taken.

Full App. III & IV Metals: Sr, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Li, Hg, Mn, Se, Ni

Major ions: Alk, Bicarb, Aik, Fg, Mg, Mn, K, Na, Sulfate

One sample set submitted for HGWA-1, HGWA-2, HGWA-3 but results will be reported for AP-1/2/3 SOCs

RELINQUISHED BY AFFILIATION	DATE	TIME	ACCEPTED BY AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
VIKASH TAVARAN	9-25-10	1720	CEA	9-25-10	1720	Temp in °C
VIKASH TAVARAN	9-25-10	2030	VIKASH TAVARAN	9-25-10	2030	Received on Ice (Y/N)
VIKASH TAVARAN	9-28-10	1350	VIKASH TAVARAN	9-28-10	1350	Custody Sealed Cooler (Y/N)
VIKASH TAVARAN	9-28-10	1350	VIKASH TAVARAN	9-28-10	1350	Samples Intact (Y/N)

PRINT Name of SAMPLER: VIKASH TAVARAN
SIGNATURE of SAMPLER: [Signature]
DATE Signed (MM/DD/YYYY): 9-25-10

*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: 2 of 2

Section A Required Client Information: Company: <u>GA Power</u> Address: <u>Atlanta, GA</u>		Section B Required Project Information: Report To: <u>SCS Contacts</u> Copy To: <u>Geosynthetic Contacts</u>		Section C Invoice Information: Attention: <u>Southern Co.</u> Company Name: _____ Address: _____ City/State: _____	
Email To: <u>SCS Contacts</u> Phone: _____ Requested Due Date/TAT: <u>10 day</u>		Purchase Order No.: _____ Project Name: <u>Plant Hamilton and AP-3 Schumann/BK/G 04</u> Project Number: <u>GW6581</u>		Price Quote Reference: _____ Price Project Manager: <u>Kevin Herring</u> Price Profile #: <u>10839-S/10839-2</u>	
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input checked="" type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER COR			Site Location: _____ STATE: <u>GA</u>		

ITEM #	Valid Matrix Codes Required Client Information: MATRIX CODE SAMPLE TYPE (G-GRAB C-COMP) DATE TIME DATE TIME SAMPLE TEMP AT COLLECTION # OF CONTAINERS Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other Analysis Test Chloride, Fluoride, Sulfate TDS App. III&IV Metals 8010/6020* RAD 228/228 Major ions** Residual Chlorine (Y/N) pH = <u>7.56</u>	MATRIX CODE	SAMPLE TYPE	DATE	TIME	DATE	TIME	REQUISITIONED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLER NAME AND SIGNATURE	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)	
																			COLLECTED
1	HQWA-1	WT G																	
2	HQWA-2	WT G																	
3	HQWA-3	WT G																	
4	HQWA-102	WT G																	
5	HQWA-120	WT G																	
6	HQWA-121A	WT G																	
7	HQWA-124	WT G																	
8	MM-32	WT G																	
9	MM-30	WT G																	
10	MM-41	WT G																	
11	MM-46D	WT G																	
12	FD-69	WT G																	

Additional Comments: _____

Requisitioned By: W. K. Thibodeau / Affiliation: SCS / Date: 9/25/20 / Time: 13:50

Accepted By: Kevin Herring / Affiliation: Pace / Date: 9/25/20 / Time: 09:10

Printer Name of Sampler: W. K. Thibodeau / Signature of Sampler: [Signature] / Date Signed (MM/DD/YYYY): 9-25-20

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



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		Section B Required Project Information: Report To: SCS Contacts Copy To: Geosynlec Contacts		Section C Invoice Information: Agency: Southern Co. Company Name: Address: City/State:	
Form To: SCS Contacts Project Name: Plant Hammond A.P. 3 Semianual/BKG 04 Project Number: GW6591		Purchase Order No: Price Quote Reference:		Price Quote Reference: Kevin Herring Price Profile #: 10839-5/10839-2	
Requested Due Date/TAT: to Day		Requested Analysis Filtered (Y/N)		REGULATORY AGENCY:	
Site Location STATE: GA		NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> LIST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>		Temp in °C: 39	

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE GENERAL WASTE WATER WASTE WATER PRODUCT SOLUBLE OK WASTE AIR DIESEL TISSE OTHER	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS
				DATE	TIME	DATE							
1	HGWA-1	WT G					7	3	3	X	X	X	
2	HGWA-2	WT G					7	9	3	X	X	X	
3	HGWA-3	WT G					7	3	3	X	X	X	
4	HGWA-122	WT G					7	3	3	X	X	X	
5	HGWC-120	WT G					7	3	3	X	X	X	
6	HGWC-124	WT G					7	3	3	X	X	X	
7	HGWA-124	WT G					7	3	3	X	X	X	
8	MW-32	WT G					7	3	3	X	X	X	
9	MW-39	WT G					7	3	3	X	X	X	
10	MW-41	WT G					7	3	3	X	X	X	
11	MW-46D	WT G					7	3	3	X	X	X	
12	PD-03	WT G					7	3	3	X	X	X	

ADDITIONAL COMMENTS: Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken. *App. III&IV Metals: Sb, Ba, Bi, B, Ca, Cr, Co, Pb, U, Mo **Major ions: Alk, Bicarb Alk, Fe, Mg, Mn, K, Na, Sulfate One sample set submitted for HGWA-1, HGWA-2, HGWA-3 but results will be reported for AP-1220 SDGAs		REMOVED BY / AFFILIATION: Thomas Hester/Geosynlec Date: 9/25/08 Time: 0855		ACCEPTED BY / AFFILIATION: Kevin Herring/RCRA Date: 9/28/08 Time: 2000	
SIGNATURE OF SAMPLER: Thomas J Hester		SIGNATURE OF SAMPLER: Kevin Herring		DATE SIGNED (MM/DD/YYYY): 09/25/08	

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

October 21, 2020

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

RE: Project: HAMMOND AP-3 SEMIANNUAL RADS
Pace Project No.: 92495892

Dear Joju Abraham:

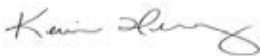
Enclosed are the analytical results for sample(s) received by the laboratory between September 16, 2020 and September 29, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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CERTIFICATIONS

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-3 SEMIANNUAL RADS
Pace Project No.: 92495892

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92495892001	HGWA-1	Water	09/15/20 14:01	09/16/20 11:14
92495892002	HGWA-2	Water	09/15/20 10:58	09/16/20 11:14
92495892003	HGWA-3	Water	09/15/20 11:45	09/16/20 11:14
92495892004	HGWA-122	Water	09/15/20 15:41	09/16/20 11:14
92495892005	HGWA-43D	Water	09/16/20 11:58	09/17/20 09:45
92495892006	HGWA-44D	Water	09/16/20 15:18	09/17/20 09:45
92495892007	HGWC-126	Water	09/18/20 15:39	09/21/20 09:25
92495892008	FB-03	Water	09/18/20 16:50	09/21/20 09:25
92495892009	HGWC-120	Water	09/21/20 13:48	09/22/20 09:25
92495892010	FD-03	Water	09/21/20 00:00	09/22/20 09:25
92495892011	HGWC-125	Water	09/21/20 12:07	09/22/20 09:25
92495892012	HGWA-45D	Water	09/25/20 13:50	09/28/20 09:40
92495892013	MW-46D	Water	09/25/20 11:10	09/28/20 09:40
92495892014	HGWC-121A	Water	09/28/20 16:04	09/29/20 08:55
92495892015	HGWC-124	Water	09/28/20 18:00	09/29/20 08:55
92495892016	MW-32	Water	09/28/20 15:44	09/29/20 08:55
92495892017	MW-39	Water	09/28/20 17:27	09/29/20 08:55
92495892018	MW-41	Water	09/28/20 19:05	09/29/20 08:55

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL RADS
Pace Project No.: 92495892

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92495892001	HGWA-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92495892002	HGWA-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92495892003	HGWA-3	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92495892004	HGWA-122	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92495892005	HGWA-43D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92495892006	HGWA-44D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92495892007	HGWC-126	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92495892008	FB-03	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92495892009	HGWC-120	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92495892010	FD-03	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92495892011	HGWC-125	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92495892012	HGWA-45D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92495892013	MW-46D	EPA 9315	LAL	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92495892014	HGWC-121A	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92495892015	HGWC-124	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92495892016	MW-32	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92495892017	MW-39	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92495892018	MW-41	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92495892001	HGWA-1					
EPA 9315	Radium-226	0.0193 ± 0.226 (0.595) C:83% T:NA	pCi/L		10/07/20 07:29	
EPA 9320	Radium-228	0.729 ± 0.435 (0.807) C:71% T:83%	pCi/L		10/07/20 14:00	
Total Radium Calculation	Total Radium	0.748 ± 0.661 (1.40)	pCi/L		10/19/20 09:49	
92495892002	HGWA-2					
EPA 9315	Radium-226	0.124 ± 0.339 (0.807) C:88% T:NA	pCi/L		10/07/20 07:30	
EPA 9320	Radium-228	-0.233 ± 0.417 (1.01) C:66% T:81%	pCi/L		10/07/20 14:00	
Total Radium Calculation	Total Radium	0.124 ± 0.756 (1.82)	pCi/L		10/16/20 12:16	
92495892003	HGWA-3					
EPA 9315	Radium-226	0.161 ± 0.215 (0.449) C:89% T:NA	pCi/L		10/07/20 07:30	
EPA 9320	Radium-228	-0.305 ± 0.343 (0.865) C:74% T:83%	pCi/L		10/07/20 14:00	
Total Radium Calculation	Total Radium	0.161 ± 0.558 (1.31)	pCi/L		10/16/20 12:16	
92495892004	HGWA-122					
EPA 9315	Radium-226	0.192 ± 0.240 (0.500) C:88% T:NA	pCi/L		10/14/20 07:29	
EPA 9320	Radium-228	0.183 ± 0.426 (0.945) C:69% T:80%	pCi/L		10/15/20 14:29	
Total Radium Calculation	Total Radium	0.375 ± 0.666 (1.45)	pCi/L		10/16/20 12:16	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL RADS
Pace Project No.: 92495892

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92495892005	HGWA-43D					
EPA 9315	Radium-226	0.531 ± 0.341 (0.558)	pCi/L		10/07/20 07:38	
EPA 9320	Radium-228	C:83% T:NA -0.0158 ± 0.401 (0.931)	pCi/L		10/08/20 11:52	
Total Radium Calculation	Total Radium	C:73% T:74% 0.531 ± 0.742 (1.49)	pCi/L		10/20/20 08:55	
92495892006	HGWA-44D					
EPA 9315	Radium-226	0.129 ± 0.179 (0.380)	pCi/L		10/07/20 07:38	
EPA 9320	Radium-228	C:100% T:NA 0.293 ± 0.412 (0.887)	pCi/L		10/08/20 11:52	
Total Radium Calculation	Total Radium	C:76% T:83% 0.422 ± 0.591 (1.27)	pCi/L		10/20/20 08:55	
92495892007	HGWC-126					
EPA 9315	Radium-226	0.369 ± 0.289 (0.513)	pCi/L		10/14/20 06:28	
EPA 9320	Radium-228	C:85% T:NA 0.472 ± 0.423 (0.866)	pCi/L		10/15/20 11:08	
Total Radium Calculation	Total Radium	C:82% T:80% 0.841 ± 0.712 (1.38)	pCi/L		10/20/20 08:55	
92495892008	FB-03					
EPA 9315	Radium-226	0.0162 ± 0.159 (0.433)	pCi/L		10/14/20 06:29	
EPA 9320	Radium-228	C:85% T:NA -0.0349 ± 0.399 (0.926)	pCi/L		10/15/20 11:08	
Total Radium Calculation	Total Radium	C:77% T:82% 0.0162 ± 0.558 (1.36)	pCi/L		10/20/20 09:06	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92495892009	HGWC-120					
EPA 9315	Radium-226	0.0994 ± 0.201 (0.468) C:86% T:NA	pCi/L		10/14/20 07:18	
EPA 9320	Radium-228	0.454 ± 0.512 (1.08) C:75% T:73%	pCi/L		10/15/20 11:07	
Total Radium Calculation	Total Radium	0.553 ± 0.713 (1.55)	pCi/L		10/20/20 09:06	
92495892010	FD-03					
EPA 9315	Radium-226	0.213 ± 0.268 (0.569) C:92% T:NA	pCi/L		10/14/20 07:19	
EPA 9320	Radium-228	0.127 ± 0.309 (0.688) C:80% T:81%	pCi/L		10/15/20 11:06	
Total Radium Calculation	Total Radium	0.340 ± 0.577 (1.26)	pCi/L		10/20/20 09:06	
92495892011	HGWC-125					
EPA 9315	Radium-226	0.621 ± 0.312 (0.353) C:87% T:NA	pCi/L		10/14/20 06:29	
EPA 9320	Radium-228	0.824 ± 0.389 (0.653) C:79% T:86%	pCi/L		10/15/20 11:06	
Total Radium Calculation	Total Radium	1.45 ± 0.701 (1.01)	pCi/L		10/20/20 09:06	
92495892012	HGWA-45D					
EPA 9315	Radium-226	0.444 ± 0.255 (0.298) C:90% T:NA	pCi/L		10/14/20 06:37	
EPA 9320	Radium-228	0.622 ± 0.414 (0.789) C:80% T:76%	pCi/L		10/15/20 11:07	
Total Radium Calculation	Total Radium	1.07 ± 0.669 (1.09)	pCi/L		10/20/20 09:06	

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL RADS
Pace Project No.: 92495892

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92495892013	MW-46D					
EPA 9315	Radium-226	0.217 ± 0.191 (0.315) C:90% T:NA	pCi/L		10/14/20 06:40	
EPA 9320	Radium-228	0.377 ± 0.345 (0.702) C:75% T:89%	pCi/L		10/15/20 11:07	
Total Radium Calculation	Total Radium	0.594 ± 0.536 (1.02)	pCi/L		10/20/20 09:06	
92495892014	HGWC-121A					
EPA 9315	Radium-226	0.417 ± 0.303 (0.513) C:84% T:NA	pCi/L		10/15/20 07:07	
EPA 9320	Radium-228	0.344 ± 0.470 (1.01) C:68% T:79%	pCi/L		10/15/20 11:14	
Total Radium Calculation	Total Radium	0.761 ± 0.773 (1.52)	pCi/L		10/20/20 10:07	
92495892015	HGWC-124					
EPA 9315	Radium-226	0.140 ± 0.201 (0.433) C:93% T:NA	pCi/L		10/15/20 08:02	
EPA 9320	Radium-228	0.337 ± 0.467 (1.00) C:70% T:80%	pCi/L		10/15/20 11:14	
Total Radium Calculation	Total Radium	0.477 ± 0.668 (1.43)	pCi/L		10/20/20 10:07	
92495892016	MW-32					
EPA 9315	Radium-226	0.220 ± 0.262 (0.549) C:89% T:NA	pCi/L		10/15/20 08:02	
EPA 9320	Radium-228	0.789 ± 0.444 (0.802) C:73% T:80%	pCi/L		10/15/20 11:30	
Total Radium Calculation	Total Radium	1.01 ± 0.706 (1.35)	pCi/L		10/20/20 10:07	

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92495892017	MW-39					
EPA 9315	Radium-226	0.588 ± 0.326 (0.462) C:86% T:NA	pCi/L		10/15/20 07:07	
EPA 9320	Radium-228	0.428 ± 0.388 (0.778) C:76% T:68%	pCi/L		10/15/20 11:30	
Total Radium Calculation	Total Radium	1.02 ± 0.714 (1.24)	pCi/L		10/20/20 10:07	
92495892018	MW-41					
EPA 9315	Radium-226	0.295 ± 0.248 (0.444) C:88% T:NA	pCi/L		10/15/20 07:08	
EPA 9320	Radium-228	0.114 ± 0.324 (0.729) C:76% T:82%	pCi/L		10/15/20 11:30	
Total Radium Calculation	Total Radium	0.409 ± 0.572 (1.17)	pCi/L		10/20/20 10:07	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Sample: HGWA-1 **Lab ID: 92495892001** Collected: 09/15/20 14:01 Received: 09/16/20 11:14 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	0.0193 ± 0.226 (0.595) C:83% T:NA	pCi/L	10/07/20 07:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.729 ± 0.435 (0.807) C:71% T:83%	pCi/L	10/07/20 14:00	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.748 ± 0.661 (1.40)	pCi/L	10/19/20 09:49	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Sample: HGWA-2 **Lab ID: 92495892002** Collected: 09/15/20 10:58 Received: 09/16/20 11:14 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	0.124 ± 0.339 (0.807) C:88% T:NA	pCi/L	10/07/20 07:30	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.233 ± 0.417 (1.01) C:66% T:81%	pCi/L	10/07/20 14:00	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.124 ± 0.756 (1.82)	pCi/L	10/16/20 12:16	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Sample: HGWA-3 **Lab ID: 92495892003** Collected: 09/15/20 11:45 Received: 09/16/20 11:14 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 ± 0.215 (0.449) C:89% T:NA	pCi/L	10/07/20 07:30	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.305 ± 0.343 (0.865) C:74% T:83%	pCi/L	10/07/20 14:00	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.161 ± 0.558 (1.31)	pCi/L	10/16/20 12:16	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-122 Lab ID: 92495892004 Collected: 09/15/20 15:41 Received: 09/16/20 11:14 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.192 ± 0.240 (0.500) C:88% T:NA	pCi/L	10/14/20 07:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.183 ± 0.426 (0.945) C:69% T:80%	pCi/L	10/15/20 14:29	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.375 ± 0.666 (1.45)	pCi/L	10/16/20 12:16	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-43D Lab ID: 92495892005 Collected: 09/16/20 11:58 Received: 09/17/20 09:45 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.531 ± 0.341 (0.558) C:83% T:NA	pCi/L	10/07/20 07:38	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.0158 ± 0.401 (0.931) C:73% T:74%	pCi/L	10/08/20 11:52	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.531 ± 0.742 (1.49)	pCi/L	10/20/20 08:55	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-44D Lab ID: 92495892006 Collected: 09/16/20 15:18 Received: 09/17/20 09:45 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.129 ± 0.179 (0.380) C:100% T:NA	pCi/L	10/07/20 07:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.293 ± 0.412 (0.887) C:76% T:83%	pCi/L	10/08/20 11:52	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.422 ± 0.591 (1.27)	pCi/L	10/20/20 08:55	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-126 Lab ID: 92495892007 Collected: 09/18/20 15:39 Received: 09/21/20 09:25 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.369 ± 0.289 (0.513) C:85% T:NA	pCi/L	10/14/20 06:28	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.472 ± 0.423 (0.866) C:82% T:80%	pCi/L	10/15/20 11:08	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.841 ± 0.712 (1.38)	pCi/L	10/20/20 08:55	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Sample: FB-03 **Lab ID: 92495892008** Collected: 09/18/20 16:50 Received: 09/21/20 09:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0162 ± 0.159 (0.433) C:85% T:NA	pCi/L	10/14/20 06:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.0349 ± 0.399 (0.926) C:77% T:82%	pCi/L	10/15/20 11:08	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.0162 ± 0.558 (1.36)	pCi/L	10/20/20 09:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-120 Lab ID: 92495892009 Collected: 09/21/20 13:48 Received: 09/22/20 09:25 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0994 ± 0.201 (0.468) C:86% T:NA	pCi/L	10/14/20 07:18	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.454 ± 0.512 (1.08) C:75% T:73%	pCi/L	10/15/20 11:07	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.553 ± 0.713 (1.55)	pCi/L	10/20/20 09:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Sample: FD-03 **Lab ID: 92495892010** Collected: 09/21/20 00:00 Received: 09/22/20 09:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.213 ± 0.268 (0.569) C:92% T:NA	pCi/L	10/14/20 07:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.127 ± 0.309 (0.688) C:80% T:81%	pCi/L	10/15/20 11:06	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.340 ± 0.577 (1.26)	pCi/L	10/20/20 09:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-125 Lab ID: 92495892011 Collected: 09/21/20 12:07 Received: 09/22/20 09:25 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.621 ± 0.312 (0.353) C:87% T:NA	pCi/L	10/14/20 06:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.824 ± 0.389 (0.653) C:79% T:86%	pCi/L	10/15/20 11:06	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.45 ± 0.701 (1.01)	pCi/L	10/20/20 09:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-45D Lab ID: 92495892012 Collected: 09/25/20 13:50 Received: 09/28/20 09:40 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.444 ± 0.255 (0.298) C:90% T:NA	pCi/L	10/14/20 06:37	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.622 ± 0.414 (0.789) C:80% T:76%	pCi/L	10/15/20 11:07	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.07 ± 0.669 (1.09)	pCi/L	10/20/20 09:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-46D Lab ID: 92495892013 Collected: 09/25/20 11:10 Received: 09/28/20 09:40 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.217 ± 0.191 (0.315) C:90% T:NA	pCi/L	10/14/20 06:40	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.377 ± 0.345 (0.702) C:75% T:89%	pCi/L	10/15/20 11:07	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.594 ± 0.536 (1.02)	pCi/L	10/20/20 09:06	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-121A Lab ID: 92495892014 Collected: 09/28/20 16:04 Received: 09/29/20 08:55 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.417 ± 0.303 (0.513) C:84% T:NA	pCi/L	10/15/20 07:07	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.344 ± 0.470 (1.01) C:68% T:79%	pCi/L	10/15/20 11:14	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.761 ± 0.773 (1.52)	pCi/L	10/20/20 10:07	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-124 Lab ID: 92495892015 Collected: 09/28/20 18:00 Received: 09/29/20 08:55 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.140 ± 0.201 (0.433) C:93% T:NA	pCi/L	10/15/20 08:02	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.337 ± 0.467 (1.00) C:70% T:80%	pCi/L	10/15/20 11:14	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.477 ± 0.668 (1.43)	pCi/L	10/20/20 10:07	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Sample: MW-32 **Lab ID: 92495892016** Collected: 09/28/20 15:44 Received: 09/29/20 08:55 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	0.220 ± 0.262 (0.549) C:89% T:NA	pCi/L	10/15/20 08:02	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.789 ± 0.444 (0.802) C:73% T:80%	pCi/L	10/15/20 11:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.01 ± 0.706 (1.35)	pCi/L	10/20/20 10:07	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Sample: MW-39 **Lab ID: 92495892017** Collected: 09/28/20 17:27 Received: 09/29/20 08:55 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	0.588 ± 0.326 (0.462) C:86% T:NA	pCi/L	10/15/20 07:07	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.428 ± 0.388 (0.778) C:76% T:68%	pCi/L	10/15/20 11:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.02 ± 0.714 (1.24)	pCi/L	10/20/20 10:07	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS
Pace Project No.: 92495892

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.295 ± 0.248 (0.444) C:88% T:NA	pCi/L	10/15/20 07:08	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.114 ± 0.324 (0.729) C:76% T:82%	pCi/L	10/15/20 11:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.409 ± 0.572 (1.17)	pCi/L	10/20/20 10:07	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

QC Batch:	415616	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92495892002, 92495892003, 92495892005, 92495892006

METHOD BLANK: 2009756 Matrix: Water

Associated Lab Samples: 92495892002, 92495892003, 92495892005, 92495892006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0920 ± 0.177 (0.408) C:91% T:NA	pCi/L	10/07/20 07:30	

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-3 SEMIANNUAL RADS

Pace Project No.: 92495892

QC Batch: 417134

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92495892007, 92495892008, 92495892009, 92495892010, 92495892011, 92495892012, 92495892013

METHOD BLANK: 2016817

Matrix: Water

Associated Lab Samples: 92495892007, 92495892008, 92495892009, 92495892010, 92495892011, 92495892012, 92495892013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.280 ± 0.239 (0.418) C:85% T:NA	pCi/L	10/14/20 06:41	

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-3 SEMIANNUAL RADS

Pace Project No.: 92495892

QC Batch: 417131

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92495892001, 92495892002, 92495892003, 92495892004

METHOD BLANK: 2016812

Matrix: Water

Associated Lab Samples: 92495892001, 92495892002, 92495892003, 92495892004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.888 ± 0.380 (0.600) C:70% T:99%	pCi/L	10/15/20 11:15	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

QC Batch:	415615	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92495892001

METHOD BLANK:	2009755	Matrix:	Water
---------------	---------	---------	-------

Associated Lab Samples: 92495892001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.119 ± 0.160 (0.326) C:94% T:NA	pCi/L	10/06/20 17:26	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

QC Batch: 417130	Analysis Method: EPA 9315
QC Batch Method: EPA 9315	Analysis Description: 9315 Total Radium
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92495892004

METHOD BLANK: 2016810 Matrix: Water

Associated Lab Samples: 92495892004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.00529 ± 0.135 (0.392) C:94% T:NA	pCi/L	10/14/20 07:09	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS
Pace Project No.: 92495892

QC Batch:	417135	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92495892005, 92495892006, 92495892007, 92495892008, 92495892009, 92495892010, 92495892011, 92495892012, 92495892013

METHOD BLANK: 2016818 Matrix: Water

Associated Lab Samples: 92495892005, 92495892006, 92495892007, 92495892008, 92495892009, 92495892010, 92495892011, 92495892012, 92495892013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.274 ± 0.291 (0.602) C:84% T:86%	pCi/L	10/15/20 11:05	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

QC Batch:	417136	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92495892014, 92495892015, 92495892016, 92495892017, 92495892018

METHOD BLANK: 2016820 Matrix: Water

Associated Lab Samples: 92495892014, 92495892015, 92495892016, 92495892017, 92495892018

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0209 ± 0.127 (0.392) C:91% T:NA	pCi/L	10/15/20 07:09	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

QC Batch:	417137	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92495892014, 92495892015, 92495892016, 92495892017, 92495892018

METHOD BLANK: 2016821 Matrix: Water

Associated Lab Samples: 92495892014, 92495892015, 92495892016, 92495892017, 92495892018

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.369 ± 0.373 (0.768) C:73% T:75%	pCi/L	10/15/20 11:15	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92495892001	HGWA-1	EPA 9315	415615		
92495892002	HGWA-2	EPA 9315	415616		
92495892003	HGWA-3	EPA 9315	415616		
92495892004	HGWA-122	EPA 9315	417130		
92495892005	HGWA-43D	EPA 9315	415616		
92495892006	HGWA-44D	EPA 9315	415616		
92495892007	HGWC-126	EPA 9315	417134		
92495892008	FB-03	EPA 9315	417134		
92495892009	HGWC-120	EPA 9315	417134		
92495892010	FD-03	EPA 9315	417134		
92495892011	HGWC-125	EPA 9315	417134		
92495892012	HGWA-45D	EPA 9315	417134		
92495892013	MW-46D	EPA 9315	417134		
92495892014	HGWC-121A	EPA 9315	417136		
92495892015	HGWC-124	EPA 9315	417136		
92495892016	MW-32	EPA 9315	417136		
92495892017	MW-39	EPA 9315	417136		
92495892018	MW-41	EPA 9315	417136		
92495892001	HGWA-1	EPA 9320	417131		
92495892002	HGWA-2	EPA 9320	417131		
92495892003	HGWA-3	EPA 9320	417131		
92495892004	HGWA-122	EPA 9320	417131		
92495892005	HGWA-43D	EPA 9320	417135		
92495892006	HGWA-44D	EPA 9320	417135		
92495892007	HGWC-126	EPA 9320	417135		
92495892008	FB-03	EPA 9320	417135		
92495892009	HGWC-120	EPA 9320	417135		
92495892010	FD-03	EPA 9320	417135		
92495892011	HGWC-125	EPA 9320	417135		
92495892012	HGWA-45D	EPA 9320	417135		
92495892013	MW-46D	EPA 9320	417135		
92495892014	HGWC-121A	EPA 9320	417137		
92495892015	HGWC-124	EPA 9320	417137		
92495892016	MW-32	EPA 9320	417137		
92495892017	MW-39	EPA 9320	417137		
92495892018	MW-41	EPA 9320	417137		
92495892001	HGWA-1	Total Radium Calculation	419126		
92495892002	HGWA-2	Total Radium Calculation	418910		
92495892003	HGWA-3	Total Radium Calculation	418910		
92495892004	HGWA-122	Total Radium Calculation	418910		
92495892005	HGWA-43D	Total Radium Calculation	419262		
92495892006	HGWA-44D	Total Radium Calculation	419262		
92495892007	HGWC-126	Total Radium Calculation	419262		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92495892

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92495892008	FB-03	Total Radium Calculation	419263		
92495892009	HGWC-120	Total Radium Calculation	419263		
92495892010	FD-03	Total Radium Calculation	419263		
92495892011	HGWC-125	Total Radium Calculation	419263		
92495892012	HGWA-45D	Total Radium Calculation	419263		
92495892013	MW-46D	Total Radium Calculation	419263		
92495892014	HGWC-121A	Total Radium Calculation	419264		
92495892015	HGWC-124	Total Radium Calculation	419264		
92495892016	MW-32	Total Radium Calculation	419264		
92495892017	MW-39	Total Radium Calculation	419264		
92495892018	MW-41	Total Radium Calculation	419264		

REPORT OF LABORATORY ANALYSIS

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Client Name: GA Power

WO#: **92495892**



Courier: Fed Ex UPS USPS Client Commercial Pace
 Tracking #: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used 214 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 0.8 Biological Tissue is Frozen: Yes No Date and Initials of person examining contents: 9/16/2004

Temp should be above freezing to 6°C

Comments:

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

Client Notification/ Resolution: _____ Field Data Required? Y / N
 Person Contacted: _____ Date/Time: _____
 Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 2

Section A Required Client Information Company: <u>GA Power</u> Address: <u>Atlanta, GA</u>		Section B Required Project Information Report To: <u>SCS Contacts</u> Copy To: <u>Geosynthetic Contacts</u>		Section C Invoice Information Attention: <u>Southern Co.</u> Company Name: _____ Address: _____ State: _____	
Email To: <u>SCS Contacts</u> Phone: _____ Requested Due Date/TAT: _____ to Day		Purchase Order No.: _____ Project Name: <u>Plant Hammond AP-3 Semiannual/BHG 04</u> Project Number: <u>GW6581</u>		Price Quote Reference: _____ Price Project Manager: <u>Kevin Herring</u> Price Print # <u>10839-SI-10839-2</u>	
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER COM			Site Location: _____ STATE: <u>GA</u>		

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE (see valid codes to list) SAMPLE TYPE (G=GRAB C=COMP) DATE TIME DATE TIME DATE TIME DATE TIME	MATRIX CODE	SAMPLE TYPE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives		Analysis Test	Requested Analysis Filtered (Y/N)		Residual Chlorine (Y/N)	pH = <u>7.15</u> <u>5.22</u> <u>DOT</u>	Face Project No/ Lab ID. <u>92445892</u>
				DATE	TIME			DATE	TIME		H ₂ SO ₄	HNO ₃			
1	HGWA-1	WT G	G	9-15-14	1401	-	-	-	-	-	-	-	-	-	-
2	HGWA-2	WT G	G	9-15-14	1058	-	-	-	-	-	-	-	-	-	-
3	HGWA-3	WT G	G	-	-	-	-	-	-	-	-	-	-	-	-
4	HGWA-192	WT G	G	-	-	-	-	-	-	-	-	-	-	-	-
5	HGWG-190	WT G	G	-	-	-	-	-	-	-	-	-	-	-	-
6	HGWMC-121A	WT G	G	-	-	-	-	-	-	-	-	-	-	-	-
7	HGWMC-124	WT G	G	-	-	-	-	-	-	-	-	-	-	-	-
8	MMW-32	WT G	G	-	-	-	-	-	-	-	-	-	-	-	-
9	MMW-30	WT G	G	-	-	-	-	-	-	-	-	-	-	-	-
10	MMW-41	WT G	G	-	-	-	-	-	-	-	-	-	-	-	-
11	MMW-46D	WT G	G	-	-	-	-	-	-	-	-	-	-	-	-
12	FD-69	WT G	G	-	-	-	-	-	-	-	-	-	-	-	-

Additional Comments: _____

Relinquished by/Affiliation: MSASH THAKOR/STV DATE: 9-15-20 TIME: 7:05

Accepted by/Affiliation: Kevin Herring/Price DATE: 9/15/20 TIME: 17:05

Signature of Sampler: MSASH THAKOR DATE Signed (MM/DD/YY): 9-15-20

Signature of Analytical Requester: Kevin Herring DATE Signed (MM/DD/YY): 9-15-20

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

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

F-ALL-Q-020Rev.07 15-Feb-2007



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

Page: 1 of 1

Section A Requested Client Information: Company: GA Power Address: Atlanta, GA		Section B Requested Project Information: Report To: SCS Contacts Copy To: Geosynthetic Contacts		Section C Trace Information: Attention: Southern Co. Company Name: Address: Phone: Reference:	
Email To: SCS Contacts Phone: <input type="checkbox"/> Fax Requested Date/Time: 10 Day		Purchase Order No.: Project Name: Plant Hammond AP-3 Semianual/BKG 04 Project Number: GW6581		Plant Order: Plant Project: Kevin Henning Plant Phone: 10839-4/10839-2	
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input checked="" type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER COR			Site Location STATE: GA		

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DIBOND PAPER WATER WASTE WATER WWT PRODUCT F H OC (CLOSURE) WIRE WTP AIR OT/69 TISSE T5	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)						Residual Chlorine (Y/N)	pH =
					DATE	TIME	DATE					TIME	DATE	TIME	Chloride	Fluoride	Sulfate		
1	HGMG-125		WT G	G	9/16	1158			3			X	X	X	X	X	X		7.52
2	HGMG-126		WT G	G	9/16	1512			3			X	X	X	X	X	X		7.03
3	MMW-43D		WT G	G	9/16	1512			3			X	X	X	X	X	X		7.03
4	MMW-44D		WT G	G	9/16	1512			3			X	X	X	X	X	X		7.03
5	MMW-45B		WT G	G	9/16	1512			3			X	X	X	X	X	X		7.03
6	MMW-45B		WT G	G	9/16	1512			3			X	X	X	X	X	X		7.03
7	FB-08		WT G	G	9/16	1512			3			X	X	X	X	X	X		7.03
8																			
9																			
10																			
11																			
12																			

ADDITIONAL COMMENTS
 Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.
 *Full App III & IV Metals-Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, U, Hg, Mo, Se, Tl
 **Major ions: AR, Bicarb Alk, Fe, Mg, Mn, K, NH₄ Sulfide
 One sample set submitted for HGWA-1, HGWA-2, HGWA-3, MM-43D, MM-44D but they will be reported for AP-1/2/3 SDGs

RELINQUISHED BY / AFFILIATION
 Chad Russel / Geo
 Melissa Mendenhall / Geo
 B. Mc / Pa
 DATE: 9/16/2005
 TIME: 0945

ACCEPTED BY / AFFILIATION
 Chad Russel / Geo
 DATE: 9/16/2005
 TIME: 0945

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Chad Russel
 SIGNATURE OF SAMPLER: [Signature]
 DATE Signed (MM/DD/YYYY): 9/16/2005

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information Company: GA Power Address: Atlanta, GA	Section B Required Project Information Report To: SCS Contacts Copy To: Geosynetic Contacts	Section C Invoice Information Attention: Southern Co. Company Name: Address: Pace Quote Reference: Pace Project Manager: Pace Profile #: 10839-4/10839-2	Page: 1 of 1
----------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------

Section D Requested Client Information Requested Date Start/End: to Day	Section E Purchase Order No.: Project Name: Plant Hammond AP-3 Semianual/BKG 04 Project Number: GW6561	Section F REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER CCR Site Location: GA STATE:
--------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

ITEM #	Section D Requested Client Information Valid Matrix Codes MATRIX CODE (see valid codes to list) SAMPLE TYPE (G=GRAB C=COMP) DATE TIME DATE TIME DATE TIME SAMPLE TEMP AT COLLECTION # OF CONTAINERS Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other Analysis Test Chloride Fluoride Sulfate TDS Full App. III&IV Metals 6010/6020/7 RAD 226/228 Major ions**	COLLECTED Pace Profile	Preservatives	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab ID.	
							MATRIX CODE
1	HGWC-125 WT G 9/18 1539 7 3 3 3						
2	HGWC-126 WT G 9/18 1539 7 3 3 3						
3	MW-43U WT G 9/18 1539 7 3 3 3						
4	MW-44D WT G 9/18 1539 7 3 3 3						
5	MW-45D WT G 9/18 1539 7 3 3 3						
6	FB-03 WT G 9/18 1539 7 3 3 3						
7							
8							
9							
10							
11							
12							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please note dry wells, state through any wells not sampled, and note when the last sample for the event has been taken. Full App. III & IV Metals-Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, U, Hg, Mo, Se, Tl **Major ions: All, Boron, Alk, Fe, Mg, Mn, K, Na, Sulfide One sample set submitted for HGWA-1, HGWA-2, HGWA-3, MW-43D, MW-44D but they will be reported for AP-1/2/3 SDGs	<i>[Signature]</i>	9/18	1539	<i>[Signature]</i>	9/18	1539	
	<i>[Signature]</i>	9/21/20	0925	<i>[Signature]</i>	9/21/20	0925	
	<i>[Signature]</i>	9/21/20	1208	<i>[Signature]</i>	9/21/20	1208	

SAMPLER NAME AND SIGNATURE		Temp in °C
PRINT Name of SAMPLER: Chad Russo	DATE Signed IMMEDIATELY: 9/18/2020	Received on Ice (Y/N)
SIGNATURE of SAMPLER: <i>[Signature]</i>		Custody Sealed Container (Y/N)
		Samples Intact (Y/N)

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



CHAIN-OF-CUSTODY / Analytical Request Document

Page: 1 of 2

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

Section B Required Project Information:
 Report To: SCS Contacts
 Copy To: Geosynthetic Contacts

Section C Project Information:
 Project Name: Plant Hammond AP-3 Semlinwood/BKG 04
 Project Number: GWM581
 Company Name: Southern Co.
 Address: [blank]
 Project Manager: Kevin Herring
 Project # 10839-S/10839-2
 Site Location: CA
 STATE: CA

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER CCR

ITEM #	Section D Required Client Information	Valid Matrix Codes MAYBE SOLUBLE SOLID SLURRY OTHER TEXTILE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH =			
											Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃						Methanol	Other	Chloride, Fluoride, Sulfate
1	HQWA-1		WT G							2	1													
2	HQWA-2		WT G							2	3													
3	HQWA-3		WT G							2	3													
4	HQWA-122		WT G							2	3													
6	HQWC-120		WT G	9/21	1548			20		2	3													
8	HQWC-121A		WT G							2	3													
7	HQWC-124		WT G							2	3													
8	MW-32		WT G							2	3													
9	MW-30		WT G							2	3													
10	MW-41		WT G							2	3													
11	MW-46D		WT G							2	3													
12	FD-03		WT G	FD1						2	3													

ADDITIONAL COMMENTS
 Please note dry weight, status through any wet not sampled, and note when the last sample for the event has been taken.
 *App. I/II/IV Metals Sp. Ba, Ba, B, Ca, Cr, Co, Pb, U, Mo

REQUISITIONED BY / AFFILIATION
 Chad Russo / Sed
 Nolin Midulum / gus
 9/22/10
 9/25/10
 9/25/10

ACCEPTED BY / AFFILIATION
 Nolin Midulum / gus
 Chad Russo / Sed
 9/21/10
 9/25/10
 9/25/10

SAMPLE CONDITIONS
 Temp in °C: 4.1
 Received on Ice (Y/N): Y
 Custody Sealed Cooler (Y/N): N
 Samples Intact (Y/N): Y

SAMPLER NAME AND SIGNATURE
 PRINTER NAME OF SAMPLER: Chad Russo
 SIGNATURE OF SAMPLER: Chad Russo
 DATE SIGNED (MM/DD/YY): 9/21/2010

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



CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 of 2

Section A Requested Client Information: Company: GA Power Address: Atlanta GA	Section B Requested Project Information: Report To: SCS Contacts Copy To: Geosynetic Contacts	Section C Invoice Information: Attention: Southern Co. Company Name: Address: Product Code: Reference Price Project: Request Price: # 10839-4/10839-2	REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER CCR
Email To: SCS Contacts Phone: [Area] [Number] Requested Due Date/RAT: 10 Day	Purchase Order No.: Project Name: Plant Hammond AP-3-Semiannual/BKG 04 Project Number: GW6581	Address: Product Code: Reference Price Project: Request Price: # 10839-4/10839-2	Site Location: <u>GA</u> STATE: _____

ITEM #	Section D Requested Client Information	Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test						Request Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH = 6.22 Pace Project No./ Lab ID. 62465662 all				
				DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Y/N	Chloride, Fluoride, Sulfate				TDS	Full App. III&IV Metals 6010/60207	RAD 226/228	Major ions**
1	HGWC-125	WT G	G	9/21	10:07		7	3	3	3	1	1	1	1	1	X	X	X	X	X	X		N			
2	HGWC-126	WT G	G				7	3	3	3	1	1	1	1	1	X	X	X	X	X	X		N			
3	MM4430	WT G	G				7	6	3	3	1	1	1	1	1	X	X	X	X	X	X		N			
4	MM4440	WT G	G				7	3	3	3	1	1	1	1	1	X	X	X	X	X	X		N			
5	MM4450	WT G	G				7	3	3	3	1	1	1	1	1	X	X	X	X	X	X		N			
6	FB-03	WT G	G				7	3	3	3	1	1	1	1	1	X	X	X	X	X	X		N			
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)				
	Bad Request / go	9/21	1110	Notia Nduke go	9/21/10	2110								
	Nelson Mufson go	9/22/10	0925	Y. T. A. Pan	9/22/10	0925								
	R. N. Pan	9/22/10	1245	Shonda Powell	9/22/10	1245	41	X	N					

SAMPLER NAME AND SIGNATURE	
PRINT NAME OF SAMPLER: Chad Russo	DATE Signed: 9/21/10
SIGNATURE OF SAMPLER: <i>Chad Russo</i>	

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 2

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

Section B Required Project Information
Report To SCS Contacts
Copy To Geosynetic Contacts

Section C Invoice Information
Address Southern Co.
Company Name

Requested Client Information
Requested Due Date/TAT: 10 Day
Project Name Plant Hamlin and AP-3 Savannah/BKG 04
Project Number GW6561

Collector Information
Requested Analysis Filtered (Y/N)
Requested Analysis Filtered (Y/N) 10831-2

REGULATORY AGENCY
NPDES GROUND WATE DRINKING WATER
UST RCRA OTHER CCR
Site Location STATE: GA

Table with columns: ITEM #, MATRIX CODE, SAMPLE TYPE, DATE, TIME, SAMPLE TEMP AT COLLECTION, # OF CONTAINERS, Preservatives, Analysis Test, Residual Chlorine, pH.

Table with columns: ADDITIONAL COMMENTS, RELINQUISHED BY, AFFILIATION, DATE, TIME, ACCEPTED BY, AFFILIATION, DATE, TIME, SAMPLE CONDITIONS.

Requester Name and Signature: VIKASH TANWAR
Date Signed: 9-25-10
Signature of Sampler: [Signature]
Date Signed: 9-25-10



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		Section B Required Project Information: Report To: SCS Contacts Copy To: Geosynlec Contacts		Section C Invoice Information: Attention: Southern Co. Company Name: _____ Address: _____ State: _____	
Email To: SCS Contacts Phone: _____ Requested Due Date/TAT: _____		Project Name: Plant Hamilton and AP-3 Savannah/BKG 04 Project Number: GW6581		Price Quote Reference Manager: Kevin Herring Price Quote # 10839-5/10839-2	
Requested Due Date/TAT: _____		Site Location: _____ STATE: GA		REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER CCM	

ITEM #	Valid Matrix Codes MATRIX CODE	SCS CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)						
											Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol				Other	Chloride, Fluoride, Sulfate	TDS	App. III&IV Metals 6010/6020*	RAD 226/228	Major ions**
1	HQWA-1	WT-9	WT-9	G	9-25-20	11:10	-	10	7	3	3															
2	HQWA-2	WT-9	WT-9	G	9-25-20	11:10	-	10	7	3	3															
3	HQWA-3	WT-9	WT-9	G	9-25-20	11:10	-	10	7	3	3															
4	HQWA-102	WT-9	WT-9	G	9-25-20	11:10	-	10	7	3	3															
5	HQWA-120	WT-9	WT-9	G	9-25-20	11:10	-	10	7	3	3															
6	HQWA-134	WT-9	WT-9	G	9-25-20	11:10	-	10	7	3	3															
7	HQWA-124	WT-9	WT-9	G	9-25-20	11:10	-	10	7	3	3															
8	HQWA-32	WT-9	WT-9	G	9-25-20	11:10	-	10	7	3	3															
9	HQWA-30	WT-9	WT-9	G	9-25-20	11:10	-	10	7	3	3															
10	HQWA-41	WT-9	WT-9	G	9-25-20	11:10	-	10	7	3	3															
11	MW-46D	WT-9	WT-9	G	9-25-20	11:10	-	10	7	3	3															
12	FD-69	WT-9	WT-9	G	9-25-20	11:10	-	10	7	3	3															

PLEASE NOTE: Dry weights, sludge through any waste not sampled, and (O&M) when the last sample for the event has been taken.

*App. III&IV Metals = Sp, Ba, Be, B, Ca, Cr, Co, Cu, Pb, Li, Mo

**Major ions = Alk, Grand Alk, Fe, Mg, Mn, K, Na, Sulfide

One sample set submitted for HQWA-1, HQWA-2, HQWA-3 but results will be reported for AP-1/2/3 SDCs.

Additional Comments: _____

Relinquished By: WISHAY THURGOOD Date: 9/25/20 Time: 1:20

Accepted By: Geo Date: 9/25/20 Time: 1:20

Sampler Name and Signature: WISHAY THURGOOD

Printed Name of Sampler: WISHAY THURGOOD

Signature of Sampler: [Signature]

Date Signed (MM/DD/YY): 9-25-20

Temp in °C: _____

Received on Ice (Y/N): _____

Custody Sealed Cooler (Y/N): _____

Samples Intact (Y/N): _____



CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Required Client Information Company: GA Power Address: Atlanta, GA		Section B Required Project Information Report To: SCS Contacts Copy To: Geosynthetic Contacts		Section C Invoice Information Address: Southern Co.	
Email To: SCS Contacts		Purchase Order No.:		Company Name:	
Phone:		Project Name: Plant Hammond AP-3 Semiannual/BKG 04		Address:	
Requested Due Date/TAT: 18 Day		Project Number: GW6591		Site Location STATE: GA	
		Requested Analysis Filtered (Y/N)		REGULATORY AGENCY NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> OTHER CCA <input type="checkbox"/>	

ITEM #	Section D Requester Client Information SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	VALID MATRIX CODES MATERIAL CODE WATER WASTE DW WATER WASTE PW WASTE WASTE PW SOLIDIFIED SOLIDIFIED WASTE WASTE WASTE WASTE OTHER TRISLE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Residual Chlorine (Y/N)	pH =
					DATE	TIME	DATE						
1	HGWA-1		WT G	G					7	3	3	1	
2	HGWA-2		WT G	G					7	3	3	5	
3	HGWA-3		WT G	G					7	3	3	3	
4	HGWA-122		WT G	G					7	3	3	3	
5	HGWC-120		WT G	G					7	3	3	3	
6	HGWA-124A		WT G	G	9-29-20	1604			26	7	3	3	
7	HGWC-124		WT G	G	9-28-20	1800			19	7	3	3	
8	MW-32		WT G	G					7	3	3	3	
9	MW-39		WT G	G					7	3	3	3	
10	MW-41		WT G	G					7	3	3	3	
11	MW-40D		WT G	G					7	3	3	3	
12	FD-03		WT G	G					7	3	3	3	

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		ACCEPTED BY / AFFILIATION		SAMPLE CONDITIONS	
Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken. *App. Field Models- SA, BA, BE, B, CA, CL, CO, FO, LI, MO		Melia Mubum Logo		Melia Mubum Logo		pH = 6.93 pH = 7.27 pH = 0.19	
*Major ions- Alk, Bicarb Alk, Fe, Mg, Mn, K, Na, Sulfate		Melia Mubum Logo		Melia Mubum Logo		Temp in °C	
One sample set submitted for HGWA-1, HGWA-2, HGWA-3 but results will be reported for AP-1203 SDCS		Melia Mubum Logo		Melia Mubum Logo		Received on Ice (Y/N)	
		Melia Mubum Logo		Melia Mubum Logo		Custody Sealed Cooler (Y/N)	
		Melia Mubum Logo		Melia Mubum Logo		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.

PRINT NAME of SAMPLER: Aaron Redden	DATE Signed (MM/DD/YYYY): 09/28/2020
SIGNATURE of SAMPLER: <i>Aaron Redden</i>	



CHAIN-OF-CUSTODY / Analytical Request Document

Section A Required Client Information: Company GA Power Address Atlanta, GA		Section B Required Project Information: Report To SCS Contacts Copy To Geosynthetic Contacts		Section C Invoice Information: Address: Company Name: Reference: Purchase Order No.:	
Requested Due Date/TIME: 10 Day		Project Name: Plant Hammond AP-3-Semiannual/BKG 04		Project Number: GW6581	
Phone: Fax:		Project Name: Plant Hammond AP-3-Semiannual/BKG 04		Project Number: GW6581	
Requested Due Date/TIME: 10 Day		Project Name: Plant Hammond AP-3-Semiannual/BKG 04		Project Number: GW6581	
Requested Due Date/TIME: 10 Day		Project Name: Plant Hammond AP-3-Semiannual/BKG 04		Project Number: GW6581	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Requested Analysis Filtered (Y/N)										Residual Chlorine (Y/N)	pH				
											Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Chloride, Fluoride, Sulfate	TDS			App. III&IV Metals 6010/6020*	RAD 228/226	Major ions**	
1	HGWA-1	WT G	WT G	G						7	3	3	3	3	3	3	3	3	3	3	3	3	3			
2	HGWA-2	WT G	WT G	G						7	9	3	3	3	3	3	3	3	3	3	3	3	3			
3	HGWA-3	WT G	WT G	G						7	3	3	3	3	3	3	3	3	3	3	3	3	3			
4	HGWA-122	WT G	WT G	G						7	3	3	3	3	3	3	3	3	3	3	3	3	3			
5	HGWC-120	WT G	WT G	G						7	3	3	3	3	3	3	3	3	3	3	3	3	3			
6	HGWA-124	WT G	WT G	G						7	3	3	3	3	3	3	3	3	3	3	3	3	3			
7	HGWA-124	WT G	WT G	G						7	3	3	3	3	3	3	3	3	3	3	3	3	3			
8	MW-32	WT G	WT G	G						7	3	3	3	3	3	3	3	3	3	3	3	3	3			
9	MW-39	WT G	WT G	G						7	3	3	3	3	3	3	3	3	3	3	3	3	3			
10	MW-41	WT G	WT G	G						7	3	3	3	3	3	3	3	3	3	3	3	3	3			
11	MW-109	WT G	WT G	G						7	3	3	3	3	3	3	3	3	3	3	3	3	3			
12	FD-09	WT G	WT G	G						7	3	3	3	3	3	3	3	3	3	3	3	3	3			

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

App. III&IV Metals Sp. Ba, Bi, B, Ca, Cr, Cu, Pb, U, Mo

Metal ions: Alk, Boro, Pb, Fe, Mg, Mn, K, Na, Sulfide

One sample set submitted for HGWA-1, HGWA-2, HGWA-3 but results will be reported for AP-12/13 SDCs

Renounced by/Affiliation: Thomas Hester/Geosynthetic

Accepted by/Affiliation: Tom Jones

Print Name of Sampler: Thomas J Hester

Signature of Sampler: [Signature]

Date Signed (MM/DD/YYYY): 09/18/20

Temp in °C: 39

Received on Ice (Y/N): Y

Custody Sealed Cooler (Y/N): N

Samples Intact (Y/N): Y

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to 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-228
Analyst: LAL
Date: 10/6/2020
Worksheet: 56393
Matrix: DW

Method Blank Assessment	
MB Sample ID	2009155
MB Concentration:	0.119
MB Counting Uncertainty:	0.159
MB MDC:	0.326
MB Numerical Performance Indicator	1.46
MB Status vs Numerical Indicator	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS ID or N/A	N
LCS56393	LCS066393
Count Date:	10/7/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.044
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):	4.565
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.770
Numerical Performance Indicator:	-0.63
Status vs Numerical Indicator:	95.59%
Upper % Recovery Limits:	N/A
Lower % Recovery Limits:	Pass
	125%
	75%

Duplicate Sample Assessment	
Sample I.D.:	92495649004
Duplicate Sample I.D.:	92495649004DUP
Sample Result (pCi/L, g, F):	0.205
Sample Result Counting Uncertainty (pCi/L, g, F):	0.210
Sample Duplicate Result (pCi/L, g, F):	0.239
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.276
Ave sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	-0.193
Duplicate RPD:	15.40%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

Comments:

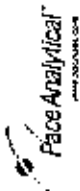
Sample Matrix Spike Control Assessment	
Sample Collection Date:	MS/MSD 1
Sample I.D.:	MS/MSD 2
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
MS Spike Uncertainty (Calculated):	
MSD Spike Uncertainty (Calculated):	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
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 Limit:	
MS/MSD Lower % Recovery Limit:	

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

Jan 10/17/2020

On 10.7.20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow

Test: Ra-228
Analyst: LAL
Date: 10/16/2020
Worklist: 56393
Matrix: DW

Method Blank Assessment

MB Sample ID	2009255
MB Concentration:	0.119
MB Counting Uncertainty:	0.109
MB MDC:	0.326
MB Numerical Performance Indicator:	1.46
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment

Count Date:	LCS#	Y or R?
10/7/2020	LCS#56393	Y
10/7/2020	LCS#56393	Y

Decay Corrected Spike Concentration (pCi/mL):

Count Date:	10/7/2020	LCS#56393
Spike I.D.	19.033	19.033
Volume Used (mL):	24.044	24.044
Aliquot Volume (L, g, F):	0.10	0.10
Target Conc. (pCi/L, g, F):	0.505	0.510
Uncertainty (Calculated):	4.718	4.718
Result (pCi/L, g, F):	0.567	0.057
Percent Recovery:	4.553	4.553
Numerical Performance Indicator:	0.770	0.790
Status vs Numerical Indicator:	-0.53	-0.31
Upper % Recovery Limit:	95.59%	97.25%
Lower % Recovery Limit:	N/A	N/A
Upper % Recovery Limit:	Pass	Pass
Lower % Recovery Limit:	125%	125%
Upper % Recovery Limit:	75%	75%

Duplicate Sample Assessment

Sample I.D.	LCS#6393	Enter Duplicate
Duplicate Sample I.D.	LCS#66393	sample IDs if other than LCS#LCS# in the space below
Sample Result Counting Uncertainty (pCi/L, g, F):	4.583	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.770	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	4.593	
Are single and/or duplicate results below RL?	0.790	
Duplicate Numerical Performance Indicator	N/A	
Duplicate Percent Recovery	-0.071	
Duplicate RPD	1.63%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	25%	

Sample Matrix Spike Control Assessment

Sample Collection Date:	MS/MSD 1	MS/MSD 2
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc. (pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Result		
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
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 Limit:		
MS/MSD Lower % Recovery Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

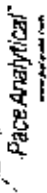
** Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

LAL 10/17/2020

DW 10/17/2020

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 10/6/2020
Worksheet: 56394
Matrix: DW

Method Blank Assessment

MB Sample ID	2009756
MB Concentration:	0.062
MB Counting Uncertainty	0.177
MB MDC:	0.408
MB Numerical Performance Indicator:	1.00
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

Count Date:	LCS (Y or N)?	Y
Spike I.D.:	LCS56394	10/6/2020
Decay Corrected Spike Concentration (pCi/mL):	19.033	19.033
Volume Used (mL):	24.044	24.044
Aliquot Volume (L, g, F):	0.10	0.10
Target Conc. (pCi/L, g, F):	4.675	4.682
Uncertainty (Calculated):	0.056	0.056
Result (pCi/L, g, F):	3.890	4.462
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.760	0.322
Numerical Performance Indicator:	-1.179	-1.33
Percent Recovery:	85.14%	95.08%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limit:	125%	125%
Lower % Recovery Limit:	75%	75%

Duplicate Sample Assessment

Sample I.D.:	LCS56394
Duplicate Sample I.D.:	LCS056394
Sample Result (pCi/L, g, F):	3.980
Sample Duplicate Result (pCi/L, g, F):	0.760
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	4.462
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.322
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-1.143
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	11.00%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

Sample Matrix Spike Control Assessment

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:	
Sample MS I.D.:	
Sample MSO I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
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:	

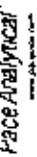
Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

LAM 10/7/2020

DW 10.7.20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: LAL
Date: 10/6/2020
Worklist: 56334
Matrix: DW

Method Blank Assessment	
MB Sample ID	2003756
MB Concentration	0.092
MB Counting Uncertainty	0.177
MB MDC	0.408
MB Numerical Performance Indicator	1.02
MB Status vs Numerical Indicator	N/A
MB Status vs MDC	Pass

Laboratory Control Sample Assessment		
LCS#	TV or N17	N
LC556394		LC5D46394
Count Date:	10/7/2020	
Spike ID:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.044	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.514	
Target Conc (pCi/L, g, F):	4.875	
Uncertainty (Calculated):	0.056	
Result (pCi/L, g, F):	3.980	
LCS0, LSD Counting Uncertainty (pCi/L, g, F):	0.760	
Numerical Performance Indicator:	-1.79	
Percent Recovery:	85.14%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limit:	125%	
Lower % Recovery Limit:	75%	

Duplicate Sample Assessment	
Sample I.D.:	9245987002
Duplicate Sample I.D.	9245987002DUP
Sample Result (pCi/L, g, F):	0.124
Sample Result Counting Uncertainty (pCi/L, g, F):	0.339
Sample Duplicate Result (pCi/L, g, F):	0.304
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.234
Are sample and/or duplicate results below RLP?	See Below ##
Duplicate Numerical Performance Indicator:	-0.829
Duplicate RPD:	64.36%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

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

Comments:

***Duplicate result is reported due to unacceptable precision. N/A LAM 10/7/2020

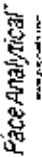
Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.	
Sample MS I.D.	
Sample MSD I.D.	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MSD Target Conc (pCi/L, g, F):	
MSD Aliquot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

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

LAM 10/7/2020

On 10.7.20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
 Analyst: LAL
 Date: 10/13/2020
 Worksheet: 56587
 Matrix: DW

Method Blank Assessment

MB Sample ID	2010810
MB Concentration:	-0.006
MB Counting Uncertainty:	0.135
MB MDG:	0.392
MB Numerical Performance Indicator:	-0.09
MB Status vs. Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

Count Date:	LCSD (Y or N)?	Y
10/14/2020	LCSD56587	
19-033	10/14/2020	
24.044	24.044	
0.10	0.10	
0.512	0.512	
4.732	4.697	
0.057	0.066	
4.419	4.489	
0.793	0.781	
-0.77	-0.59	
93.40%	94.94%	
N/A	N/A	
Pass	Pass	
125%	125%	
75%	75%	

Duplicate Sample Assessment

Sample ID:	LCSD56587
Duplicate Sample ID	LCSD56587
Sample Result (pCi/L, g, F):	4.419
Sample Duplicate Result (pCi/L, g, F):	0.793
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	4.459
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.781
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.071
(Based on the LCSD/LCSD Percent Recoveries) Duplicate RPD:	1.64%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Sample Matrix Spike Control Assessment

Sample Collection Date:	
Sample ID:	
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):	
MSD Spike Uncertainty (calculated):	
MSD Spike Uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	
MS/MSD Upper % Recovery Limits:	
MS/MSD Lower % Recovery Limits:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

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

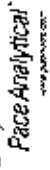
Comments:

000114101710

10/14/2020

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-226
 Analyst: LAL
 Date: 10/13/2020
 Worklist: 56567
 Matrix: DW

Method Blank Assessment	
MB Sample ID	Z016610
MB Concentration:	-0.005
MB Counting Uncertainty:	0.135
MB MDC	0.392
MB Numerical Performance Indicator:	-0.06
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)†	N
LCSD56567	LCSD56567
Count Date:	10/14/2020
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.044
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.529
Target Conc. (pCi/L, g, F):	4.732
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.419
LCSD Counting Uncertainty (pCi/L, g, F):	0.793
Numerical Performance Indicator:	-0.77
Percent Recovery:	93.40%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	92497113001
Duplicate Sample I.D.:	92497113001DUP
Sample Result (pCi/L, g, F):	0.393
Sample Duplicate Result (pCi/L, g, F):	0.257
Sample Duplicate Result (pCi/L, g, F):	0.393
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.369
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	-0.003
Duplicate RPD:	20%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

Comments:

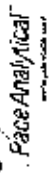
Sample Matrix Spike Control Assessment	M5A/MSD 1	M5A/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.		
M5A/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): X-2 Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):		
Sample Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Result Matrix Spike Result Counting Uncertainty (pCi/L, g, F): 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: M5A/MSD Upper % Recovery Limits: M5A/MSD Lower % Recovery Limits:		

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

Quality Control

10/14/2020

Quality Control Sample Performance Assessment



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

Test: **Ra-226**
Analyst: **LAL**
Date: **10/13/2020**
Worklist: **56591**
Matrix: **DW**

Method Blank Assessment	MB Sample ID	Count Date	Spikes I.D.
MB Concentration:	2016917	10/14/2020	LCS056591
MB Counting Uncertainty:	0.280	19-033	19-033
MB MDC:	0.293	24.044	24.044
MS Numerical Performance Indicator:	0.418	0.10	0.10
MB Status vs Numerical Indicator:	2.33	4.697	4.711
MB Status vs MDC:	N/A	0.056	0.057
	Pass	4.666	4.350
		0.761	0.758
		-0.06	-0.93
		99.33%	92.35%
		N/A	N/A
		Pass	Pass
		125%	125%
		75%	75%

Laboratory Control Sample Assessment	Count Date	Spikes I.D.	Y
Decay Corrected Spike Concentration (pCi/mL):	10/14/2020	LCS056591	LCS056591
Volume Used (mL):	19-033	19-033	19-033
Aliquot Volume (L, g, F):	24.044	24.044	24.044
Target Conc (pCi/L, g, F):	0.10	0.10	0.10
Uncertainty (Calculated):	4.697	4.711	4.711
Result (pCi/L, g, F):	0.056	0.057	0.057
Counting Uncertainty (pCi/L, g, F):	4.666	4.350	4.350
Numerical Performance Indicator:	0.761	0.758	0.758
Percent Recovery:	-0.06	-0.93	-0.93
Status vs Numerical Indicator:	99.33%	92.35%	92.35%
Upper % Recovery Limits:	N/A	N/A	N/A
Lower % Recovery Limits:	Pass	Pass	Pass
	125%	125%	125%
	75%	75%	75%

Duplicate Sample Assessment	Sample I.D.	Duplicate Sample I.D.	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample Result Counting Uncertainty (pCi/L, g, F):	LCS056591	LCS056591	92486904020
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	4.666	4.666	92486904020
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.761	0.761	
Are sample and/or duplicate results below RL?	4.350	4.350	
Duplicate Numerical Performance Indicator:	0.758	0.758	
Duplicate Percent Recovery:	NO	NO	
Duplicate Status vs Numerical Indicator:	0.577	0.577	
Duplicate Status vs RPD:	7.29%	7.29%	
Duplicate Status vs RPD:	N/A	N/A	
% RPD Limit:	Pass	Pass	
	25%	25%	

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

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

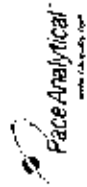
** Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

VAM 10/14/2020

Chaitin-Hill MD

Quality Control Sample Performance Assessment



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

Test: Ra-226
Analyst: LAL
Date: 10/13/2020
Worklist: 58591
Matrix: DW

MB Sample ID	2016817
MB Concentration	0.280
MB Counting Uncertainty	0.235
MB MDC	0.418
MB Numerical Performance Indicator	2.33
MB Status vs Numerical Indicator	N/A
MB Status vs MDC	Pass

LCS# (Y or N)†	N	LCS# (Y or N)†	
		LCS#66591	LCS#04591
Count Date	10/14/2020		
Sample I.D.	19-033		
Decay Corrected Spike Concentration (pCi/mL)	24.044		
Volume Used (mL)	0.30		
Aliquot Volume (L, g, F)	0.512		
Target Conc (pCi/L, g, F)	4.697		
Uncertainty (Calculated)	0.056		
Result (pCi/L, g, F)	4.666		
LCS#LCS# Counting Uncertainty (pCi/L, g, F)	0.761		
Numerical Performance Indicator	-0.08		
Percent Recovery	99.33%		
Status vs Numerical Indicator	N/A		
Status vs Recovery	Pass		
Upper % Recovery Limit	125%		
Lower % Recovery Limit	75%		

Sample I.D.	92466904020	Enter Duplicate sample IDs if other than LCS#LCS# in the space below.
Duplicate Sample I.D.	92466904020DUP	92466904020 92466904020DUP
Sample Result Counting Uncertainty (pCi/L, g, F)	0.317	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	0.241	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	0.374	
Are sample and/or duplicate results below RL?	0.240	
Duplicate Numerical Performance Indicator	See Below ##	
Duplicate RPD	-0.331	
Duplicate Status vs Numerical Indicator	16.61%	
Duplicate Status vs RPD	N/A	
% RPD Limit	Pass	
	25%	

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

<p>Matrix Spike/Matrix Spike Duplicate Sample Assessment</p> <p>Sample I.D.</p> <p>Sample MS I.D.</p> <p>Sample MSD I.D.</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F)</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F)</p> <p>Duplicate Numerical Performance Indicator</p> <p>Duplicate Numerical Performance Indicator</p> <p>(Based on the Percent Recovery) MS/MSD Duplicate RPD</p> <p>MS/MSD Duplicate Status vs Numerical Indicator</p> <p>MS/MSD Duplicate Status vs RPD</p> <p>% RPD Limit</p>		
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Quinta M. H. 10/14/2020

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

Comments:

nam 10/14/2020

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Re-226
 Analyst: LAL
 Date: 10/14/2020
 Worksheet: 56593
 Matrix: DW



Method Blank Assessment	
MB Sample ID	2016810
MB Concentration:	-0.071
MB Counting Uncertainty:	0.127
MB MDC:	0.392
MB Numerical Performance Indicator:	-0.32
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSS6593	LCSD56393
Count Date:	10/15/2020
Spike I.D.:	19-039
Decay Corrected Spike Concentration (pCi/L):	24.044
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.509
Target Conc. (pCi/L, g, F):	4.737
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.134
LCSD Counting Uncertainty (pCi/L, g, F):	0.606
Numerical Performance Indicator:	-1.46
Percent Recovery:	87.27%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limit:	125%
Lower % Recovery Limit:	75%

Duplicate Sample Assessment	
Sample I.D.:	92495687027
Duplicate Sample ID	92495687027DUP
Sample Result (pCi/L, g, F):	-0.019
Sample Result Counting Uncertainty (pCi/L, g, F):	0.155
Sample Duplicate Result (pCi/L, g, F):	-0.014
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.204
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	-0.035
Duplicate RPD:	-27.96%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

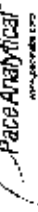
Comments:

Copy

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

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

Quality Control Sample Performance Assessment



Analyst: Musti Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyte: VAL
Date: 10/13/2020
Worksheet: 56588
Matrix: YWT

Method Blank Assessment

MB Sample ID	2016812
MB Concentration:	0.069
MB 2 Sigma CSU:	0.380
MB MDC:	0.600
MB Numerical Performance Indicator:	4.58
MB Status vs Numerical Indicator:	Fail
MB Status vs MDC:	Met Comment*

Laboratory Control Sample Assessment

LCSD (Y or N)*	Y
LCSD56588	LCSD56588
10/15/2020	10/15/2020
20-230	20-230
38.018	38.018
0.10	0.10
0.817	0.810
4.664	4.666
0.228	0.230
5.370	5.370
1.191	1.191
0.65	1.29
111.49%	114.37%
N/A	N/A
Pass	Pass
366%	135%
60%	60%

Count Date: 10/15/2020
Spike ID: 20-230
Decay Corrected Spike Concentration (pCi/mL): 38.018
Volume Used (mL): 0.10
Aliquot Volume (L, g, F): 0.817
Target Conc. (pCi/L, g, F): 4.664
Uncertainty (Calculated): 0.228
Result (pCi/L, g, F): 5.370
LCSD 2 Sigma CSU (pCi/L, g, F): 1.191
Numerical Performance Indicator: 0.65
Percent Recovery: 111.49%
Status vs Numerical Indicator: N/A
Status vs Recovery: Pass
Upper % Recovery Limits: 366%
Lower % Recovery Limits: 60%

Duplicate Sample Assessment

Sample ID	Duplicate Sample ID
LCSD56588	LCSD56588
5.168	5.168
1.207	1.207
6.370	6.370
1.191	1.191
N/A	N/A
-0.210	-0.210
2.55%	2.55%
Pass	Pass
35%	35%

Enter Duplicate sample IDs if other than LCSD in the space below:

Sample Matrix Spike Control Assessment

Sample Collection Date:	MSM4SD 1	MSM4SD 2
Sample ID:		
Sample MS ID:		
Sample MSD ID:		
Spike ID:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc. (pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (Calculated):		
MSD Spike Uncertainty (Calculated):		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

10/16/20

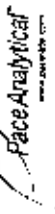
* Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*The method blank result is below the reporting limit for this analysis and is acceptable.

Accepted

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 10/16/2020
Worksheet: 56592
Matrix: WT

Method Blank Assessment

MB Sample ID
MB Concentration
MB 2 Sigma CSU
MB YDC
MB Numerical Performance Indicator
MB Status vs Numerical Indicator
Y/N Status vs YDC

Laboratory Control Sample Assessment		LCSID (Y or N)?	Y
Count Date:		LCS056592	
Spike I.D.		10/19/2020	
Decay Corrected Spike Concentration (pCi/mL)		20-030	
Volume Used (mL)		37.968	
Aliquot Volume (L, g, F)		0.10	
Target Conc. (pCi/L, g, F)		0.836	
Uncertainty (Calculated)		4.670	
Result (pCi/L, g, F)		0.223	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F)		4.645	
Numerical Performance Indicator		1.050	
Percent Recovery		-0.04	
Status vs Numerical Indicator		99.46%	
Status vs Recovery		N/A	
Upper % Recovery Limits		Pass	
Lower % Recovery Limits		135%	
		60%	

Duplicate Sample Assessment

Sample I.D.
Duplicate Sample I.D.
Sample Result (pCi/L, g, F)
Sample Duplicate Result (pCi/L, g, F)
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F)
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F)
Also sample and/or duplicate results below RL?
Duplicate Numerical Performance Indicator
Duplicate Percent Recoveries
Duplicate RPD
Duplicate Status vs Numerical Indicator
Duplicate Status vs RPD
% RPD Limit

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

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

Comments:

Sample Matrix Spike Control Assessment

Sample Collection Date:
Sample I.D.
Sample MS I.D.
Sample MSD I.D.
Spike I.D.

MSMSD Decay Corrected Spike Concentration (pCi/mL)
Spike Volume Used in MS (mL)
Spike Volume Used in MSD (mL)
Y/S Aliquot (L, g, F)
MS Target Conc. (pCi/L, g, F)
MSD Aliquot (L, g, F)
MSD Target Conc. (pCi/L, g, F)
MS Spike Uncertainty (Calculated)
MSD Spike Uncertainty (Calculated)

Sample Result 2 Sigma CSU (pCi/L, g, F)
Sample Matrix Spike Result
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F)
Sample Matrix Spike Duplicate Result
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F)
Y/S Numerical Performance Indicator
MSD Numerical Performance Indicator
Y/S Percent Recovery
MSD Percent Recovery
MS Status vs Numerical Indicator
MSD Status vs Numerical Indicator
MS Status vs Recovery
MSD Status vs Recovery
MSMSD Upper % Recovery Limits
MSMSD Lower % Recovery Limits

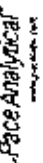
Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.
Sample MS I.D.
Sample MSD I.D.

Matrix Spike Result 2 Sigma CSU (pCi/L, g, F)
Sample Matrix Spike Duplicate Result
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F)
Duplicate Numerical Performance Indicator
Duplicate Percent Recoveries
MS/MSD Duplicate RPD
MS/MSD Duplicate Status vs Numerical Indicator
MS/MSD Duplicate Status vs RPD
% RPD Limit

Handwritten signature and date: 10/20/20

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 10/13/2020
Worklist: 58592
Matrix: WTT

MB Sample ID	2018918
MB Concentration:	0.274
MB 2 Sigma CSU:	0.291
MB MDC:	0.622
MB Numerical Performance Indicator:	1.85
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS#	Y or N?
Count Date:	10/15/2020	LCS#58592	Y
Spike I.D.:	20-030	10-52020	
Decay Corrected Spike Concentration (pCi/mL):	38.018	20-030	
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0.836		
Target Conc. (pCi/L, g, F):	4.874		
Uncertainty (Calculated):	0.223		
Result (pCi/L, g, F):	2.225		
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	-7.16		
Numerical Performance Indicator:	47.80%		
Status vs Numerical Indicator:	Fail**		
Upper % Recovery Limits:	135%		
Lower % Recovery Limits:	60%		

Duplicate Sample Assessment		LCS#	Y or N?
Sample I.D.:	LC58592	LCSD58592	
Duplicate Sample I.D.:	LCSD58592		
Sample Result (pCi/L, g, F):	2.225		
Sample Duplicate Result (pCi/L, g, F):	0.429		
Sample Duplicate Result (pCi/L, g, F):	2.863		
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.764		
Are sample and/or duplicate results below RL?	NO		
Duplicate Numerical Performance Indicator:	-1.462		
(Based on the LCS/LCSD Percent Recovery) Duplicate RPD:	31.10%		
Duplicate Status vs Numerical Indicator:	Pass		
Duplicate Status vs RPD:	Pass		
% RPD Limit:	38%		

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

Comments:

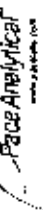
**Batch must be respipped due to LCS failure.

Handwritten signature/initials

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: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Sample Matrix Spike Duplicate Result: Duplicate Numerical Performance Indicator: Duplicate Numerical Performance Indicator: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:

Quality Control Sample Performance Assessment



Test: Ra-228
Analyst: VAL
Date: 10/13/2020
Worksheet: 56594
Matrix: WT

Method Blank Assessment

MB Sample ID	2016821
MB Concentration	0.369
MB 2 Sigma CSU	0.373
MB MDC	0.768
MB Numerical Performance Indicator	1.94
MB Status vs Numerical Indicator	Pass
MB Status vs MDC	Pass

Laboratory Control Sample Assessment

	LCSD (Y or N)?	Y
Count Date	LCSD56594	10/15/2020
Spike I.D.	LCSD56594	20-030
Decay Corrected Spike Concentration (pCi/mL)	38.018	38.018
Volume Used (mL)	0.10	0.10
Aliquot Volume (L, g, F)	0.813	0.815
Target Conc. (pCi/L, g, F)	4.874	4.867
Uncertainty (Calculated)	0.229	0.229
Result (pCi/L, g, F)	3.852	4.892
LCSD 2 Sigma CSU (pCi/L, g, F)	0.818	1.182
Numerical Performance Indicator	1.49	0.38
Percent Recovery	84.57%	104.82%
Status vs Numerical Indicator	N/A	N/A
Status vs Recovery	Pass	Pass
Upper % Recovery Limit	735%	138%
Lower % Recovery Limit	69%	80%

Duplicate Sample Assessment

	LCSD (Y or N)?	Y
Sample I.D.	LCSD56594	10/15/2020
Duplicate Sample I.D.	LCSD56594	20-030
Sample Result (pCi/L, g, F)	3.952	38.018
Sample Result 2 Sigma CSU (pCi/L, g, F)	0.918	0.815
Sample Duplicate Result (pCi/L, g, F)	4.892	4.867
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F)	1.182	1.182
Ave sample and/or duplicate results below LCSD	ND	ND
Duplicate Numerical Performance Indicator	-1.250	-1.250
Duplicate (Percent Recoveries) Duplicate RPO	21.36%	21.36%
Duplicate Status vs Numerical Indicator	Pass	Pass
Duplicate Status vs RPO	Pass	Pass
% RPO Limit	36%	36%

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment

MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.: MS/MSD Direct Corrected Spike Concentration (pCi/mL): Spike Volume Used to MS (mL): Spike Volume Used in W-MSD (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): W-MSD Aliquot (L, g, F): W-MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (Calculated): MS Spike Uncertainty (Calculated): MSD Spike Uncertainty (Calculated): Sample Result: Sample Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): MS Numerical Performance Indicator: MS Numerical Performance Indicator: MS Percent Recovery: MS Percent Recovery: MS Status vs Numerical Indicator: W-MSD Status vs Numerical Indicator: MS Status vs Recovery: MS Status vs Recovery: MS/MSD Upper % Recovery Limit: MS/MSD Lower % Recovery Limit: MS/MSD % RPO Limit:	Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): Duplicate Numerical Performance Indicator: Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/MSD Duplicate RPO: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPO: MS/MSD % RPO Limit:

Matrix Spike/Matrix Spike Duplicate Sample Assessment

MS/MSD 1	MS/MSD 2
Sample I.D. Sample MS I.D. Sample MSD I.D. Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): Duplicate Numerical Performance Indicator: Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/MSD Duplicate RPO: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPO: MS/MSD % RPO Limit:	Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): Duplicate Numerical Performance Indicator: Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/MSD Duplicate RPO: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPO: MS/MSD % RPO Limit:

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

Comments:

OK 10/14/2020

OK 10/16/20

November 2020

November 30, 2020

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

RE: Project: HAMMOND AP-3 BKG 02,05/NR
Pace Project No.: 92505496

Dear Joju Abraham:

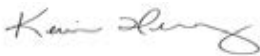
Enclosed are the analytical results for sample(s) received by the laboratory between November 11, 2020 and November 12, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

Pace Analytical Services Charlotte

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

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

Georgia DW Microbiology Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92505496001	HGWA-43D	Water	11/10/20 10:21	11/11/20 12:12
92505496002	EB-01	Water	11/10/20 16:10	11/11/20 12:12
92505496003	HGWA-44D	Water	11/10/20 15:55	11/11/20 12:12
92505496004	HGWA-44D FILTERED	Water	11/10/20 16:30	11/11/20 12:12
92505496005	HGWA-45D	Water	11/11/20 15:50	11/12/20 16:47
92505496006	HGWC-126	Water	11/11/20 11:25	11/12/20 16:47
92505496007	HGWC-125	Water	11/12/20 09:26	11/12/20 16:47
92505496008	MW-46D	Water	11/11/20 12:50	11/12/20 16:47

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92505496001	HGWA-43D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92505496002	EB-01	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92505496003	HGWA-44D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92505496004	HGWA-44D FILTERED	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92505496005	HGWA-45D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92505496006	HGWC-126	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92505496007	HGWC-125	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92505496008	MW-46D	EPA 6010D	KH	1
		EPA 6020B	CW1	2

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 02,05/NR
Pace Project No.: 92505496

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92505496001	HGWA-43D					
	Performed by	CUSTOMER			11/12/20 08:54	
	pH	7.27	Std. Units		11/12/20 08:54	
EPA 6010D	Calcium	63.3	mg/L	1.0	11/19/20 09:40	
EPA 6020B	Antimony	0.00043J	mg/L	0.0030	11/19/20 18:47	B
EPA 6020B	Arsenic	0.0021J	mg/L	0.0050	11/19/20 18:47	
EPA 6020B	Barium	0.25	mg/L	0.010	11/19/20 18:47	
EPA 6020B	Boron	0.057J	mg/L	0.10	11/19/20 18:47	
EPA 6020B	Lead	0.000069J	mg/L	0.0050	11/19/20 18:47	
EPA 6020B	Lithium	0.0013J	mg/L	0.030	11/19/20 18:47	
EPA 6020B	Molybdenum	0.0072J	mg/L	0.010	11/19/20 18:47	
SM 2450C-2011	Total Dissolved Solids	307	mg/L	10.0	11/13/20 14:21	
EPA 300.0 Rev 2.1 1993	Chloride	4.4	mg/L	1.0	11/14/20 16:04	
EPA 300.0 Rev 2.1 1993	Fluoride	0.19	mg/L	0.10	11/14/20 16:04	
EPA 300.0 Rev 2.1 1993	Sulfate	39.0	mg/L	1.0	11/14/20 16:04	
92505496002	EB-01					
SM 2450C-2011	Total Dissolved Solids	13.0	mg/L	10.0	11/13/20 14:21	
92505496003	HGWA-44D					
	Performed by	CUSTOMER			11/12/20 08:54	
	pH	7.84	Std. Units		11/12/20 08:54	
EPA 6010D	Calcium	33.6	mg/L	1.0	11/19/20 10:28	
EPA 6020B	Barium	0.38	mg/L	0.010	11/19/20 18:58	
EPA 6020B	Boron	0.29	mg/L	0.10	11/19/20 18:58	
EPA 6020B	Chromium	0.00089J	mg/L	0.010	11/19/20 18:58	
EPA 6020B	Lead	0.00020J	mg/L	0.0050	11/19/20 18:58	
EPA 6020B	Lithium	0.025J	mg/L	0.030	11/19/20 18:58	
EPA 6020B	Molybdenum	0.0018J	mg/L	0.010	11/19/20 18:58	
SM 2450C-2011	Total Dissolved Solids	287	mg/L	10.0	11/13/20 14:21	
EPA 300.0 Rev 2.1 1993	Chloride	7.8	mg/L	1.0	11/14/20 16:33	
EPA 300.0 Rev 2.1 1993	Fluoride	0.59	mg/L	0.10	11/14/20 16:33	
EPA 300.0 Rev 2.1 1993	Sulfate	6.3	mg/L	1.0	11/14/20 16:33	
92505496004	HGWA-44D FILTERED					
	Performed by	CUSTOMER			11/12/20 08:55	
	pH	7.84	Std. Units		11/12/20 08:55	
EPA 6010D	Calcium	27.0	mg/L	1.0	11/19/20 10:34	
EPA 6020B	Barium	0.39	mg/L	0.010	11/19/20 19:04	
EPA 6020B	Boron	0.27	mg/L	0.10	11/19/20 19:04	
EPA 6020B	Lithium	0.027J	mg/L	0.030	11/19/20 19:04	
EPA 6020B	Molybdenum	0.0015J	mg/L	0.010	11/19/20 19:04	
SM 2450C-2011	Total Dissolved Solids	301	mg/L	10.0	11/13/20 14:22	
EPA 300.0 Rev 2.1 1993	Chloride	7.6	mg/L	1.0	11/14/20 16:47	
EPA 300.0 Rev 2.1 1993	Fluoride	0.58	mg/L	0.10	11/14/20 16:47	
EPA 300.0 Rev 2.1 1993	Sulfate	5.9	mg/L	1.0	11/14/20 16:47	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 02,05/NR
Pace Project No.: 92505496

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92505496005	HGWA-45D					
	Performed by	CUSTOME			11/13/20 10:47	
		R				
	pH	7.40	Std. Units		11/13/20 10:47	
EPA 6010D	Calcium	54.9	mg/L	1.0	11/19/20 02:38	
EPA 6020B	Antimony	0.00057J	mg/L	0.0030	11/19/20 19:44	B
EPA 6020B	Arsenic	0.0011J	mg/L	0.0050	11/19/20 19:44	
EPA 6020B	Barium	0.45	mg/L	0.010	11/19/20 19:44	
EPA 6020B	Boron	0.17	mg/L	0.10	11/19/20 19:44	
EPA 6020B	Lead	0.000040J	mg/L	0.0050	11/19/20 19:44	
EPA 6020B	Lithium	0.0032J	mg/L	0.030	11/19/20 19:44	
EPA 6020B	Molybdenum	0.0049J	mg/L	0.010	11/19/20 19:44	
SM 2450C-2011	Total Dissolved Solids	276	mg/L	10.0	11/17/20 16:03	
EPA 300.0 Rev 2.1 1993	Chloride	3.3	mg/L	1.0	11/18/20 04:47	
EPA 300.0 Rev 2.1 1993	Fluoride	0.19	mg/L	0.10	11/18/20 04:47	
EPA 300.0 Rev 2.1 1993	Sulfate	11.2	mg/L	1.0	11/18/20 04:47	
92505496006	HGWC-126					
	Performed by	CUSTOME			11/13/20 10:47	
		R				
	pH	6.86	Std. Units		11/13/20 10:47	
EPA 6010D	Calcium	133	mg/L	1.0	11/19/20 02:43	M1
EPA 6020B	Antimony	0.00040J	mg/L	0.0030	11/19/20 19:50	B
EPA 6020B	Barium	0.23	mg/L	0.010	11/19/20 19:50	
EPA 6020B	Boron	0.0090J	mg/L	0.10	11/19/20 19:50	
EPA 6020B	Lead	0.000042J	mg/L	0.0050	11/19/20 19:50	
EPA 6020B	Lithium	0.0032J	mg/L	0.030	11/19/20 19:50	
SM 2450C-2011	Total Dissolved Solids	468	mg/L	20.0	11/17/20 16:03	
EPA 300.0 Rev 2.1 1993	Chloride	8.3	mg/L	1.0	11/18/20 05:01	
EPA 300.0 Rev 2.1 1993	Fluoride	0.45	mg/L	0.10	11/18/20 05:01	
EPA 300.0 Rev 2.1 1993	Sulfate	62.3	mg/L	1.0	11/18/20 05:01	
92505496007	HGWC-125					
	Performed by	CUSTOME			11/13/20 10:47	
		R				
	pH	6.13	Std. Units		11/13/20 10:47	
EPA 6010D	Calcium	165	mg/L	1.0	11/19/20 03:15	
EPA 6020B	Barium	0.042	mg/L	0.010	11/19/20 19:55	
EPA 6020B	Boron	1.4	mg/L	0.10	11/19/20 19:55	
EPA 6020B	Cobalt	0.012	mg/L	0.0050	11/19/20 19:55	
EPA 6020B	Lead	0.000047J	mg/L	0.0050	11/19/20 19:55	
EPA 6020B	Lithium	0.0038J	mg/L	0.030	11/19/20 19:55	
EPA 6020B	Molybdenum	0.0017J	mg/L	0.010	11/19/20 19:55	
SM 2450C-2011	Total Dissolved Solids	694	mg/L	20.0	11/17/20 16:04	
EPA 300.0 Rev 2.1 1993	Chloride	10.4	mg/L	1.0	11/18/20 05:15	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	11/18/20 05:15	
EPA 300.0 Rev 2.1 1993	Sulfate	300	mg/L	7.0	11/18/20 07:36	
92505496008	MW-46D					
	Performed by	CUSTOME			11/13/20 10:48	
		R				

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92505496008	MW-46D					
	pH	7.52	Std. Units		11/13/20 10:48	
EPA 6010D	Calcium	69.3	mg/L	1.0	11/19/20 03:20	
EPA 6020B	Boron	0.68	mg/L	0.10	11/20/20 18:55	
EPA 6020B	Molybdenum	0.015	mg/L	0.010	11/20/20 18:55	
SM 2450C-2011	Total Dissolved Solids	472	mg/L	20.0	11/17/20 16:04	
EPA 300.0 Rev 2.1 1993	Chloride	3.5	mg/L	1.0	11/18/20 05:29	
EPA 300.0 Rev 2.1 1993	Fluoride	1.0	mg/L	0.10	11/18/20 05:29	
EPA 300.0 Rev 2.1 1993	Sulfate	167	mg/L	4.0	11/18/20 07:50	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 02,05/NR
Pace Project No.: 92505496

Sample: HGWA-43D		Lab ID: 92505496001		Collected: 11/10/20 10:21		Received: 11/11/20 12:12		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		11/12/20 08:54		
pH	7.27	Std. Units			1		11/12/20 08:54		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	63.3	mg/L	1.0	0.070	1	11/16/20 11:00	11/19/20 09:40	7440-70-2	
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	11/19/20 08:40	11/19/20 18:47	7440-36-0	B
Arsenic	0.0021J	mg/L	0.0050	0.00078	1	11/19/20 08:40	11/19/20 18:47	7440-38-2	
Barium	0.25	mg/L	0.010	0.00071	1	11/19/20 08:40	11/19/20 18:47	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	11/19/20 08:40	11/19/20 18:47	7440-41-7	
Boron	0.057J	mg/L	0.10	0.0052	1	11/19/20 08:40	11/19/20 18:47	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	11/19/20 08:40	11/19/20 18:47	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	11/19/20 08:40	11/19/20 18:47	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	11/19/20 08:40	11/19/20 18:47	7440-48-4	
Lead	0.000069J	mg/L	0.0050	0.000036	1	11/19/20 08:40	11/19/20 18:47	7439-92-1	
Lithium	0.0013J	mg/L	0.030	0.00081	1	11/19/20 08:40	11/19/20 18:47	7439-93-2	
Molybdenum	0.0072J	mg/L	0.010	0.00069	1	11/19/20 08:40	11/19/20 18:47	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	11/19/20 08:40	11/19/20 18:47	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/19/20 08:40	11/19/20 18:47	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	11/16/20 08:00	11/18/20 13:55	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	307	mg/L	10.0	10.0	1		11/13/20 14:21		
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	0.60	1		11/14/20 16:04	16887-00-6	
Fluoride	0.19	mg/L	0.10	0.050	1		11/14/20 16:04	16984-48-8	
Sulfate	39.0	mg/L	1.0	0.50	1		11/14/20 16:04	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

Sample: EB-01		Lab ID: 92505496002		Collected: 11/10/20 16:10	Received: 11/11/20 12:12	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
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	11/16/20 11:00	11/19/20 09:45	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	11/19/20 08:40	11/19/20 18:52	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	11/19/20 08:40	11/19/20 18:52	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	11/19/20 08:40	11/19/20 18:52	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	11/19/20 08:40	11/19/20 18:52	7440-41-7		
Boron	ND	mg/L	0.10	0.0052	1	11/19/20 08:40	11/19/20 18:52	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	11/19/20 08:40	11/19/20 18:52	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	11/19/20 08:40	11/19/20 18:52	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	11/19/20 08:40	11/19/20 18:52	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	11/19/20 08:40	11/19/20 18:52	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	11/19/20 08:40	11/19/20 18:52	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	11/19/20 08:40	11/19/20 18:52	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	11/19/20 08:40	11/19/20 18:52	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	11/19/20 08:40	11/19/20 18:52	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	11/16/20 08:00	11/18/20 13:57	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	13.0	mg/L	10.0	10.0	1		11/13/20 14:21			
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		11/14/20 16:18	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		11/14/20 16:18	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		11/14/20 16:18	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

Sample: HGWA-44D		Lab ID: 92505496003		Collected: 11/10/20 15:55	Received: 11/11/20 12:12	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		11/12/20 08:54		
pH	7.84	Std. Units			1		11/12/20 08:54		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	33.6	mg/L	1.0	0.070	1	11/16/20 11:00	11/19/20 10:28	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	11/19/20 08:40	11/19/20 18:58	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	11/19/20 08:40	11/19/20 18:58	7440-38-2	
Barium	0.38	mg/L	0.010	0.00071	1	11/19/20 08:40	11/19/20 18:58	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	11/19/20 08:40	11/19/20 18:58	7440-41-7	
Boron	0.29	mg/L	0.10	0.0052	1	11/19/20 08:40	11/19/20 18:58	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	11/19/20 08:40	11/19/20 18:58	7440-43-9	
Chromium	0.00089J	mg/L	0.010	0.00055	1	11/19/20 08:40	11/19/20 18:58	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	11/19/20 08:40	11/19/20 18:58	7440-48-4	
Lead	0.00020J	mg/L	0.0050	0.000036	1	11/19/20 08:40	11/19/20 18:58	7439-92-1	
Lithium	0.025J	mg/L	0.030	0.00081	1	11/19/20 08:40	11/19/20 18:58	7439-93-2	
Molybdenum	0.0018J	mg/L	0.010	0.00069	1	11/19/20 08:40	11/19/20 18:58	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	11/19/20 08:40	11/19/20 18:58	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/19/20 08:40	11/19/20 18:58	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	11/16/20 08:00	11/18/20 14:00	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	287	mg/L	10.0	10.0	1		11/13/20 14:21		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	7.8	mg/L	1.0	0.60	1		11/14/20 16:33	16887-00-6	
Fluoride	0.59	mg/L	0.10	0.050	1		11/14/20 16:33	16984-48-8	
Sulfate	6.3	mg/L	1.0	0.50	1		11/14/20 16:33	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

Sample: HGWA-44D FILTERED		Lab ID: 92505496004		Collected: 11/10/20 16:30		Received: 11/11/20 12:12		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		11/12/20 08:55		
pH	7.84	Std. Units			1		11/12/20 08:55		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	27.0	mg/L	1.0	0.070	1	11/16/20 11:00	11/19/20 10:34	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	11/19/20 08:40	11/19/20 19:04	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	11/19/20 08:40	11/19/20 19:04	7440-38-2	
Barium	0.39	mg/L	0.010	0.00071	1	11/19/20 08:40	11/19/20 19:04	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	11/19/20 08:40	11/19/20 19:04	7440-41-7	
Boron	0.27	mg/L	0.10	0.0052	1	11/19/20 08:40	11/19/20 19:04	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	11/19/20 08:40	11/19/20 19:04	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	11/19/20 08:40	11/19/20 19:04	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	11/19/20 08:40	11/19/20 19:04	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	11/19/20 08:40	11/19/20 19:04	7439-92-1	
Lithium	0.027J	mg/L	0.030	0.00081	1	11/19/20 08:40	11/19/20 19:04	7439-93-2	
Molybdenum	0.0015J	mg/L	0.010	0.00069	1	11/19/20 08:40	11/19/20 19:04	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	11/19/20 08:40	11/19/20 19:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/19/20 08:40	11/19/20 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	11/16/20 08:00	11/18/20 14:02	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	301	mg/L	10.0	10.0	1		11/13/20 14:22		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	7.6	mg/L	1.0	0.60	1		11/14/20 16:47	16887-00-6	
Fluoride	0.58	mg/L	0.10	0.050	1		11/14/20 16:47	16984-48-8	
Sulfate	5.9	mg/L	1.0	0.50	1		11/14/20 16:47	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

Sample: HGWA-45D		Lab ID: 92505496005		Collected: 11/11/20 15:50		Received: 11/12/20 16:47		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		11/13/20 10:47		
pH	7.40	Std. Units			1		11/13/20 10:47		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	54.9	mg/L	1.0	0.070	1	11/18/20 15:19	11/19/20 02:38	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	11/19/20 08:40	11/19/20 19:44	7440-36-0	B
Arsenic	0.0011J	mg/L	0.0050	0.00078	1	11/19/20 08:40	11/19/20 19:44	7440-38-2	
Barium	0.45	mg/L	0.010	0.00071	1	11/19/20 08:40	11/19/20 19:44	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	11/19/20 08:40	11/19/20 19:44	7440-41-7	
Boron	0.17	mg/L	0.10	0.0052	1	11/19/20 08:40	11/19/20 19:44	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	11/19/20 08:40	11/19/20 19:44	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	11/19/20 08:40	11/19/20 19:44	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	11/19/20 08:40	11/19/20 19:44	7440-48-4	
Lead	0.000040J	mg/L	0.0050	0.000036	1	11/19/20 08:40	11/19/20 19:44	7439-92-1	
Lithium	0.0032J	mg/L	0.030	0.00081	1	11/19/20 08:40	11/19/20 19:44	7439-93-2	
Molybdenum	0.0049J	mg/L	0.010	0.00069	1	11/19/20 08:40	11/19/20 19:44	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	11/19/20 08:40	11/19/20 19:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/19/20 08:40	11/19/20 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	11/16/20 08:00	11/18/20 14:28	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	276	mg/L	10.0	10.0	1		11/17/20 16:03		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	3.3	mg/L	1.0	0.60	1		11/18/20 04:47	16887-00-6	
Fluoride	0.19	mg/L	0.10	0.050	1		11/18/20 04:47	16984-48-8	
Sulfate	11.2	mg/L	1.0	0.50	1		11/18/20 04:47	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

Sample: HGWC-126		Lab ID: 92505496006		Collected: 11/11/20 11:25		Received: 11/12/20 16:47		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		11/13/20 10:47		
pH	6.86	Std. Units			1		11/13/20 10:47		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	133	mg/L	1.0	0.070	1	11/18/20 15:19	11/19/20 02:43	7440-70-2	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00040J	mg/L	0.0030	0.00028	1	11/19/20 08:40	11/19/20 19:50	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	11/19/20 08:40	11/19/20 19:50	7440-38-2	
Barium	0.23	mg/L	0.010	0.00071	1	11/19/20 08:40	11/19/20 19:50	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	11/19/20 08:40	11/19/20 19:50	7440-41-7	
Boron	0.0090J	mg/L	0.10	0.0052	1	11/19/20 08:40	11/19/20 19:50	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	11/19/20 08:40	11/19/20 19:50	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	11/19/20 08:40	11/19/20 19:50	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	11/19/20 08:40	11/19/20 19:50	7440-48-4	
Lead	0.000042J	mg/L	0.0050	0.000036	1	11/19/20 08:40	11/19/20 19:50	7439-92-1	
Lithium	0.0032J	mg/L	0.030	0.00081	1	11/19/20 08:40	11/19/20 19:50	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	11/19/20 08:40	11/19/20 19:50	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	11/19/20 08:40	11/19/20 19:50	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/19/20 08:40	11/19/20 19:50	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	11/16/20 08:00	11/18/20 14:30	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	468	mg/L	20.0	20.0	1		11/17/20 16:03		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	8.3	mg/L	1.0	0.60	1		11/18/20 05:01	16887-00-6	
Fluoride	0.45	mg/L	0.10	0.050	1		11/18/20 05:01	16984-48-8	
Sulfate	62.3	mg/L	1.0	0.50	1		11/18/20 05:01	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 02,05/NR
Pace Project No.: 92505496

Sample: HGWC-125		Lab ID: 92505496007		Collected: 11/12/20 09:26		Received: 11/12/20 16:47		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		11/13/20 10:47		
pH	6.13	Std. Units			1		11/13/20 10:47		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	165	mg/L	1.0	0.070	1	11/18/20 15:19	11/19/20 03:15	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	11/19/20 08:40	11/19/20 19:55	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	11/19/20 08:40	11/19/20 19:55	7440-38-2	
Barium	0.042	mg/L	0.010	0.00071	1	11/19/20 08:40	11/19/20 19:55	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	11/19/20 08:40	11/19/20 19:55	7440-41-7	
Boron	1.4	mg/L	0.10	0.0052	1	11/19/20 08:40	11/19/20 19:55	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	11/19/20 08:40	11/19/20 19:55	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	11/19/20 08:40	11/19/20 19:55	7440-47-3	
Cobalt	0.012	mg/L	0.0050	0.00038	1	11/19/20 08:40	11/19/20 19:55	7440-48-4	
Lead	0.000047J	mg/L	0.0050	0.000036	1	11/19/20 08:40	11/19/20 19:55	7439-92-1	
Lithium	0.0038J	mg/L	0.030	0.00081	1	11/19/20 08:40	11/19/20 19:55	7439-93-2	
Molybdenum	0.0017J	mg/L	0.010	0.00069	1	11/19/20 08:40	11/19/20 19:55	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	11/19/20 08:40	11/19/20 19:55	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	11/19/20 08:40	11/19/20 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	11/23/20 08:20	11/23/20 13:43	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	694	mg/L	20.0	20.0	1		11/17/20 16:04		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	10.4	mg/L	1.0	0.60	1		11/18/20 05:15	16887-00-6	
Fluoride	0.12	mg/L	0.10	0.050	1		11/18/20 05:15	16984-48-8	
Sulfate	300	mg/L	7.0	3.5	7		11/18/20 07:36	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: MW-46D Lab ID: 92505496008 Collected: 11/11/20 12:50 Received: 11/12/20 16:47 Matrix: Water									
Field Data Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		11/13/20 10:48		
pH	7.52	Std. Units			1		11/13/20 10:48		
6010D ATL ICP Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	69.3	mg/L	1.0	0.070	1	11/18/20 15:19	11/19/20 03:20	7440-70-2	
6020 MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	0.68	mg/L	0.10	0.0052	1	11/19/20 08:40	11/20/20 18:55	7440-42-8	
Molybdenum	0.015	mg/L	0.010	0.00069	1	11/19/20 08:40	11/20/20 18:55	7439-98-7	
2540C Total Dissolved Solids Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	472	mg/L	20.0	20.0	1		11/17/20 16:04		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	3.5	mg/L	1.0	0.60	1		11/18/20 05:29	16887-00-6	
Fluoride	1.0	mg/L	0.10	0.050	1		11/18/20 05:29	16984-48-8	
Sulfate	167	mg/L	4.0	2.0	4		11/18/20 07:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR
Pace Project No.: 92505496

QC Batch: 580529 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004

METHOD BLANK: 3070802 Matrix: Water
Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	11/19/20 06:54	

LABORATORY CONTROL SAMPLE: 3070803

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3070804 3070805

Parameter	Units	3070804		3070805		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	9170 ug/L	1	1	173	169	16300	16000	75-125	2	20 M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR
Pace Project No.: 92505496

QC Batch: 581313 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92505496005, 92505496006, 92505496007, 92505496008

METHOD BLANK: 3074651 Matrix: Water
Associated Lab Samples: 92505496005, 92505496006, 92505496007, 92505496008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	11/19/20 02:12	

LABORATORY CONTROL SAMPLE: 3074652

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: 3074653 3074654

Parameter	Units	3074653		3074654		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	133	1	1	130	129	-299	-430	75-125	1	20 M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR
Pace Project No.: 92505496

QC Batch: 581474 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004, 92505496005, 92505496006, 92505496007

METHOD BLANK: 3075459 Matrix: Water
Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004, 92505496005, 92505496006, 92505496007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00037J	0.0030	0.00028	11/19/20 17:21	
Arsenic	mg/L	ND	0.0050	0.00078	11/19/20 17:21	
Barium	mg/L	ND	0.010	0.00071	11/19/20 17:21	
Beryllium	mg/L	ND	0.0030	0.000046	11/19/20 17:21	
Boron	mg/L	ND	0.10	0.0052	11/19/20 17:21	
Cadmium	mg/L	ND	0.0025	0.00012	11/19/20 17:21	
Chromium	mg/L	ND	0.010	0.00055	11/19/20 17:21	
Cobalt	mg/L	ND	0.0050	0.00038	11/19/20 17:21	
Lead	mg/L	ND	0.0050	0.000036	11/19/20 17:21	
Lithium	mg/L	ND	0.030	0.00081	11/19/20 17:21	
Molybdenum	mg/L	ND	0.010	0.00069	11/19/20 17:21	
Selenium	mg/L	ND	0.010	0.0016	11/19/20 17:21	
Thallium	mg/L	ND	0.0010	0.00014	11/19/20 17:21	

LABORATORY CONTROL SAMPLE: 3075460

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	100	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.097	97	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	0.1	0.10	103	80-120	
Chromium	mg/L	0.1	0.10	103	80-120	
Cobalt	mg/L	0.1	0.10	100	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3075461 3075462

Parameter	Units	92505482033 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	0.095	0.099	95	99	75-125	4	20	
Arsenic	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

Parameter	Units	3075461		3075462		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92505482033 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	ND	0.1	0.1	0.11	0.11	92	95	75-125	3	20		
Beryllium	mg/L	ND	0.1	0.1	0.094	0.095	94	95	75-125	1	20		
Boron	mg/L	46.1 ug/L	1	1	0.96	0.98	91	94	75-125	3	20		
Cadmium	mg/L	ND	0.1	0.1	0.096	0.098	96	98	75-125	2	20		
Chromium	mg/L	ND	0.1	0.1	0.095	0.099	95	99	75-125	4	20		
Cobalt	mg/L	ND	0.1	0.1	0.095	0.096	94	96	75-125	1	20		
Lead	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20		
Lithium	mg/L	ND	0.1	0.1	0.095	0.093	95	92	75-125	3	20		
Molybdenum	mg/L	ND	0.1	0.1	0.096	0.099	96	99	75-125	3	20		
Selenium	mg/L	ND	0.1	0.1	0.094	0.095	93	95	75-125	2	20		
Thallium	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	1	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

QC Batch: 581476	Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A	Analysis Description: 6020 MET
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92505496008

METHOD BLANK: 3075465 Matrix: Water

Associated Lab Samples: 92505496008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/L	ND	0.10	0.0052	11/20/20 18:15	
Molybdenum	mg/L	ND	0.010	0.00069	11/20/20 18:15	

LABORATORY CONTROL SAMPLE: 3075466

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	1.1	106	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3075467 3075468

Parameter	Units	92505843001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	0.012J	1	1	0.97	0.99	96	98	75-125	2	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	2	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

QC Batch:	580637	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004, 92505496005, 92505496006

METHOD BLANK: 3071454 Matrix: Water
Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004, 92505496005, 92505496006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	11/17/20 13:51	

LABORATORY CONTROL SAMPLE: 3071455

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3071456 3071457

Parameter	Units	3071456		3071457		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	0.45 ug/L	0.0025	0.0025	0.0030	0.0029	101	97	75-125	3	20

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

QC Batch: 580803	Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A	Analysis Description: 7470 Mercury
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92505496007

METHOD BLANK: 3072015 Matrix: Water

Associated Lab Samples: 92505496007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	11/23/20 13:21	

LABORATORY CONTROL SAMPLE: 3072016

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3072017 3072018

Parameter	Units	3072017		3072018		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0025	98	99	75-125	1	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

QC Batch: 580910

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: 92505496005, 92505496006, 92505496007, 92505496008

METHOD BLANK: 3072613

Matrix: Water

Associated Lab Samples: 92505496005, 92505496006, 92505496007, 92505496008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/17/20 16:03	

LABORATORY CONTROL SAMPLE: 3072614

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	411	103	84-108	

SAMPLE DUPLICATE: 3072616

Parameter	Units	92506106002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	62.0	64.0	3	10	

SAMPLE DUPLICATE: 3072820

Parameter	Units	92506187002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	196	209	6	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

QC Batch: 580949	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: 92505496001, 92505496002, 92505496003, 92505496004

METHOD BLANK: 3072818 Matrix: Water
Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	11/13/20 14:19	

LABORATORY CONTROL SAMPLE: 3072819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	403	101	84-108	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

QC Batch: 580375 Analysis Method: EPA 300.0 Rev 2.1 1993
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004

METHOD BLANK: 3070250 Matrix: Water
 Associated Lab Samples: 92505496001, 92505496002, 92505496003, 92505496004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	11/14/20 12:56	
Fluoride	mg/L	ND	0.10	0.050	11/14/20 12:56	
Sulfate	mg/L	ND	1.0	0.50	11/14/20 12:56	

LABORATORY CONTROL SAMPLE: 3070251

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	2.7	108	90-110	
Sulfate	mg/L	50	49.9	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3070252 3070253

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92505439001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	15.5	50	50	50	65.1	67.1	99	103	90-110	3	10	
Fluoride	mg/L	9.9	2.5	2.5	2.5	1.5	11.3	-333	58	90-110	152	10	M6, R1
Sulfate	mg/L	635	50	50	50	275	677	-721	83	90-110	85	10	M6, R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3070254 3070255

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92505478001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	2.7	50	50	50	53.8	54.8	102	104	90-110	2	10	
Fluoride	mg/L	0.065J	2.5	2.5	2.5	2.7	2.8	105	108	90-110	3	10	
Sulfate	mg/L	2.3	50	50	50	52.6	53.9	101	103	90-110	2	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

QC Batch: 580771 Analysis Method: EPA 300.0 Rev 2.1 1993
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
 Laboratory: Pace Analytical Services - Asheville
 Associated Lab Samples: 92505496005, 92505496006, 92505496007, 92505496008

METHOD BLANK: 3071887 Matrix: Water
 Associated Lab Samples: 92505496005, 92505496006, 92505496007, 92505496008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	11/17/20 22:58	
Fluoride	mg/L	ND	0.10	0.050	11/17/20 22:58	
Sulfate	mg/L	ND	1.0	0.50	11/17/20 22:58	

LABORATORY CONTROL SAMPLE: 3071888

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.8	102	90-110	
Fluoride	mg/L	2.5	2.6	105	90-110	
Sulfate	mg/L	50	50.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3071889 3071890

Parameter	Units	92506020008		3071889		3071890		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	ND	ND	50	50	52.0	52.2	104	104	90-110	0	10	
Fluoride	mg/L	ND	ND	2.5	2.5	2.4	2.6	97	103	90-110	7	10	
Sulfate	mg/L	ND	ND	50	50	51.4	51.5	103	103	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3071891 3071892

Parameter	Units	92506244005		3071891		3071892		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	2.2	2.2	50	50	54.1	54.4	104	104	90-110	0	10	
Fluoride	mg/L	ND	ND	2.5	2.5	2.3	2.5	92	99	90-110	7	10	
Sulfate	mg/L	ND	ND	50	50	51.3	51.5	102	102	90-110	0	10	

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QUALIFIERS

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

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.

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92505496001	HGWA-43D				
92505496003	HGWA-44D				
92505496004	HGWA-44D FILTERED				
92505496005	HGWA-45D				
92505496006	HGWC-126				
92505496007	HGWC-125				
92505496008	MW-46D				
92505496001	HGWA-43D	EPA 3010A	580529	EPA 6010D	580567
92505496002	EB-01	EPA 3010A	580529	EPA 6010D	580567
92505496003	HGWA-44D	EPA 3010A	580529	EPA 6010D	580567
92505496004	HGWA-44D FILTERED	EPA 3010A	580529	EPA 6010D	580567
92505496005	HGWA-45D	EPA 3010A	581313	EPA 6010D	581362
92505496006	HGWC-126	EPA 3010A	581313	EPA 6010D	581362
92505496007	HGWC-125	EPA 3010A	581313	EPA 6010D	581362
92505496008	MW-46D	EPA 3010A	581313	EPA 6010D	581362
92505496001	HGWA-43D	EPA 3005A	581474	EPA 6020B	581563
92505496002	EB-01	EPA 3005A	581474	EPA 6020B	581563
92505496003	HGWA-44D	EPA 3005A	581474	EPA 6020B	581563
92505496004	HGWA-44D FILTERED	EPA 3005A	581474	EPA 6020B	581563
92505496005	HGWA-45D	EPA 3005A	581474	EPA 6020B	581563
92505496006	HGWC-126	EPA 3005A	581474	EPA 6020B	581563
92505496007	HGWC-125	EPA 3005A	581474	EPA 6020B	581563
92505496008	MW-46D	EPA 3005A	581476	EPA 6020B	581564
92505496001	HGWA-43D	EPA 7470A	580637	EPA 7470A	580829
92505496002	EB-01	EPA 7470A	580637	EPA 7470A	580829
92505496003	HGWA-44D	EPA 7470A	580637	EPA 7470A	580829
92505496004	HGWA-44D FILTERED	EPA 7470A	580637	EPA 7470A	580829
92505496005	HGWA-45D	EPA 7470A	580637	EPA 7470A	580829
92505496006	HGWC-126	EPA 7470A	580637	EPA 7470A	580829
92505496007	HGWC-125	EPA 7470A	580803	EPA 7470A	582285
92505496001	HGWA-43D	SM 2450C-2011	580949		
92505496002	EB-01	SM 2450C-2011	580949		
92505496003	HGWA-44D	SM 2450C-2011	580949		
92505496004	HGWA-44D FILTERED	SM 2450C-2011	580949		
92505496005	HGWA-45D	SM 2450C-2011	580910		
92505496006	HGWC-126	SM 2450C-2011	580910		
92505496007	HGWC-125	SM 2450C-2011	580910		
92505496008	MW-46D	SM 2450C-2011	580910		
92505496001	HGWA-43D	EPA 300.0 Rev 2.1 1993	580375		
92505496002	EB-01	EPA 300.0 Rev 2.1 1993	580375		
92505496003	HGWA-44D	EPA 300.0 Rev 2.1 1993	580375		
92505496004	HGWA-44D FILTERED	EPA 300.0 Rev 2.1 1993	580375		
92505496005	HGWA-45D	EPA 300.0 Rev 2.1 1993	580771		
92505496006	HGWC-126	EPA 300.0 Rev 2.1 1993	580771		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 BKG 02,05/NR

Pace Project No.: 92505496

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92505496007	HGWC-125	EPA 300.0 Rev 2.1 1993	580771		
92505496008	MW-46D	EPA 300.0 Rev 2.1 1993	580771		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: G. A. Lower

Project #: **WO# : 92505496**

Courier: Fed Ex UPS USPS Client
 Commercial Pace Other: _____



Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 11/11/20

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: Gun ID: 230 Type of Ice: Wet Blue None

Cooler Temp: 3.6 C Correction Factor: Add/Subtract (C): 0

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

Cooler Temp Corrected (C): 3.6

USDA Regulated Soil (N/A, water sample)
 Do samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No

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

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A -Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <u>W</u>	9. <u>FB-01 is labeled EB-01</u> <u>11/10/20 @ 1810</u>
-Includes Date/Time/ID/Analysis Matrix:	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

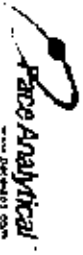
Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Requested Client Information: Company: GA Power Address: Atlanta, GA Contact: SCS Contacts Phone: Fax Requested Date: 10/07		Section B Requested Project Information: Report To: SCS Contacts Copy To: Geosynthetic Contacts Purchase Order No.: Project Name: Pearl Hammond AP-3 BRG 02 USNR Project Number: GW5581		Section C Invoice Information: Address: Atlanta Southern Co. Company Name: Site Name: Site Address: Site Phone: Site Fax: Project Name: Kevin Henning Project Number: 10838-4	
REGULATORY AGENCY NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRSA <input checked="" type="checkbox"/> DRINKING WATER OTHER CCR <input type="checkbox"/>				Site Location: GA STATE:	

ITEM #	Location & Ingestible Child Information	MATERIAL	SCORING	MATRIX CODE	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives					Analyte Test	Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)	
					DATE	TIME	DATE			TIME	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₈				Methanol
1	HQMA-43D	WT G	1110	1620	-	16	5	2	3									
2	HQMA-44B	WT G	-	-	-	5	2	3										
3	HQMA-45D	WT G	-	-	-	5	2	3										
4	HQMA-47E	WT G	-	-	-	5	2	3										
5	HQMA-47E	WT G	-	-	-	5	2	3										
6	MM-48B	WT G	-	-	-	5	2	3										
7	FB-01	WT G	1110	1630	-	5	2	3										
8																		
9																		
10																		
11																		
12																		

FIELD USE ONLY: THIS SECTION IS TO BE FILLED OUT BY THE FIELD PERSONNEL AT THE TIME OF SAMPLE COLLECTION. IT IS THE RESPONSIBILITY OF THE FIELD PERSONNEL TO PROVIDE ACCURATE INFORMATION AND TO SIGN AND DATE THIS SECTION.

Requested by: James Hoode
 DATE: *11/11/07*

Requester Name and Signature: *James Hoode*
 Title: *Project Manager*

Signature of Sampler: *James Hoode*
 Date Signed: *11/11/07*

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

Page: 1 of 2

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

Section A Requested Client Information: Company: GA Power Address: Atlanta, GA	Section B Requested Project Information: Report To: SCS Contacts Copy To: Geosynthetic Contacts	Section C Facility Information: Address: Southern Co. Company Name: Southern Co.	REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> LST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER COR
Email To: SCS Contacts Phone: Pace Requested Date DEADLINE: 18 Day	Project Order No: Project Name: Plant Hammond AP-3 BRG 02.05.08 Project Number: GW8581	Address: Plant Name: Plant Hammond Requested By: Kevin Hering Plant Address: 10838-4 Plant State: GA	<input type="checkbox"/> STATE: <u>GA</u>

ITEM #	Section A Requested Client Information	Yield Matrix Codes MATRIX CODE (see vocab codes in back)	Section B Requested Project Information	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES						ANALYSIS TEST	Requested Analysis Returned (Y/N)					
										Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃			Methanol	Other	Mo-Ap, U Metals	Chloride, Fluoride, Sulfide	TDS
1	HQWA-430	WT 12	WT 12	11/10/2008	15:30	11/10/2008	17:30	19	5	3												
2	HQWA-440	WT 6	WT 6	11/11/2008	12:12	11/11/2008	12:12	19	5	3												
3	HQWA-450	WT 6	WT 6	11/11/2008	12:12	11/11/2008	12:12	19	5	3												
4	HQWC-125	WT 6	WT 6	11/11/2008	12:12	11/11/2008	12:12	19	5	3												
5	HQWC-126	WT 6	WT 6	11/11/2008	12:12	11/11/2008	12:12	19	5	3												
6	MW-460	WT 6	WT 6	11/11/2008	12:12	11/11/2008	12:12	19	5	3												
7	F-B-01	WT 0	WT 0	11/11/2008	12:12	11/11/2008	12:12	19	5	3												
8	MW-450 <i>MW-450B, FILTERED</i>	WT 6	WT 6	11/11/2008	12:12	11/11/2008	12:12	19	5	3												
9				11/11/2008		11/11/2008																
10				11/11/2008		11/11/2008																
11				11/11/2008		11/11/2008																
12				11/11/2008		11/11/2008																

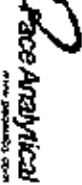
ADDITIONAL COMMENTS:
Please note any scale, stock through any wells not specified are not within the job limits for the event (see below link).
Mo-Ap, U Metals: CA 100
*Full App. ICS&V Metals: CA 100

RELEASED BY / AFFILIATION: Shawn Lin / Geosynthetic
DATE: 11/11/08
TIME: 17:30
ACCEPTED BY / AFFILIATION: Kevin Hering
DATE: 11/10/08
TIME: 17:30

SAMPLER NAME AND SIGNATURE: Shawn Lin
DATE SIGNING (MM/DD/YY): 11/10/2008

Temp in °C: _____
Received on ice (Y/N): _____
Custody Sealed Cooler (Y/N): _____
Samples intact (Y/N): _____

FALL-0200 Rev 07 - 15-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
Requesting Client InformationCompany: GA Power
Address: Atlanta GA**Section B**
Requested Project InformationReport to: SCS Contacts
Copy To: Geosynthetic Contacts**Section C**
Invoicing InformationCompany Name: Southern Co.
Address: [Blank]Email to: SCS Contacts
Phone: [Blank]
Requested Date Range/AT: 30 Day
Project Name: Plant Hammond AP-3 BKND 02/05/14
Project Number: GVA0561Invoicing: [Blank]
Request: Kean's Meeting
Purchase Order No.: 10839-4REGULATORY AGENCY:
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER SWP
Site Location: GA STATE: GA

ITEM #	Section D Requested Client Information SAMPLE D (A-Z, 0-9 / - / . /) Samples DO NOT BE UNIQUE	VIAL MATRIX CODES MATRIX: 2006Z Sample type: WT WASTE WATER MATERIALS WATER SOIL OTHER	MATRIX CODE (Use vial codes to left)		SAMPLE TYPE (G=GRAB C=COMP)		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)	PH = PH = PH = PH = PH =																	
			DATE	TIME	G	C							DATE	TIME	UNPRESERVED	H ₂ SO ₄	HNO ₃	HCl					NaOH	Na ₂ S ₂ O ₃	Methanol	Other													
1	HQWA-438	WT	G	G	1/12	0926	16	5	2	3	3	2																											
2	HQWP-440	WT	G	G																																			
3	HQWP-480	WT	G	G																																			
4	HQWC-125	WT	G	G																																			
5	HQWC-125	WT	G	G																																			
6	HQWC-125	WT	G	G																																			
7	HQWC-125	WT	G	G																																			
8	HQWC-125	WT	G	G																																			
9	HQWC-125	WT	G	G																																			
10	HQWC-125	WT	G	G																																			
11	HQWC-125	WT	G	G																																			
12	HQWC-125	WT	G	G																																			

ADDITIONAL COMMENTS					REQUISITIONED BY / APPLICATION					ACQUIRED BY / APPLICATION					SAMPLE CONDITIONS								
PLEASE NOTE: Dry weight, total through dry weight not sampled and data which has been sampled for the event has been taken.																							
MCA App. B (MCA-125), MCA App. C (MCA-125), MCA App. D (MCA-125), MCA App. E (MCA-125), MCA App. F (MCA-125), MCA App. G (MCA-125), MCA App. H (MCA-125), MCA App. I (MCA-125), MCA App. J (MCA-125), MCA App. K (MCA-125), MCA App. L (MCA-125), MCA App. M (MCA-125), MCA App. N (MCA-125), MCA App. O (MCA-125), MCA App. P (MCA-125), MCA App. Q (MCA-125), MCA App. R (MCA-125), MCA App. S (MCA-125), MCA App. T (MCA-125), MCA App. U (MCA-125), MCA App. V (MCA-125), MCA App. W (MCA-125), MCA App. X (MCA-125), MCA App. Y (MCA-125), MCA App. Z (MCA-125)																							
DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	TEMP IN °C	RECEIVED ON FOR (Y/N)	CURIOY SEALED COOLER (Y/N)	SAMPLES INTACT (Y/N)
1/12	0926			1/12	0926			1/12	0926			1/12	0926			1/12	0926						
Requesting Client Information					Requested Project Information					Invoicing Information					Regulatory Agency								
Requesting Client Information					Requested Project Information					Invoicing Information					Regulatory Agency								

* Requested Note: By signing this form you are accepting Face's IMT 30 day return terms and agreeing to any changes of T&C for events for any events not paid within 30 days.

F-ALL-0-00-01 Rev. 07, 15-Feb-2007

December 17, 2020

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

RE: Project: HAMMOND AP-3 BKG 02,05/NR RADS
Pace Project No.: 92505470

Dear Joju Abraham:

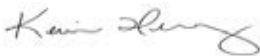
Enclosed are the analytical results for sample(s) received by the laboratory between November 11, 2020 and November 12, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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CERTIFICATIONS

Project: HAMMOND AP-3 BKG 02,05/NR RADS
Pace Project No.: 92505470

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92505470001	HGWA-43D	Water	11/10/20 10:21	11/11/20 12:12
92505470002	EB-01	Water	11/10/20 16:10	11/11/20 12:12
92505470003	HGWA-44D	Water	11/10/20 15:55	11/11/20 12:12
92505470004	HGWA-44D FILTERED	Water	11/10/20 16:30	11/11/20 12:12
92505470005	HGWA-45D	Water	11/11/20 15:50	11/12/20 16:47
92505470006	HGWC-126	Water	11/11/20 11:25	11/12/20 16:47
92505470007	HGWC-125	Water	11/12/20 09:26	11/12/20 16:47

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92505470001	HGWA-43D	EPA 9315	CMC	1	PASI-PA
		EPA 9320	CMC	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92505470002	EB-01	EPA 9315	CMC	1	PASI-PA
		EPA 9320	CMC	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92505470003	HGWA-44D	EPA 9315	CMC	1	PASI-PA
		EPA 9320	CMC	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92505470004	HGWA-44D FILTERED	EPA 9315	CMC	1	PASI-PA
		EPA 9320	CMC	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92505470005	HGWA-45D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92505470006	HGWC-126	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92505470007	HGWC-125	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92505470001	HGWA-43D					
EPA 9315	Radium-226	0.150 ± 0.247 (0.551)	pCi/L		12/14/20 15:38	
EPA 9320	Radium-228	C:76% T:NA 0.638 ± 0.432 (0.836)	pCi/L		12/03/20 11:11	
Total Radium Calculation	Total Radium	C:78% T:81% 0.788 ± 0.679 (1.39)	pCi/L		12/17/20 15:41	
92505470002	EB-01					
EPA 9315	Radium-226	0.0159 ± 0.209 (0.560)	pCi/L		12/01/20 07:46	
EPA 9320	Radium-228	C:78% T:NA -0.184 ± 0.389 (0.935)	pCi/L		12/17/20 11:11	
Total Radium Calculation	Total Radium	C:74% T:80% 0.0159 ± 0.598 (1.50)	pCi/L		12/17/20 15:41	
92505470003	HGWA-44D					
EPA 9315	Radium-226	0.244 ± 0.219 (0.389)	pCi/L		12/01/20 07:46	
EPA 9320	Radium-228	C:95% T:NA 0.0487 ± 0.339 (0.777)	pCi/L		12/03/20 11:12	
Total Radium Calculation	Total Radium	C:78% T:90% 0.293 ± 0.558 (1.17)	pCi/L		12/17/20 15:41	
92505470004	HGWA-44D FILTERED					
EPA 9315	Radium-226	0.0162 ± 0.234 (0.615)	pCi/L		12/01/20 07:46	
EPA 9320	Radium-228	C:84% T:NA 0.0824 ± 0.364 (0.826)	pCi/L		12/03/20 11:12	
Total Radium Calculation	Total Radium	C:76% T:81% 0.0986 ± 0.598 (1.44)	pCi/L		12/17/20 15:41	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92505470005	HGWA-45D					
EPA 9315	Radium-226	0.352 ± 0.215 (0.344) C:92% T:NA	pCi/L		12/14/20 08:14	
EPA 9320	Radium-228	0.138 ± 0.325 (0.722) C:77% T:94%	pCi/L		12/09/20 11:12	
Total Radium Calculation	Total Radium	0.490 ± 0.540 (1.07)	pCi/L		12/14/20 15:54	
92505470006	HGWC-126					
EPA 9315	Radium-226	0.484 ± 0.285 (0.434) C:90% T:NA	pCi/L		12/14/20 08:00	
EPA 9320	Radium-228	0.353 ± 0.413 (0.872) C:74% T:87%	pCi/L		12/09/20 11:12	
Total Radium Calculation	Total Radium	0.837 ± 0.698 (1.31)	pCi/L		12/14/20 15:54	
92505470007	HGWC-125					
EPA 9315	Radium-226	0.435 ± 0.224 (0.318) C:95% T:NA	pCi/L		12/14/20 08:14	
EPA 9320	Radium-228	0.198 ± 0.411 (0.905) C:77% T:87%	pCi/L		12/09/20 11:12	
Total Radium Calculation	Total Radium	0.633 ± 0.635 (1.22)	pCi/L		12/14/20 15:54	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-43D Lab ID: 92505470001 Collected: 11/10/20 10:21 Received: 11/11/20 12:12 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.150 ± 0.247 (0.551) C:76% T:NA	pCi/L	12/14/20 15:38	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.638 ± 0.432 (0.836) C:78% T:81%	pCi/L	12/03/20 11:11	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.788 ± 0.679 (1.39)	pCi/L	12/17/20 15:41	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EB-01 Lab ID: 92505470002 Collected: 11/10/20 16:10 Received: 11/11/20 12:12 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0159 ± 0.209 (0.560) C:78% T:NA	pCi/L	12/01/20 07:46	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.184 ± 0.389 (0.935) C:74% T:80%	pCi/L	12/17/20 11:11	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.0159 ± 0.598 (1.50)	pCi/L	12/17/20 15:41	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-44D Lab ID: 92505470003 Collected: 11/10/20 15:55 Received: 11/11/20 12:12 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.244 ± 0.219 (0.389) C:95% T:NA	pCi/L	12/01/20 07:46	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.0487 ± 0.339 (0.777) C:78% T:90%	pCi/L	12/03/20 11:12	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.293 ± 0.558 (1.17)	pCi/L	12/17/20 15:41	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

Sample: HGWA-44D FILTERED **Lab ID: 92505470004** Collected: 11/10/20 16:30 Received: 11/11/20 12:12 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	0.0162 ± 0.234 (0.615) C:84% T:NA	pCi/L	12/01/20 07:46	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.0824 ± 0.364 (0.826) C:76% T:81%	pCi/L	12/03/20 11:12	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.0986 ± 0.598 (1.44)	pCi/L	12/17/20 15:41	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-45D Lab ID: 92505470005 Collected: 11/11/20 15:50 Received: 11/12/20 16:47 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.352 ± 0.215 (0.344) C:92% T:NA	pCi/L	12/14/20 08:14	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.138 ± 0.325 (0.722) C:77% T:94%	pCi/L	12/09/20 11:12	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.490 ± 0.540 (1.07)	pCi/L	12/14/20 15:54	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-126 Lab ID: 92505470006 Collected: 11/11/20 11:25 Received: 11/12/20 16:47 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.484 ± 0.285 (0.434) C:90% T:NA	pCi/L	12/14/20 08:00	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.353 ± 0.413 (0.872) C:74% T:87%	pCi/L	12/09/20 11:12	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.837 ± 0.698 (1.31)	pCi/L	12/14/20 15:54	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-125 Lab ID: 92505470007 Collected: 11/12/20 09:26 Received: 11/12/20 16:47 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.435 ± 0.224 (0.318) C:95% T:NA	pCi/L	12/14/20 08:14	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.198 ± 0.411 (0.905) C:77% T:87%	pCi/L	12/09/20 11:12	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.633 ± 0.635 (1.22)	pCi/L	12/14/20 15:54	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

QC Batch:	425494	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92505470005, 92505470006, 92505470007

METHOD BLANK: 2056122 Matrix: Water

Associated Lab Samples: 92505470005, 92505470006, 92505470007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.240 ± 0.389 (0.846) C:74% T:78%	pCi/L	12/09/20 11:13	

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-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

QC Batch: 426374

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92505470001, 92505470002, 92505470003, 92505470004, 92505470005, 92505470006, 92505470007

METHOD BLANK: 2060743

Matrix: Water

Associated Lab Samples: 92505470001, 92505470002, 92505470003, 92505470004, 92505470005, 92505470006, 92505470007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0337 ± 0.132 (0.329) C:92% T:NA	pCi/L	12/14/20 08:00	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

QC Batch:	426455	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92505470001, 92505470002, 92505470003, 92505470004

METHOD BLANK:	2060998	Matrix:	Water
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Associated Lab Samples: 92505470001, 92505470002, 92505470003, 92505470004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.623 ± 0.506 (1.00) C:63% T:69%	pCi/L	12/03/20 11:13	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: HAMMOND AP-3 BKG 02,05/NR RADS

Pace Project No.: 92505470

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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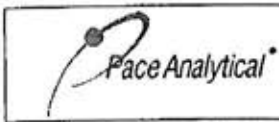
QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 BKG 02,05/NR RADS
Pace Project No.: 92505470

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92505470001	HGWA-43D	EPA 9315	426374		
92505470002	EB-01	EPA 9315	426374		
92505470003	HGWA-44D	EPA 9315	426374		
92505470004	HGWA-44D FILTERED	EPA 9315	426374		
92505470005	HGWA-45D	EPA 9315	426374		
92505470006	HGWC-126	EPA 9315	426374		
92505470007	HGWC-125	EPA 9315	426374		
92505470001	HGWA-43D	EPA 9320	426455		
92505470002	EB-01	EPA 9320	426455		
92505470003	HGWA-44D	EPA 9320	426455		
92505470004	HGWA-44D FILTERED	EPA 9320	426455		
92505470005	HGWA-45D	EPA 9320	425494		
92505470006	HGWC-126	EPA 9320	425494		
92505470007	HGWC-125	EPA 9320	425494		
92505470001	HGWA-43D	Total Radium Calculation	427699		
92505470002	EB-01	Total Radium Calculation	427699		
92505470003	HGWA-44D	Total Radium Calculation	427699		
92505470004	HGWA-44D FILTERED	Total Radium Calculation	427699		
92505470005	HGWA-45D	Total Radium Calculation	427136		
92505470006	HGWC-126	Total Radium Calculation	427136		
92505470007	HGWC-125	Total Radium Calculation	427136		

REPORT OF LABORATORY ANALYSIS

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Document Name:
Sample Condition Upon Receipt(SCUR)

Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
Page 1 of 2

Issuing Authority:
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
Upon Receipt

Client Name:

Project #: **WO# : 92505470**

Courier: Fed Ex UPS USPS Client
 Pace Other: _____



Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 11/11/20

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?
 Yes No N/A

Thermometer: Wet Blue None
Gun ID: 230 Type of Ice: _____

Cooler Temp: 3.6 C Correction Factor: Add/Subtract (°C) 0

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

Cooler Temp Corrected (°C): 3.6

USDA Regulated Soil (N/A, water sample)

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

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

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	9. <u>FB-01 is Labeled EB-01</u> <u>11/11/20 @ 1610</u>
-Includes Date/Time/ID/Analysis Matrix: <u>W</u>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY _____ Field Data Required? Yes No

Lot ID of split containers: _____

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



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

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

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

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

Project #

W0# : 92505470

PH: KLH1

Due Date: 12/04/20

CLIENT: GA-GA Power

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

pH Adjustment Log for Preserved Samples

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

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



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

Page: 1 of 2

Section A Required Client Information Company: GA Power Address: Atlanta, GA		Section B Required Project Information Report to: SCS Contacts Copy to: Geosyntec Contacts		Section C Invoice Information Attention: Southern Co. Company Name: Southern Co. Address: [Blank] Product Code: [Blank] Project Name: Kevin Henning Project Manager: [Blank] Project #.: 10839-4	
Email To: SCS Contacts Phone: [Blank] Fax: [Blank]		Purchase Order No.: [Blank] Project Name: Plant Hammond AP-3 BKG 02.05/NR		Regulatory Agency: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER CCR	
Requested Due Date/TIME: 10 Day		Project Number: GW6591		Site Location: GA STATE: GA	

ITEM #	Section D Required Client Information				MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives		Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS			
	Material	Desired Matrix	DW	SC			DATE	TIME			DATE	TIME					H ₂ SO ₄	HNO ₃	HCl
1	HGWA-43D				WT G	G	11/10	1621		15	5	2	3						
2	HGWA-44D				WT G	G				5	2	3							
3	HGWA-45D				WT G	G				5	2	3							
4	HGWC-125				WT G	G				6	2	3							
5	HGWC-126				WT G	G				5	2	3							
6	MM-469				WT G	G				3	2	1							
7	FB-01				WT G	G	11/10	1610		21	5	2	3						
8																			
9																			
10																			
11																			
12																			

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

F-ALL-Q-0207rev.07, 15-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 2 of 2

Section A Required Client Information Company: GA Power Address: Atlanta, GA		Section B Required Project Information Report To: SCS Contacts Copy To: Geosynthetic Contacts		Section C Invoicing Information Attention: Southern Co.	
Email To: SCS Contacts		Purchase Order No.:		Company Name	
Phone:		Project Name: Plant Hammond AP-3 BKG 02.05/NR		Address	
Requested Due Date/TAT: 15 Day		Project Number: GW6581		Product Code Reference	
				Project Manager: Kevin Hemming	
				Product # 10839-4	

ITEM #	Section B Required Client Information Valid Matrix Codes MATERIAL CODE DM WATER WATER PERCOLATE SOLID SL OK AP OT TSS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Y/N	Requested Analysis Filtered (Y/N)	Regulatory Agency	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
										Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol								
1	HQWA-42B	WT G	G	11/10/20	15:35	11/10/20	17:30	19	5	0								<input type="checkbox"/> NPDES	<input checked="" type="checkbox"/> GROUND WATER	<input type="checkbox"/> DRINKING WATER				
2	HQWA-44D	WT G	G	11/10/20	15:35	11/10/20	17:30	19	5	2								<input type="checkbox"/> UST	<input type="checkbox"/> RCRA	<input checked="" type="checkbox"/> OTHER CCM				
3	HQWA-45D	WT G	G	11/10/20	15:35	11/10/20	17:30	19	5	2														
4	HQWC-125	WT G	G	11/10/20	15:35	11/10/20	17:30	19	5	2														
5	HQWC-126	WT G	G	11/10/20	15:35	11/10/20	17:30	19	5	2														
6	MW-48D	WT G	G	11/10/20	15:35	11/10/20	17:30	19	5	2														
7	FB-01	WT G	G	11/10/20	15:35	11/10/20	17:30	19	5	2														
8	HQWA-44B, Filtered	WT G	G	11/10/20	15:35	11/10/20	17:30	19	5	2														
9																								
10																								
11																								
12																								

Additional Comments: HQWA-44B, Filtered

Relinquished By / Affiliation: Shawn Lin / Geosynthetic

Accepted By / Affiliation: Ben Williams / Pace

Date: 11/10/20

Time: 17:30

Signature: Shawn Lin

Signature: Ben Williams

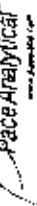
Date: 11/10/20

Time: 12:12

Sampler Name and Signature: Shawn Lin
Print Name of Sampler: Shawn Lin
Signature of Sampler: Shawn Lin
Date Signed: 11/10/20

Important Note: By signing this form you are accepting Pace's Mill 7 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: JJY
 Date: 12/11/2020
 Worksheet: 57777
 Matrix: DW

Method Blank Assessment	
MB Sample ID	2560743
MB Concentration:	0.034
MB Counting Uncertainty:	0.131
MS MDC:	0.329
MB Numerical Performance Indicator:	0.50
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	Y
LCSD57777	LCSD57777
Count Date	12/14/2020
Spike I.D.	19-003
Decay Corrected Spike Concentration (pCi/mL):	24.042
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.571
Target Conc. (pCi/L, g, F):	4.816
Uncertainty (Calculated):	0.025
Result (pCi/L, g, F):	4.983
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.584
Numerical Performance Indicator:	-1.97
Percent Recovery:	87.23%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limit:	126%
Lower % Recovery Limit:	75%

Duplicate Sample Assessment	
Sample I.D.	LCSD57777
Duplicate Sample I.D.	LCSD57777
Sample Result (pCi/L, g, F):	4.983
Sample Duplicate Result (pCi/L, g, F):	4.027
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.584
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	2.139
(Based on the LCSD/LCSD Percent Recoveries) Duplicate RPD:	19.90%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

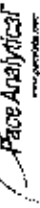
Comments:

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

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

SAM 12/15/2020

Quality Control Sample Performance Assessment



Test: Ra-228
Analyst: VAL
Date: 12/7/2020
Worksheet: 57700
Matrix: W/T

Method Blank Assessment	
MB Sample ID	2056122
MB Concentration:	0.240
W/B 2 Sigma CSU:	0.369
MB MDC:	0.846
MB Numerical Performance Indicator:	1.21
MB Status vs Numerical Indicator:	Pass
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment	
LCS ID	Y or N?
LCS57700	Y
Count Date:	12/9/2020
Spike ID:	20-030
Decay Corrected Spike Concentration (pCi/mL):	37.334
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.826
Target Conc. (pCi/L, g, F):	4.520
Uncertainty (Calculated):	0.222
Result (pCi/L, g, F):	3.467
LCS % CSD 2 Sigma CSU (pCi/L, g, F):	0.898
Numerical Performance Indicator:	-2.25
Percent Recovery:	76.70%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limit:	135%
Lower % Recovery Limit:	62%

Duplicate Sample Assessment	
Sample ID:	LCS57700
Duplicate Sample ID:	LCS057700
Sample Result (pCi/L, g, F):	3.437
Sample Duplicate Result (pCi/L, g, F):	0.888
Sample Duplicate Result 2 (pCi/L, g, F):	2.970
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.624
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	16.60%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	35%

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

Comments:

Handwritten signature/initials

Analyst Must Manually Enter All Fields Highlighted in Yellow.

MS/MSD 1	MS/MSD 2
<p>Sample Matrix Spike Control Assessment</p> <p>Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike ID</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MSD Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):</p> <p>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 Limit: MS/MSD Lower % Recovery Limit:</p>	<p>Matrix Spike/Matrix Spike Duplicate Sample Assessment</p> <p>Sample I.D. Sample MS I.D. Sample MSD I.D.</p> <p>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:</p>

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: **Ra-228**
 Analyst: **VAL**
 Date: **11/25/2020**
 Work.Kit: **57465**
 Matrix: **WF**



Method Blank Assessment

MB Sample ID	2048526
MB Concentration:	0.629
MB 2 Sigma CSU:	0.506
MB MDC:	1.002
MB Numerical Performance Indicator:	2.42
MB Status vs. Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

LC/SD ID or MDC	LC/SD ID	Y
Count Date:	12/3/2020	
Spike I.D.:	12/3/2020	
Decay Corrected Spike Concentration (pCi/mL):	20-030	37.408
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.805	0.828
Target Conc. (pCi/L, g, F):	4.846	4.527
Uncertainty (Calculated):	0.228	0.222
Result (pCi/L, g, F):	3.570	4.899
LC/SD 2 Sigma CSU (pCi/L, g, F):	0.862	1.105
Numerical Performance Indicator:	-2.37	0.14
Percent Recovery:	75.84%	101.73%
Status vs Numerical Indicator:	N/A	N/A
Upper % Recovery Limit:	Pass	Pass
Lower % Recovery Limit:	135%	135%
	60%	60%

Duplicate Sample Assessment

Sample I.D.	LC/SD ID	Y
Duplicate Sample I.D.:	LC/SD57465	
Sample Result (pCi/L, g, F):	3.570	Enter Duplicate sample IDs if other than LC/SD in the space below.
Sample Result 2 Sigma CSU (pCi/L, g, F):	4.836	
Sample Duplicate Result (pCi/L, g, F):	1.105	
Avg. sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-1.448	
(Based on the LC/SD Percent Recoveries) Duplicate RPD:	27.83%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	50%	

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

Comments:

12-4-20

Sample Matrix Spike Control Assessment

Sample Collection Date:	MS/MSD 1	MS/MSD 2
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):		
x-3 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 Limit:		
MS/MSD Lower % Recovery Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.	MS/MSD 1	MS/MSD 2
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 RPD:		
% RPD Limit:		

December 2020

December 23, 2020

Kelley Sharpe
ARCADIS - Atlanta
2839 Paces Ferry Rd
STE 900
Atlanta, GA 30339

RE: Project: Plant Hammond-CCR Ash Pond-Revised Report
Pace Project No.: 92511978

Dear Kelley Sharpe:

Enclosed are the analytical results for sample(s) received by the laboratory on December 15, 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 - Peachtree Corners, GA

This replaces the December 21, 2020 final report. This report was revised to report Boron by EPA 6020B. No other changes were made to this report.

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

Sincerely,



Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Ben Hodges, Georgia Power
Warren Johnson, ARCADIS - Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Hammond-CCR Ash Pond-Revised Report

Pace Project No.: 92511978

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

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SAMPLE SUMMARY

Project: Plant Hammond-CCR Ash Pond-Revised Report

Pace Project No.: 92511978

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92511978001	H-SCC NBR	Water	12/14/20 17:00	12/15/20 15:19
92511978002	H-SCC E41	Water	12/14/20 15:00	12/15/20 15:19
92511978003	H-SCC	Water	12/14/20 14:35	12/15/20 15:19

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SAMPLE ANALYTE COUNT

Project: Plant Hammond-CCR Ash Pond-Revised Report

Pace Project No.: 92511978

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92511978001	H-SCC NBR	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2450C-2011	ALW	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92511978002	H-SCC E41	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2450C-2011	ALW	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92511978003	H-SCC	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	CW1	2	PASI-GA
		SM 2450C-2011	ALW	1	PASI-GA
		SM 2320B-2011	ECH	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond-Revised Report

Pace Project No.: 92511978

Sample: H-SCC NBR	Lab ID: 92511978001	Collected: 12/14/20 17:00	Received: 12/15/20 15:19	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	12/17/20 09:44	12/19/20 00:50	7440-09-7	
Sodium	1.2	mg/L	1.0	1	12/17/20 09:44	12/19/20 00:50	7440-23-5	
Calcium	8.3	mg/L	1.0	1	12/17/20 09:44	12/19/20 00:50	7440-70-2	
Magnesium	2.0	mg/L	0.050	1	12/17/20 09:44	12/19/20 00:50	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	12/16/20 12:36	12/22/20 15:44	7440-42-8	
Molybdenum	ND	mg/L	0.010	1	12/16/20 12:36	12/17/20 18:43	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		12/19/20 13:49		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	22.9	mg/L	5.0	1		12/18/20 20:23		
Alkalinity, Total as CaCO ₃	22.9	mg/L	5.0	1		12/18/20 20:23		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	1.3	mg/L	1.0	1		12/19/20 01:39	16887-00-6	
Fluoride	ND	mg/L	0.10	1		12/19/20 01:39	16984-48-8	
Sulfate	9.1	mg/L	1.0	1		12/19/20 01:39	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond-Revised Report
Pace Project No.: 92511978

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: H-SCC E41								
Lab ID: 92511978002								
Collected: 12/14/20 15:00 Received: 12/15/20 15:19 Matrix: Water								
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	1.7	mg/L	0.20	1	12/17/20 09:44	12/19/20 01:00	7440-09-7	
Sodium	1.3	mg/L	1.0	1	12/17/20 09:44	12/19/20 01:00	7440-23-5	
Calcium	9.0	mg/L	1.0	1	12/17/20 09:44	12/19/20 01:00	7440-70-2	
Magnesium	2.1	mg/L	0.050	1	12/17/20 09:44	12/19/20 01:00	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	12/16/20 12:36	12/22/20 15:49	7440-42-8	
Molybdenum	ND	mg/L	0.010	1	12/16/20 12:36	12/17/20 18:49	7439-98-7	
2540C Total Dissolved Solids								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	83.0	mg/L	10.0	1		12/19/20 13:49		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	21.8	mg/L	5.0	1		12/18/20 20:29		
Alkalinity, Total as CaCO ₃	21.8	mg/L	5.0	1		12/18/20 20:29		
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	1		12/19/20 02:39	16887-00-6	
Fluoride	ND	mg/L	0.10	1		12/19/20 02:39	16984-48-8	
Sulfate	10.2	mg/L	1.0	1		12/19/20 02:39	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond-Revised Report
Pace Project No.: 92511978

Sample: H-SCC	Lab ID: 92511978003	Collected: 12/14/20 14:35		Received: 12/15/20 15:19		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	2.3	mg/L	0.20	1	12/17/20 09:44	12/19/20 01:05	7440-09-7	
Sodium	1.3	mg/L	1.0	1	12/17/20 09:44	12/19/20 01:05	7440-23-5	
Calcium	9.9	mg/L	1.0	1	12/17/20 09:44	12/19/20 01:05	7440-70-2	
Magnesium	2.4	mg/L	0.050	1	12/17/20 09:44	12/19/20 01:05	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	12/16/20 12:36	12/22/20 15:55	7440-42-8	
Molybdenum	ND	mg/L	0.010	1	12/16/20 12:36	12/17/20 18:54	7439-98-7	
2540C Total Dissolved Solids								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	84.0	mg/L	10.0	1		12/19/20 13:49		
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	24.9	mg/L	5.0	1		12/18/20 20:44		
Alkalinity, Total as CaCO ₃	24.9	mg/L	5.0	1		12/18/20 20:44		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	1.5	mg/L	1.0	1		12/19/20 03:24	16887-00-6	
Fluoride	ND	mg/L	0.10	1		12/19/20 03:24	16984-48-8	
Sulfate	9.2	mg/L	1.0	1		12/19/20 03:24	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond-Revised Report
Pace Project No.: 92511978

QC Batch: 587738 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92511978001, 92511978002, 92511978003

METHOD BLANK: 3105916 Matrix: Water
Associated Lab Samples: 92511978001, 92511978002, 92511978003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	12/18/20 23:09	
Magnesium	mg/L	ND	0.050	12/18/20 23:09	
Potassium	mg/L	ND	0.20	12/18/20 23:09	
Sodium	mg/L	ND	1.0	12/18/20 23:09	

LABORATORY CONTROL SAMPLE: 3105917

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	100	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Potassium	mg/L	1	1.0	104	80-120	
Sodium	mg/L	1	1.1	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3105918 3105919

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92511758011 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	ND	1	1	1.6	1.5	114	108	75-125	4	20
Magnesium	mg/L	ND	1	1	1.1	1.0	105	102	75-125	3	20
Potassium	mg/L	ND	1	1	1.0	1.0	104	100	75-125	4	20
Sodium	mg/L	ND	1	1	1.1	1.0	110	105	75-125	5	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond-Revised Report

Pace Project No.: 92511978

QC Batch: 587446	Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A	Analysis Description: 6020 MET
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92511978001, 92511978002, 92511978003

METHOD BLANK: 3104529 Matrix: Water

Associated Lab Samples: 92511978001, 92511978002, 92511978003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	12/17/20 17:22	
Molybdenum	mg/L	ND	0.010	12/17/20 17:22	

LABORATORY CONTROL SAMPLE: 3104530

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/L	1	0.85	85	80-120	
Molybdenum	mg/L	0.1	0.095	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3104531 3104532

Parameter	Units	92511973001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	mg/L	0.041	1	1	0.94	0.93	90	89	75-125	0	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.11	104	105	75-125	1	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond-Revised Report

Pace Project No.: 92511978

QC Batch:	587365	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: 92511978001, 92511978002, 92511978003

METHOD BLANK: 3104189 Matrix: Water

Associated Lab Samples: 92511978001, 92511978002, 92511978003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	12/19/20 13:47	

LABORATORY CONTROL SAMPLE: 3104190

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	413	103	84-108	

SAMPLE DUPLICATE: 3104191

Parameter	Units	92511963001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	71.0	81.0	13	10	D6

SAMPLE DUPLICATE: 3104192

Parameter	Units	92511973004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	69.0	73.0	6	10	

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QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond-Revised Report

Pace Project No.: 92511978

QC Batch: 588167 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92511978001, 92511978002, 92511978003

METHOD BLANK: 3107984 Matrix: Water

Associated Lab Samples: 92511978001, 92511978002, 92511978003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	12/18/20 18:47	
Alkalinity, Bicarbonate (CaCO ₃)	mg/L	ND	5.0	12/18/20 18:47	

LABORATORY CONTROL SAMPLE: 3107985

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	51.5	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3107986 3107987

Parameter	Units	92511312001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO ₃	mg/L	264	50	50	318	318	109	108	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3107988 3107989

Parameter	Units	92511978003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO ₃	mg/L	24.9	50	50	74.5	70.3	99	91	80-120	6	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

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QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond-Revised Report
Pace Project No.: 92511978

QC Batch: 587786 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92511978001, 92511978002, 92511978003

METHOD BLANK: 3106200 Matrix: Water
Associated Lab Samples: 92511978001, 92511978002, 92511978003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	12/18/20 21:42	
Fluoride	mg/L	ND	0.10	12/18/20 21:42	
Sulfate	mg/L	ND	1.0	12/18/20 21:42	

LABORATORY CONTROL SAMPLE: 3106201

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.4	103	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	50	52.0	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3106202 3106203

Parameter	Units	92511971001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Chloride	mg/L	5.3	50	50	56.1	57.6	102	105	90-110	2	10		
Fluoride	mg/L	ND	2.5	2.5	2.7	2.8	106	110	90-110	3	10		
Sulfate	mg/L	12.2	50	50	66.9	68.4	109	112	90-110	2	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3106204 3106205

Parameter	Units	92511978002		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Chloride	mg/L	1.4	50	50	56.1	55.5	109	108	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.7	104	106	90-110	1	10		
Sulfate	mg/L	10.2	50	50	63.8	64.2	107	108	90-110	1	10		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Hammond-CCR Ash Pond-Revised Report

Pace Project No.: 92511978

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.

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Hammond-CCR Ash Pond-Revised Report
Pace Project No.: 92511978

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92511978001	H-SCC NBR	EPA 3010A	587738	EPA 6010D	587869
92511978002	H-SCC E41	EPA 3010A	587738	EPA 6010D	587869
92511978003	H-SCC	EPA 3010A	587738	EPA 6010D	587869
92511978001	H-SCC NBR	EPA 3005A	587446	EPA 6020B	587533
92511978002	H-SCC E41	EPA 3005A	587446	EPA 6020B	587533
92511978003	H-SCC	EPA 3005A	587446	EPA 6020B	587533
92511978001	H-SCC NBR	SM 2450C-2011	587365		
92511978002	H-SCC E41	SM 2450C-2011	587365		
92511978003	H-SCC	SM 2450C-2011	587365		
92511978001	H-SCC NBR	SM 2320B-2011	588167		
92511978002	H-SCC E41	SM 2320B-2011	588167		
92511978003	H-SCC	SM 2320B-2011	588167		
92511978001	H-SCC NBR	EPA 300.0 Rev 2.1 1993	587786		
92511978002	H-SCC E41	EPA 300.0 Rev 2.1 1993	587786		
92511978003	H-SCC	EPA 300.0 Rev 2.1 1993	587786		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Requested Client Information: Company: ARCADIS - Atlanta Address: 2839 Peach Ferry Rd Atlanta, GA 30339 Email: warron.johnson@arcadis.com Phone: 878.445.5298 Requested On Date: 7/07/11	Section B Requested Project Information: Report To: Ben Hodges, GPC Copy To: Purchase Order #: SCS10282775 Project Name: Fruit Hammond AP-3 Project #:	Section C Project Information: Attention: Ben Hodges Company Name: GPC Address: POC Order: POC Project Manager: Mayra Parsh@gpc.com POC Profile #: 2238	Regulatory Agency State / Location GA
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------

#	MATRIX CODE (See table codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analytes Test	Residual Chlorine (Y/N)			
			START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O8			Methanol	Other	
1	M-SOC NBR	WT	12-16	17:00									X	X	X		
2	H-SOC EAT	WT	12-16	15:00									X	X	X		
3	H-SOC	WT	12-14	14:45									X	X	X		
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

Major Issue: Lg. Ha. K. Total sludge. Excessive sludge RELINQUISHED BY / AFFILIATION: <i>[Signature]</i> DATE: 12/16/11 TIME: 12:05 PM ACCEPTED BY / AFFILIATION: <i>[Signature]</i> DATE: 12/15/11 TIME: 12:56 PM	ADDITIONAL COMMENTS:
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------

W0#: 92511978

92511978

SAMPLER NAME AND SIGNATURE: <i>[Signature]</i> PRINT Name of SAMPLER: <i>[Name]</i> SIGNATURE of SAMPLER: <i>[Signature]</i> DATE Signed: 12-15-11	TEMP in C: _____ Received on: _____ (Y/N) Custody Sealed: _____ (Y/N) Cooler: _____ (Y/N) Samples Intact: _____ (Y/N)
-------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: Arcadis

Project #

WO#: 92511978

Due Date: 12/22/20

Courier: Commercial Fed Ex UPS USPS Client Other: _____

PM: MP
CLIENT: GA-ArcadAt1

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 12/15/20
MP

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 0107-230 Type of Ice: Water Blue None

Cooler Temp: 0.8 Correction Factor: Add/Subtract (°C) 0.0

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

Cooler Temp Corrected (°C): 0.8

USDA Regulated Soil (N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

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

Comments/Discrepancy:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>PH rec 004</u>
Short Hold Time Analysis (<72 hr.)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix:	<u>W</u>	
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____

January 04, 2021

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

RE: Project: HAMMOND AP-3 BKG 03, 06
Pace Project No.: 92512580

Dear Joju Abraham:

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

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

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

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

Pace Analytical Services Charlotte

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

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

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

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SAMPLE SUMMARY

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92512580001	HGWA-43D	Water	12/15/20 12:25	12/17/20 08:48
92512580002	HGWA-44D	Water	12/15/20 16:18	12/17/20 08:48
92512580003	EB-01	Water	12/15/20 18:02	12/17/20 08:48
92512580004	HGWA-45D	Water	12/16/20 09:40	12/17/20 08:48
92512580005	HGWC-125	Water	12/16/20 12:01	12/17/20 08:48
92512580006	HGWC-126	Water	12/16/20 14:22	12/17/20 08:48

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92512580001	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
92512580002	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
92512580003	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
92512580004	HGWA-45D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92512580005	HGWC-125	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92512580006	HGWC-126	EPA 6010D	KH	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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92512580001	HGWA-43D					
	Performed by	CUSTOMER			01/04/21 15:36	
	pH	7.39	Std. Units		01/04/21 15:36	
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 12:22	
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	
92512580002	HGWA-44D					
	Performed by	CUSTOMER			01/04/21 15:36	
	pH	7.87	Std. Units		01/04/21 15:36	
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 12:22	
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	
92512580003	EB-01					
EPA 6010D	Calcium	0.12J	mg/L	1.0	12/25/20 00:28	
92512580004	HGWA-45D					
	Performed by	CUSTOMER			01/04/21 15:36	
	pH	7.39	Std. Units		01/04/21 15:36	
EPA 6010D	Calcium	56.4	mg/L	1.0	12/25/20 00:52	
EPA 6020B	Barium	0.52	mg/L	0.010	12/29/20 10:32	
EPA 6020B	Boron	0.16	mg/L	0.10	12/29/20 10:32	
EPA 6020B	Lead	0.000058J	mg/L	0.0050	12/29/20 10:32	
EPA 6020B	Lithium	0.0045J	mg/L	0.030	12/29/20 10:32	
EPA 6020B	Molybdenum	0.0024J	mg/L	0.010	12/29/20 10:32	
SM 2450C-2011	Total Dissolved Solids	294	mg/L	10.0	12/22/20 17:32	
EPA 300.0 Rev 2.1 1993	Chloride	3.4	mg/L	1.0	12/23/20 20:29	
EPA 300.0 Rev 2.1 1993	Fluoride	0.18	mg/L	0.10	12/23/20 20:29	
EPA 300.0 Rev 2.1 1993	Sulfate	11.3	mg/L	1.0	12/23/20 20:29	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92512580005	HGWC-125					
	Performed by	CUSTOME			01/04/21 15:36	
		R				
	pH	6.61	Std. Units		01/04/21 15:36	
EPA 6010D	Calcium	194	mg/L	1.0	12/25/20 00:58	
EPA 6020B	Barium	0.041	mg/L	0.010	12/29/20 10:38	
EPA 6020B	Boron	1.5	mg/L	0.10	12/29/20 10:38	
EPA 6020B	Cobalt	0.0055	mg/L	0.0050	12/29/20 10:38	
EPA 6020B	Lithium	0.0055J	mg/L	0.030	12/29/20 10:38	
EPA 6020B	Molybdenum	0.014	mg/L	0.010	12/29/20 10:38	
SM 2450C-2011	Total Dissolved Solids	816	mg/L	20.0	12/22/20 17:33	
EPA 300.0 Rev 2.1 1993	Chloride	5.3	mg/L	1.0	12/23/20 21:14	
EPA 300.0 Rev 2.1 1993	Fluoride	0.20	mg/L	0.10	12/23/20 21:14	
EPA 300.0 Rev 2.1 1993	Sulfate	306	mg/L	7.0	12/24/20 11:22	
92512580006	HGWC-126					
	Performed by	CUSTOME			01/04/21 15:36	
		R				
	pH	6.93	Std. Units		01/04/21 15:36	
EPA 6010D	Calcium	132	mg/L	1.0	12/25/20 01:04	
EPA 6020B	Barium	0.24	mg/L	0.010	12/29/20 10:44	
EPA 6020B	Boron	0.011J	mg/L	0.10	12/29/20 10:44	
EPA 6020B	Lithium	0.0029J	mg/L	0.030	12/29/20 10:44	
SM 2450C-2011	Total Dissolved Solids	536	mg/L	20.0	12/22/20 17:33	
EPA 300.0 Rev 2.1 1993	Chloride	8.9	mg/L	1.0	12/23/20 21:29	
EPA 300.0 Rev 2.1 1993	Fluoride	0.49	mg/L	0.10	12/23/20 21:29	
EPA 300.0 Rev 2.1 1993	Sulfate	68.1	mg/L	1.0	12/23/20 21:29	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 03, 06
Pace Project No.: 92512580

Sample: HGWA-43D		Lab ID: 92512580001		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 15:36		
pH	7.39	Std. Units			1		01/04/21 15:36		
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 12:22		
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

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 03, 06
Pace Project No.: 92512580

Sample: HGWA-44D		Lab ID: 92512580002		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 15:36		
pH	7.87	Std. Units			1		01/04/21 15:36		
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 12:22		
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	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

Sample: EB-01 **Lab ID: 92512580003** Collected: 12/15/20 18:02 Received: 12/17/20 08:48 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
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 12:22		
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	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 03, 06
Pace Project No.: 92512580

Sample: HGWA-45D		Lab ID: 92512580004		Collected: 12/16/20 09:40		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 15:36		
pH	7.39	Std. Units			1		01/04/21 15:36		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	56.4	mg/L	1.0	0.070	1	12/24/20 13:26	12/25/20 00:52	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	12/24/20 10:19	12/29/20 10:32	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	12/24/20 10:19	12/29/20 10:32	7440-38-2	
Barium	0.52	mg/L	0.010	0.00071	1	12/24/20 10:19	12/29/20 10:32	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	12/24/20 10:19	12/29/20 10:32	7440-41-7	
Boron	0.16	mg/L	0.10	0.0052	1	12/24/20 10:19	12/29/20 10:32	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	12/24/20 10:19	12/29/20 10:32	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	12/24/20 10:19	12/29/20 10:32	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	12/24/20 10:19	12/29/20 10:32	7440-48-4	
Lead	0.000058J	mg/L	0.0050	0.000036	1	12/24/20 10:19	12/29/20 10:32	7439-92-1	
Lithium	0.0045J	mg/L	0.030	0.00081	1	12/24/20 10:19	12/29/20 10:32	7439-93-2	
Molybdenum	0.0024J	mg/L	0.010	0.00069	1	12/24/20 10:19	12/29/20 10:32	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	12/24/20 10:19	12/29/20 10:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/20 10:19	12/29/20 10:32	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	12/22/20 07:10	12/22/20 13:19	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	294	mg/L	10.0	10.0	1		12/22/20 17:32		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	3.4	mg/L	1.0	0.60	1		12/23/20 20:29	16887-00-6	
Fluoride	0.18	mg/L	0.10	0.050	1		12/23/20 20:29	16984-48-8	
Sulfate	11.3	mg/L	1.0	0.50	1		12/23/20 20:29	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 03, 06
Pace Project No.: 92512580

Sample: HGWC-125		Lab ID: 92512580005		Collected: 12/16/20 12:01		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 15:36		
pH	6.61	Std. Units			1		01/04/21 15:36		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	194	mg/L	1.0	0.070	1	12/24/20 13:26	12/25/20 00:58	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 10:38	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	12/24/20 10:19	12/29/20 10:38	7440-38-2	
Barium	0.041	mg/L	0.010	0.00071	1	12/24/20 10:19	12/29/20 10:38	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	12/24/20 10:19	12/29/20 10:38	7440-41-7	
Boron	1.5	mg/L	0.10	0.0052	1	12/24/20 10:19	12/29/20 10:38	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	12/24/20 10:19	12/29/20 10:38	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	12/24/20 10:19	12/29/20 10:38	7440-47-3	
Cobalt	0.0055	mg/L	0.0050	0.00038	1	12/24/20 10:19	12/29/20 10:38	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	12/24/20 10:19	12/29/20 10:38	7439-92-1	
Lithium	0.0055J	mg/L	0.030	0.00081	1	12/24/20 10:19	12/29/20 10:38	7439-93-2	
Molybdenum	0.014	mg/L	0.010	0.00069	1	12/24/20 10:19	12/29/20 10:38	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	12/24/20 10:19	12/29/20 10:38	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/20 10:19	12/29/20 10:38	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 13:21	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	816	mg/L	20.0	20.0	1		12/22/20 17:33		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.3	mg/L	1.0	0.60	1		12/23/20 21:14	16887-00-6	
Fluoride	0.20	mg/L	0.10	0.050	1		12/23/20 21:14	16984-48-8	
Sulfate	306	mg/L	7.0	3.5	7		12/24/20 11:22	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 03, 06
Pace Project No.: 92512580

Sample: HGWC-126		Lab ID: 92512580006		Collected: 12/16/20 14:22		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 15:36		
pH	6.93	Std. Units			1		01/04/21 15:36		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	132	mg/L	1.0	0.070	1	12/24/20 13:26	12/25/20 01:04	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 10:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	12/24/20 10:19	12/29/20 10:44	7440-38-2	
Barium	0.24	mg/L	0.010	0.00071	1	12/24/20 10:19	12/29/20 10:44	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	12/24/20 10:19	12/29/20 10:44	7440-41-7	
Boron	0.011J	mg/L	0.10	0.0052	1	12/24/20 10:19	12/29/20 10:44	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	12/24/20 10:19	12/29/20 10:44	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	12/24/20 10:19	12/29/20 10:44	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	12/24/20 10:19	12/29/20 10:44	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	12/24/20 10:19	12/29/20 10:44	7439-92-1	
Lithium	0.0029J	mg/L	0.030	0.00081	1	12/24/20 10:19	12/29/20 10:44	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	12/24/20 10:19	12/29/20 10:44	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	12/24/20 10:19	12/29/20 10:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/20 10:19	12/29/20 10:44	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	12/22/20 07:10	12/22/20 13:23	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	536	mg/L	20.0	20.0	1		12/22/20 17:33		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	8.9	mg/L	1.0	0.60	1		12/23/20 21:29	16887-00-6	
Fluoride	0.49	mg/L	0.10	0.050	1		12/23/20 21:29	16984-48-8	
Sulfate	68.1	mg/L	1.0	0.50	1		12/23/20 21:29	14808-79-8	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 03, 06
Pace Project No.: 92512580

QC Batch: 589396 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92512580001, 92512580002, 92512580003, 92512580004, 92512580005, 92512580006

METHOD BLANK: 3113409 Matrix: Water
Associated Lab Samples: 92512580001, 92512580002, 92512580003, 92512580004, 92512580005, 92512580006

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

LABORATORY CONTROL SAMPLE: 3113410

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3113411 3113412

Parameter	Units	3113411		3113412		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92512572002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Calcium	mg/L	28.7	1	1	30.4	29.3	173	61	75-125	4	20 M1

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 03, 06
Pace Project No.: 92512580

QC Batch: 589337 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92512580001, 92512580002, 92512580003, 92512580004, 92512580005, 92512580006

METHOD BLANK: 3113101 Matrix: Water
Associated Lab Samples: 92512580001, 92512580002, 92512580003, 92512580004, 92512580005, 92512580006

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

LABORATORY CONTROL SAMPLE: 3113102

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3113103 3113104

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

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3113103		3113104		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92512103004 Result	MS Spike Conc.	MSD Spike Conc.								
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

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

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

Associated Lab Samples: 92512580001, 92512580002, 92512580003, 92512580004, 92512580005, 92512580006

METHOD BLANK: 3109729 Matrix: Water
Associated Lab Samples: 92512580001, 92512580002, 92512580003, 92512580004, 92512580005, 92512580006

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

LABORATORY CONTROL SAMPLE: 3109730

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3109731 3109732

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

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 03, 06
Pace Project No.: 92512580

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: 92512580001, 92512580002, 92512580003

METHOD BLANK: 3109057 Matrix: Water
Associated Lab Samples: 92512580001, 92512580002, 92512580003

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

QC Batch: 588927

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: 92512580004, 92512580005, 92512580006

METHOD BLANK: 3111378

Matrix: Water

Associated Lab Samples: 92512580004, 92512580005, 92512580006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	12/22/20 17:31	

LABORATORY CONTROL SAMPLE: 3111379

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	386	96	84-108	

SAMPLE DUPLICATE: 3111380

Parameter	Units	92512580004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	294	295	0	10	

SAMPLE DUPLICATE: 3111381

Parameter	Units	92513185001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	339	340	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

QC Batch: 589104 Analysis Method: EPA 300.0 Rev 2.1 1993
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
 Laboratory: Pace Analytical Services - Asheville
 Associated Lab Samples: 92512580001, 92512580002, 92512580003, 92512580004, 92512580005, 92512580006

METHOD BLANK: 3112052 Matrix: Water
 Associated Lab Samples: 92512580001, 92512580002, 92512580003, 92512580004, 92512580005, 92512580006

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

LABORATORY CONTROL SAMPLE: 3112053

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3112054 3112055

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3112056 3112057

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

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: HAMMOND AP-3 BKG 03, 06

Pace Project No.: 92512580

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 BKG 03, 06
Pace Project No.: 92512580

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92512580001	HGWA-43D				
92512580002	HGWA-44D				
92512580004	HGWA-45D				
92512580005	HGWC-125				
92512580006	HGWC-126				
92512580001	HGWA-43D	EPA 3010A	589396	EPA 6010D	589429
92512580002	HGWA-44D	EPA 3010A	589396	EPA 6010D	589429
92512580003	EB-01	EPA 3010A	589396	EPA 6010D	589429
92512580004	HGWA-45D	EPA 3010A	589396	EPA 6010D	589429
92512580005	HGWC-125	EPA 3010A	589396	EPA 6010D	589429
92512580006	HGWC-126	EPA 3010A	589396	EPA 6010D	589429
92512580001	HGWA-43D	EPA 3005A	589337	EPA 6020B	589405
92512580002	HGWA-44D	EPA 3005A	589337	EPA 6020B	589405
92512580003	EB-01	EPA 3005A	589337	EPA 6020B	589405
92512580004	HGWA-45D	EPA 3005A	589337	EPA 6020B	589405
92512580005	HGWC-125	EPA 3005A	589337	EPA 6020B	589405
92512580006	HGWC-126	EPA 3005A	589337	EPA 6020B	589405
92512580001	HGWA-43D	EPA 7470A	588542	EPA 7470A	588758
92512580002	HGWA-44D	EPA 7470A	588542	EPA 7470A	588758
92512580003	EB-01	EPA 7470A	588542	EPA 7470A	588758
92512580004	HGWA-45D	EPA 7470A	588542	EPA 7470A	588758
92512580005	HGWC-125	EPA 7470A	588542	EPA 7470A	588758
92512580006	HGWC-126	EPA 7470A	588542	EPA 7470A	588758
92512580001	HGWA-43D	SM 2450C-2011	588373		
92512580002	HGWA-44D	SM 2450C-2011	588373		
92512580003	EB-01	SM 2450C-2011	588373		
92512580004	HGWA-45D	SM 2450C-2011	588927		
92512580005	HGWC-125	SM 2450C-2011	588927		
92512580006	HGWC-126	SM 2450C-2011	588927		
92512580001	HGWA-43D	EPA 300.0 Rev 2.1 1993	589104		
92512580002	HGWA-44D	EPA 300.0 Rev 2.1 1993	589104		
92512580003	EB-01	EPA 300.0 Rev 2.1 1993	589104		
92512580004	HGWA-45D	EPA 300.0 Rev 2.1 1993	589104		
92512580005	HGWC-125	EPA 300.0 Rev 2.1 1993	589104		
92512580006	HGWC-126	EPA 300.0 Rev 2.1 1993	589104		

REPORT OF LABORATORY ANALYSIS

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Document Name:
Sample Condition Upon Receipt(SCUR)
 Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
 Page 1 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project #: **WO# : 92512580**



92512580

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

Courier: Fed Ex UPS USPS Client
 Commercial Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other

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

Biological Tissue Frozen? Yes No N/A

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

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

Cooler Temp Corrected (°C): 4.3

USDA Regulated Soil (N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Document Name:
 Sample Condition Upon Receipt(SCUR)
 Document No.:
 F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
 Page 2 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

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

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

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

Project #

WO#: 92512580

PM: KLH1

Due Date: 01/04/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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6	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

pH Adjustment Log for Preserved Samples

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information		Section B Required Project Information		Section C Invoice Information	
Company: GA POWER	Address: Atlanta, GA	Report To: SCS Contacts	Copy To: Geosyntec Contacts	Attention: Southern Co.	Company Name: Southern Co.
Address: Atlanta, GA	City: Atlanta, GA	Purchase Order No.:	Project Name: Plant Hammond AP-3 BKG 03 06	Address:	Area Date:
Phone: Fax	Requested Date/Deliver: 14 Day	Project Number: GW6581	Requested Analysis Filtered (Y/N)	REGULATORY AGENCY	NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/>
Requested Date/Deliver: 14 Day				UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER COR <input type="checkbox"/>	Site Location: STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes MATERIAL: ORGANIC MATTER, WATER, WASTE WATER, PRODUCT, SOIL, OIL, WASTE, AIR, OTHER TISSUE	SCOPE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)			
						DATE	TIME					Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃				Methanol	Other	Chloride, Fluoride, Sulfate
1	HQWA-430					12/15	12:25	17	5	2	3	X	X	X	X	X	X	N	N	N	N	N	
2	HQWA-440					12/15	16:18	16	5	2	3	X	X	X	X	X	X	N	N	N	N	N	
3	HQWA-450											X	X	X	X	X	X	N	N	N	N	N	
4	HQWA-125											X	X	X	X	X	X	N	N	N	N	N	
5	HQWA-126											X	X	X	X	X	X	N	N	N	N	N	
6	EB-01					12/15	18:02	6	5	2	3	X	X	X	X	X	X	N	N	N	N	N	

ADDITIONAL COMMENTS
Please note dry wells, tanks through any wells not sampled and when the last sample for the event has been taken.
Full App. III & IV Metals: SA, AA, BA, BB, B, CA, CC, CO, PO, LI, PG, MA, SE, TI
1 sample set for HQWA-430 and HQWA-440, reported for AP-1/20. 1 sample set for EB-01, reported for AP-1/20/2010/2

RELINQUISHED BY / AFFILIATION
Thomas Hesketh / Geosyntec
12/15/20
11/17/20

ACCEPTED BY / AFFILIATION
Kevin Herring / Southern Co.
12/15/20
12/15/20

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Thomas Hesketh
SIGNATURE of SAMPLER: [Signature]
DATE Signed (MANDATORY): 12/15/20

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 Face's NET 30 day deposit terms and agreeing to hire charges of 1.5% per month for any overruns not paid within 30 days.
FALL-Q-020/rev 07, 15-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: _____ of _____

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: GA Power	Address: Atlanta, GA	Report to: SCS Contacts	Copy To: GeosynTec Contacts	Attention: Southern Co.	Company Name: Southern Co.
Email To: SCS Contacts	Phone: _____	Purchase Order No.:	Plant Name: Plant Hammond AP-3 BKG 03.06	Address:	Project Name: Plant Hammond AP-3 BKG 03.06
Requested Due Date/TAT: 10 Day	Requested Date/TAT: 10 Day	Project Number: GWS681	Requested Date/TAT: 10 Day	Project Number: GWS681	Requested Date/TAT: 10 Day

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX	SCOPE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES						Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH				
						DATE	TIME	DATE			TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH					Na ₂ S ₂ O ₃	Methanol	Other	Chloride, Fluoride, Sulfate
1	HQWA-43D	DM WT	DM WT																					
2	HQWA-44D	DM WT	DM WT																					
3	HQWA-45D	DM WT	DM WT																					
4	HQWC-125	DM WT	DM WT																					
5	HQWC-126	DM WT	DM WT																					
6	EB-01	DM WT	DM WT																					

ADDITIONAL COMMENTS		REIMBURSED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME	
Please note dry weights, state through any wells not sampled, and note when the last sample for the month has been taken. Full App. III & IV Metals: Sb, Ar, Ba, Br, B, Cd, Cr, C, Co, Pb, Li, Hg, Mo, Se, Tl 1 sample set for HQWA-43D and HQWA-44D, reported for AP-1202. 1 sample set for EB-01, reported for AP-1204 SDCS.		Thomas Hesslie / GSC		12/17		08:46		E. Hesslie / PA		12/17		8:24	
SAMPLER NAME AND SIGNATURE		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS	
PRINT Name of SAMPLER: Thomas Hesslie		DATE Signed (MM/DD/YY): 12/16/20		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		Temp in °C	
SIGNATURE of SAMPLER: <i>Thomas Hesslie</i>		DATE Signed (MM/DD/YY): 12/16/20		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		Received on Ice (Y/N)	
SIGNATURE of ANALYST: <i>[Signature]</i>		DATE Signed (MM/DD/YY): 12/16/20		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		Custody Sealed Cooler (Y/N)	
SIGNATURE of RECEIVING PARTY: <i>[Signature]</i>		DATE Signed (MM/DD/YY): 12/16/20		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		Samples Intact (Y/N)	

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

F-ALL-Q-020rev.07.15.Feb-2007

January 11, 2021

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

RE: Project: HAMMOND AP-3 BKG 03, 06 RADS
Pace Project No.: 92512547

Dear Joju Abraham:

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

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-3 BKG 03, 06 RADS
Pace Project No.: 92512547

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92512547001	HGWA-43D	Water	12/15/20 12:25	12/17/20 08:48
92512547002	HGWA-44D	Water	12/15/20 16:18	12/17/20 08:48
92512547003	EB-01	Water	12/15/20 18:02	12/17/20 08:48
92512547004	HGWA-45D	Water	12/16/20 09:40	12/17/20 08:48
92512547005	HGWC-125	Water	12/16/20 12:01	12/17/20 08:48
92512547006	HGWC-126	Water	12/16/20 14:22	12/17/20 08:48

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 BKG 03, 06 RAD5

Pace Project No.: 92512547

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92512547001	HGWA-43D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92512547002	HGWA-44D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92512547003	EB-01	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92512547004	HGWA-45D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92512547005	HGWC-125	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92512547006	HGWC-126	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92512547001	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 14:32	
92512547002	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 14:32	
92512547003	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	
92512547004	HGWA-45D					
EPA 9315	Radium-226	0.460 ± 0.373 (0.719) C:90% T:NA	pCi/L		01/06/21 06:58	
EPA 9320	Radium-228	0.503 ± 0.434 (0.874) C:63% T:83%	pCi/L		01/04/21 11:29	
Total Radium Calculation	Total Radium	0.963 ± 0.807 (1.59)	pCi/L		01/06/21 14:34	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92512547005	HGWC-125					
EPA 9315	Radium-226	0.472 ± 0.355 (0.637) C:82% T:NA	pCi/L		01/06/21 06:59	
EPA 9320	Radium-228	0.346 ± 0.402 (0.849) C:75% T:82%	pCi/L		01/05/21 13:26	
Total Radium Calculation	Total Radium	0.818 ± 0.757 (1.49)	pCi/L		01/06/21 14:34	
92512547006	HGWC-126					
EPA 9315	Radium-226	0.535 ± 0.347 (0.577) C:81% T:NA	pCi/L		01/06/21 07:27	
EPA 9320	Radium-228	0.722 ± 0.446 (0.840) C:73% T:79%	pCi/L		01/05/21 13:26	
Total Radium Calculation	Total Radium	1.26 ± 0.793 (1.42)	pCi/L		01/06/21 14:34	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-43D Lab ID: 92512547001 Collected: 12/15/20 12:25 Received: 12/17/20 08:48 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	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 14:32	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-44D Lab ID: 92512547002 Collected: 12/15/20 16:18 Received: 12/17/20 08:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	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 14:32	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

Sample: EB-01 **Lab ID: 92512547003** 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

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-45D Lab ID: 92512547004 Collected: 12/16/20 09:40 Received: 12/17/20 08:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.460 ± 0.373 (0.719) C:90% T:NA	pCi/L	01/06/21 06:58	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.503 ± 0.434 (0.874) C:63% T:83%	pCi/L	01/04/21 11:29	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.963 ± 0.807 (1.59)	pCi/L	01/06/21 14:34	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-125 Lab ID: 92512547005 Collected: 12/16/20 12:01 Received: 12/17/20 08:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.472 ± 0.355 (0.637) C:82% T:NA	pCi/L	01/06/21 06:59	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.346 ± 0.402 (0.849) C:75% T:82%	pCi/L	01/05/21 13:26	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.818 ± 0.757 (1.49)	pCi/L	01/06/21 14:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-126 Lab ID: 92512547006 Collected: 12/16/20 14:22 Received: 12/17/20 08:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.535 ± 0.347 (0.577) C:81% T:NA	pCi/L	01/06/21 07:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.722 ± 0.446 (0.840) C:73% T:79%	pCi/L	01/05/21 13:26	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.26 ± 0.793 (1.42)	pCi/L	01/06/21 14:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

QC Batch: 428750

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92512547005, 92512547006

METHOD BLANK: 2071922

Matrix: Water

Associated Lab Samples: 92512547005, 92512547006

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

QC Batch:	428749	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92512547001, 92512547002, 92512547003, 92512547004

METHOD BLANK: 2071921 Matrix: Water

Associated Lab Samples: 92512547001, 92512547002, 92512547003, 92512547004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.161 ± 0.312 (0.758) C:74% T:81%	pCi/L	01/04/21 11:42	

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-3 BKG 03, 06 RADS

Pace Project No.: 92512547

QC Batch: 429175

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92512547001, 92512547002, 92512547003, 92512547004, 92512547005, 92512547006

METHOD BLANK: 2073293

Matrix: Water

Associated Lab Samples: 92512547001, 92512547002, 92512547003, 92512547004, 92512547005, 92512547006

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.

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QUALIFIERS

Project: HAMMOND AP-3 BKG 03, 06 RADS

Pace Project No.: 92512547

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 BKG 03, 06 RAD5
Pace Project No.: 92512547

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92512547001	HGWA-43D	EPA 9315	429175		
92512547002	HGWA-44D	EPA 9315	429175		
92512547003	EB-01	EPA 9315	429175		
92512547004	HGWA-45D	EPA 9315	429175		
92512547005	HGWC-125	EPA 9315	429175		
92512547006	HGWC-126	EPA 9315	429175		
92512547001	HGWA-43D	EPA 9320	428749		
92512547002	HGWA-44D	EPA 9320	428749		
92512547003	EB-01	EPA 9320	428749		
92512547004	HGWA-45D	EPA 9320	428749		
92512547005	HGWC-125	EPA 9320	428750		
92512547006	HGWC-126	EPA 9320	428750		
92512547001	HGWA-43D	Total Radium Calculation	429860		
92512547002	HGWA-44D	Total Radium Calculation	429860		
92512547003	EB-01	Total Radium Calculation	429861		
92512547004	HGWA-45D	Total Radium Calculation	429861		
92512547005	HGWC-125	Total Radium Calculation	429861		
92512547006	HGWC-126	Total Radium Calculation	429861		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project #: **WO# : 92512547**



92512547

Courier: Fed Ex UPS USPS Client
 Commercial Pace Other: _____

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

Custody Seal Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

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

Yes No N/A

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

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 4.3

USDA Regulated Soil (N/A, water sample)

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

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

Yes No

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____

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

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

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

Project

WO# : 92512547

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)-S03S kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP9T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

pH Adjustment Log for Preserved Samples

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: GA Power		Report To: SCS Contacts		Invoice Number: Southern Co.	
Address: Atlanta, GA		Copy To: Geosynlec Contacts		Company Name	
Email To: SCS Contacts		Purchase Order No.:		Address:	
Phone: Fax		Project Name: Plant Hammond AP-3 BKG 03 06		Sales Dept:	
Requested Due Date/TAT: to Day		Project Number: GWS561		Sales Project Manager: Kevin Herring	
				Sales Project # 10839-4	
				Requested Analyze Filtered (Y/N)	
				REGULATORY AGENCY	
				<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER COM	
		Site Location STATE: GA			

ITEM #	Section B Valid Matrix Codes SC03	COLLECTED				SAMPLE TEMP AT COLLECTION	PRESERVATIVES							REQUESTED ANALYZE FILTERED (Y/N)			SAMPLER NAME AND SIGNATURE	DATE SIGNED (MANDATORY)																				
		MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME		DATE	TIME	UNPRESERVED	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other			CHLORIDE, FLUORIDE, SULFATE	TDS	*Full App. III&IV Metals	RAD 228/226																
1	HQWA-43D	WT G	12/15	12:55																																		
2	HQWA-44D	WT G	12/15	16:18																																		
3	HQWA-49D	WT G																																				
4	HQWC-125	WT G																																				
5	HQWC-126	WT G																																				
6	EB-01	WT G	12/15	18:02																																		
7																																						
8																																						
9																																						
10																																						
11																																						
12																																						

Section D
Request Client Information

Valid Matrix Codes

DW	COND	DW	COND
WATER	COND	WATER	COND
WASTE WATER	COND	WASTE WATER	COND
PRODUCT	COND	PRODUCT	COND
SEWAGE	COND	SEWAGE	COND
AIR	COND	AIR	COND
OTHER	COND	OTHER	COND
TISSUE	COND	TISSUE	COND

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

Section E
Request Additional Information

ADDITIONAL COMMENTS

Relinquished by / Affiliation: Thomas Vessily / Georgia Dept of Transportation
Date: 12/15/20
Time: 08:46

Accepted by / Affiliation: Kevin Herring / Pace Analytical
Date: 12/15/20
Time: 14:17

Section F
Request Analyze Filtered (Y/N)

Residual Chlorine (Y/N) pH = 7.34
pH = 7.87

Section G
Request Sample Conditions

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

Section H
Request Signatures

Sampler Name and Signature: Thomas Vessily
Date Signed (Mandatory): 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.

F-ALL-CO-020REV 07 15-Feb-2007



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

Page: 1 of 1

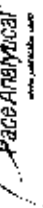
Section A Required Client Information: Company: GA Power, Address: Atlanta, GA
Section B Required Project Information: Report To: SCS Contacts, Copy To: Geosynlec Contacts
Section C Invoice Information: Attention: Southern Co., Company Name, Address, Fax Code, Release, Site Project, Manager, Pace Project #: 10839-4
REGULATORY AGENCY: NPDES, GROUND WATER, UST, RCRA, OTHER COM
Site Location: STATE: GA

Table with columns: ITEM #, Section D Required Client Information, Valid Matrix Codes, MATRIX CODE, SAMPLE TYPE, DATE, TIME, DATE, TIME, SAMPLE TEMP AT COLLECTION, # OF CONTAINERS, Preservatives (Unpreserved, H2SO4, HNO3, HCl, NaOH, Na2S2O3, Methanol, Other), Analysis Test (Chloride, Fluoride, Sulfate, TDS, Full App. III&IV Metals, RAD 226/228), Residual Chlorine (Y/N), pH, and 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 the charges of 1.5% per month for any invoices not paid within 30 days.

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

Quality Control Sample Performance Assessment



Test: Ra-226
 Analyst: LAL
 Date: 1/5/2021
 Worklist: 58133
 Matrix: DW

Method Blank Assessment

MB Sample ID	2073293
MB concentration:	0.176
MB Counting Uncertainty:	0.125
MB WADC:	0.246
MB Numerical Performance Indicator:	2.65
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment

Count Date:	LCSD (g/L)?	N
1/6/2021	LCSD59138	LCSD59138
Spike I.D.:	18-033	
Decay Corrected Spike Concentration (pCi/mL):	24.041	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, FI):	0.515	
Target Conc. (pCi/L, g, FI):	4.669	
Uncertainty (Calculated):	0.056	
Result (pCi/L, g, FI):	4.726	
LCSD Counting Uncertainty (pCi/L, g, FI):	0.782	
Numerical Performance Indicator:	0.14	
Percent Recovery:	101.21%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limit:	125%	
Lower % Recovery Limit:	75%	

Duplicate Sample Assessment

Sample I.D.:	Enter duplicate sample IDs if other than LCSD/LCSD in the space below.
92512557001	92512557007 DUP
Duplicate Sample I.D.:	92512557007 DUP
Sample Result (pCi/L, g, FI):	0.259
Sample Result Counting Uncertainty (pCi/L, g, FI):	0.248
Sample Duplicate Result (pCi/L, g, FI):	0.181
Sample Duplicate Result Counting Uncertainty (pCi/L, g, FI):	0.219
Are sample and/or duplicate results below RL?	See Performance
Duplicate Numerical Performance Indicator:	30.10%
Duplicate RPD:	30.10%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail
% RPD Limit:	32%

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

Comments:

***Batch number 181E-3119199 is unacceptable precision. N/A

1-6-2021

1-6-2021

1-6-2021

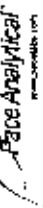
Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix	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, FI): MS Target Conc. (pCi/L, g, FI): MSD Aliquot (L, g, FI): MSD Target Conc. (pCi/L, g, FI): MS Spike Uncertainty (Calculated): MSD Spike Uncertainty (Calculated):		
Sample Result Counting Uncertainty (pCi/L, g, FI): Sample Matrix Spike Result: Matrix Spike Result Counting Uncertainty (pCi/L, g, FI): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, FI): MS Numerical Performance Indicator: MS Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limit: MS/MSD Lower % Recovery Limit:		

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, FI): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, FI): Duplicate Numerical Performance Indicator: Duplicate Percent Recovery: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:		

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Method Blank Assessment	
MB Sample ID	2073338
MB Concentration:	0.176
MB Counting Uncertainty:	0.135
MB MDC:	0.246
MB Numerical Performance Indicator:	2.56
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS# of N?		Y
	LCS#	N?	
Dilute Corrected Spike Concentration (pCi/ml.)	Count Date	1/5/2021	LCS#58138
	Spike I.D.	19-033	19-033
	Volume Used (ml.)	24.041	24.041
	Aliquot Volume (l., g. F.)	0.10	0.10
	Target Conc. (pCi/l., g. F.)	0.515	0.507
	Uncertainty (Calculated)	4.669	4.743
	Result (pCi/l., g. F.)	0.056	0.087
	Percent Recovery	4.728	4.173
	Numerical Performance Indicator	0.782	0.736
	Status vs Numerical Indicator:	101.21%	87.98%
LCS#LCS# Counting Uncertainty (pCi/l., g. F.)	Upper % Recovery Limits:	Pass	Pass
	Lower % Recovery Limits:	125%	125%
	Upper % Recovery Limits:	75%	75%
	Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment	LCS# of N?		Y
	LCS#	N?	
Duplicate Sample Assessment	Sample I.D.	LCS#58138	Enter Duplicate sample IDs if other than LCS#LCS# in the space below.
	Duplicate Sample I.D.	LCS#58138	
	Sample Result Counting Uncertainty (pCi/l., g. F.)	4.728	
	Sample's Duplicate Result (pCi/l., g. F.)	0.782	
	Sample Duplicate Result Counting Uncertainty (pCi/l., g. F.)	4.173	
	Ave. sample and/or duplicate results below RCP	0.736	
	Duplicate Numerical Performance Indicator:	NO	
	Duplicate Percent Recoveries:	1.02%	92512557001
	Duplicate Status vs Numerical Indicator:	13.89%	82312557001DUP
	Duplicate Status vs RPD:	N/A	
% RPD Limit:	Pass		
% RPD Limit:	25%		

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment	MS/MSD 1		MS/MSD 2
	Sample I.D.	Sample MS I.D.	
Matrix Spike/Matrix Spike Duplicate Sample Assessment	Sample I.D.	Sample MS I.D.	
	Sample MS I.D.	Sample MS I.D.	
	Matrix Spike Result Counting Uncertainty (pCi/l., g. F.)	Matrix Spike Result Counting Uncertainty (pCi/l., g. F.)	
	Matrix's Duplicate Result (pCi/l., g. F.)	Matrix's Duplicate Result (pCi/l., g. F.)	
	Matrix Duplicate Result Counting Uncertainty (pCi/l., g. F.)	Matrix Duplicate Result Counting Uncertainty (pCi/l., g. F.)	
	Ave. sample and/or duplicate results below RCP	Duplicate Numerical Performance Indicator:	
	Duplicate Numerical Performance Indicator:	Duplicate Percent Recoveries:	
	Duplicate Status vs Numerical Indicator:	Duplicate Status vs RPD:	
	Duplicate Status vs RPD:	% RPD Limit:	
	% RPD Limit:		

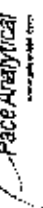
Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

1-6-2021
MRS

WAM 1/10/21

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: **RA-228**
 Analyst: **VAL**
 Date: **12/30/2021**
 Worklist: **58094**
 Matrix: **WT**

Method Blank Assessment	
MB Sample ID	2071921
MB Concentration:	-0.161
MB 2 Sigma CSU:	0.312
MB MDC:	0.758
MB Numerical Performance Indicator:	-1.01
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	11/6/2021
Spike ID:	20-030
Diluted Connected Spike Concentration (pCi/mL):	37.015
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.825
Target Conc. (pCi/L, g, F):	4.488
Uncertainty (Calculated):	0.220
Result (pCi/L, g, F):	5.637
LC50, LSD 2 Sigma CSU (pCi/L, g, F):	1.278
Numerical Performance Indicator:	1.73
Percent Recovery:	125.39%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	135%
Lower % Recovery Limits:	80%

Duplicate Sample Assessment	
Sample ID:	LC58094
Duplicate Sample ID:	LCSD58094
Sample Result (pCi/L, g, F):	5.637
Sample Duplicate Result (pCi/L, g, F):	1.278
Sample Duplicate Result (pCi/L, g, F):	5.675
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.293
Are sample and/or duplicate results below RLO?	NO
Duplicate Numerical Performance Indicator:	-0.041
(Based on the LC50, LSD Percent Recoveries) Duplicate RPD:	0.65%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

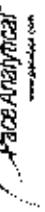
Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Sample Matrix Spike Control Assessment	MSMSD 1	MSMSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.		
MSMSD Dose/Connected Spike Concentration (pCi/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 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: MSMSD Upper % Recovery Limit: MSMSD Lower % Recovery Limit:		

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

Quality Control Sample Performance Assessment



Analyst: Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 12/01/2020
Worksheet: 58095
Matrix: WWT

Method Blank Assessment	
MB Sample ID	2071922
MB Concentration:	0.864
MB 2 Sigma CSU:	0.340
MB MDC:	0.676
MB Numerical Performance Indicator:	3.56
MB Status vs. Numerical Indicator:	Fail*
MB Status vs. MDC:	See Comment

Laboratory Control Sample Assessment	
LCS ID	Y or N?
LCS58095	Y
LCS58095	1/5/2021
Count Date:	1/5/2021
Spike ID:	20-030
Decay Corrected Spike Concentration (pCi/mL):	37.002
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.803
Target Conc. (pCi/L, g, F):	4.810
Uncertainty (Calculated):	0.226
Result (pCi/L, g, F):	5.691
LCS1,CS2 Percent Recovery:	1.255
Numerical Performance Indicator:	1.49
Percent Recovery:	121.06%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limit:	135%
Lower % Recovery Limit:	60%

Duplicate Sample Assessment	
Sample ID:	LCS58095
Duplicate Sample ID:	LCS058095
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 LCS1,CS2 Percent Recoveries) Duplicate RPD:	3.25%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	58%

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

Comments:

*The method blank result is below the reporting limit for this analysis and is acceptable.

Sample Matrix Spike Control Assessment	
Sample Collection Date:	Sample I.D.
Sample I.D.	Sample MS I.D.
Sample MS I.D.	Sample MSD I.D.
Spike 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):
MS Spike Uncertainty (calculated):	MSD Spike Uncertainty (calculated):
MS/MSD Status vs Numerical Indicator:	MS/MSD Status vs Numerical Indicator:
MS/MSD Upper % Recovery Limit:	MS/MSD Lower % Recovery Limit:
MS/MSD Lower % Recovery Limit:	

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

January 2021

February 04, 2021

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

RE: Project: HAMMOND AP-3 BKG 04, 07
Pace Project No.: 92517909

Dear Joju Abraham:

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

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

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

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-3 BKG 04, 07

Pace Project No.: 92517909

Pace Analytical Services Charlotte

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

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

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SAMPLE SUMMARY

Project: HAMMOND AP-3 BKG 04, 07

Pace Project No.: 92517909

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92517909001	HGWA-43D	Water	01/19/21 16:45	01/21/21 11:30
92517909002	HGWC-125	Water	01/20/21 13:20	01/21/21 11:30
92517909003	HGWA-44D	Water	01/19/21 17:42	01/21/21 11:30
92517909004	HGWA-45D	Water	01/20/21 11:11	01/21/21 11:30
92517909005	HGWC-126	Water	01/20/21 13:16	01/21/21 11:30
92517909006	EB-01	Water	01/20/21 14:00	01/21/21 11:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 BKG 04, 07

Pace Project No.: 92517909

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92517909001	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
92517909002	HGWC-125	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
92517909003	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
92517909004	HGWA-45D	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
92517909005	HGWC-126	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92517909006	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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 04, 07

Pace Project No.: 92517909

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92517909001	HGWA-43D					
	Performed by	CUSTOME			02/04/21 09:44	
		R				
	pH	7.39	Std. Units		02/04/21 09:44	
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	
92517909002	HGWC-125					
	Performed by	CUSTOME			02/04/21 09:44	
		R				
	pH	6.23	Std. Units		02/04/21 09:44	
EPA 6010D	Calcium	177	mg/L	1.0	02/02/21 09:24	M1
EPA 6020B	Barium	0.045	mg/L	0.010	02/02/21 19:46	
EPA 6020B	Boron	1.5	mg/L	0.10	02/02/21 19:46	
EPA 6020B	Chromium	0.00081J	mg/L	0.010	02/02/21 19:46	
EPA 6020B	Cobalt	0.012	mg/L	0.0050	02/02/21 19:46	
EPA 6020B	Lead	0.000092J	mg/L	0.0050	02/02/21 19:46	
EPA 6020B	Lithium	0.0046J	mg/L	0.030	02/02/21 19:46	
EPA 6020B	Molybdenum	0.0013J	mg/L	0.010	02/02/21 19:46	
SM 2450C-2011	Total Dissolved Solids	726	mg/L	20.0	01/22/21 16:45	
EPA 300.0 Rev 2.1 1993	Chloride	10.2	mg/L	1.0	01/26/21 22:09	
EPA 300.0 Rev 2.1 1993	Fluoride	0.13	mg/L	0.10	01/26/21 22:09	
EPA 300.0 Rev 2.1 1993	Sulfate	335	mg/L	7.0	01/27/21 10:21	
92517909003	HGWA-44D					
	Performed by	CUSTOME			02/04/21 09:44	
		R				
	pH	7.86	Std. Units		02/04/21 09:44	
EPA 6010D	Calcium	33.0	mg/L	1.0	02/02/21 14:34	
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	
92517909004	HGWA-45D					
	Performed by	CUSTOME			02/04/21 09:44	
		R				
	pH	7.47	Std. Units		02/04/21 09:44	
EPA 6010D	Calcium	55.0	mg/L	1.0	02/02/21 14:48	
EPA 6020B	Arsenic	0.0022J	mg/L	0.0050	02/02/21 19:51	
EPA 6020B	Barium	0.53	mg/L	0.010	02/02/21 19:51	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 04, 07

Pace Project No.: 92517909

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92517909004	HGWA-45D					
EPA 6020B	Boron	0.19	mg/L	0.10	02/02/21 19:51	
EPA 6020B	Chromium	0.00067J	mg/L	0.010	02/02/21 19:51	
EPA 6020B	Lead	0.000082J	mg/L	0.0050	02/02/21 19:51	
EPA 6020B	Lithium	0.0025J	mg/L	0.030	02/02/21 19:51	
EPA 6020B	Molybdenum	0.0063J	mg/L	0.010	02/02/21 19:51	
SM 2450C-2011	Total Dissolved Solids	289	mg/L	10.0	01/22/21 16:45	
EPA 300.0 Rev 2.1 1993	Chloride	3.5	mg/L	1.0	01/26/21 22:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.22	mg/L	0.10	01/26/21 22:24	
EPA 300.0 Rev 2.1 1993	Sulfate	14.2	mg/L	1.0	01/26/21 22:24	
92517909005	HGWC-126					
	Performed by	CUSTOME			02/04/21 09:44	
		R				
	pH	6.99	Std. Units		02/04/21 09:44	
EPA 6010D	Calcium	131	mg/L	1.0	02/01/21 21:50	
EPA 6020B	Barium	0.25	mg/L	0.010	02/02/21 19:57	
EPA 6020B	Lithium	0.0038J	mg/L	0.030	02/02/21 19:57	
SM 2450C-2011	Total Dissolved Solids	472	mg/L	20.0	01/22/21 16:45	
EPA 300.0 Rev 2.1 1993	Chloride	8.5	mg/L	1.0	01/26/21 23:09	
EPA 300.0 Rev 2.1 1993	Fluoride	0.44	mg/L	0.10	01/26/21 23:09	
EPA 300.0 Rev 2.1 1993	Sulfate	66.6	mg/L	1.0	01/26/21 23:09	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 04, 07
Pace Project No.: 92517909

Sample: HGWA-43D		Lab ID: 92517909001		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 09:44		
pH	7.39	Std. Units			1		02/04/21 09:44		
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

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 04, 07
Pace Project No.: 92517909

Sample: HGWC-125		Lab ID: 92517909002		Collected: 01/20/21 13:20		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 09:44		
pH	6.23	Std. Units			1		02/04/21 09:44		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	177	mg/L	1.0	0.070	1	02/01/21 11:28	02/02/21 09:24	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	02/02/21 09:23	02/02/21 19:46	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/02/21 09:23	02/02/21 19:46	7440-38-2	
Barium	0.045	mg/L	0.010	0.00071	1	02/02/21 09:23	02/02/21 19:46	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/02/21 09:23	02/02/21 19:46	7440-41-7	
Boron	1.5	mg/L	0.10	0.0052	1	02/02/21 09:23	02/02/21 19:46	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/02/21 09:23	02/02/21 19:46	7440-43-9	
Chromium	0.00081J	mg/L	0.010	0.00055	1	02/02/21 09:23	02/02/21 19:46	7440-47-3	
Cobalt	0.012	mg/L	0.0050	0.00038	1	02/02/21 09:23	02/02/21 19:46	7440-48-4	
Lead	0.000092J	mg/L	0.0050	0.000036	1	02/02/21 09:23	02/02/21 19:46	7439-92-1	
Lithium	0.0046J	mg/L	0.030	0.00081	1	02/02/21 09:23	02/02/21 19:46	7439-93-2	
Molybdenum	0.0013J	mg/L	0.010	0.00069	1	02/02/21 09:23	02/02/21 19:46	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/02/21 09:23	02/02/21 19:46	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/02/21 09:23	02/02/21 19:46	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	01/26/21 07:45	01/26/21 10:54	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	726	mg/L	20.0	20.0	1		01/22/21 16:45		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	10.2	mg/L	1.0	0.60	1		01/26/21 22:09	16887-00-6	
Fluoride	0.13	mg/L	0.10	0.050	1		01/26/21 22:09	16984-48-8	
Sulfate	335	mg/L	7.0	3.5	7		01/27/21 10:21	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 04, 07
Pace Project No.: 92517909

Sample: HGWA-44D		Lab ID: 92517909003		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 09:44		
pH	7.86	Std. Units			1		02/04/21 09:44		
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	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 10:35	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	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 04, 07

Pace Project No.: 92517909

Sample: HGWA-45D		Lab ID: 92517909004		Collected: 01/20/21 11:11		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 09:44		
pH	7.47	Std. Units			1		02/04/21 09:44		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	55.0	mg/L	1.0	0.070	1	02/01/21 11:28	02/02/21 14:48	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/02/21 09:23	02/02/21 19:51	7440-36-0	
Arsenic	0.0022J	mg/L	0.0050	0.00078	1	02/02/21 09:23	02/02/21 19:51	7440-38-2	
Barium	0.53	mg/L	0.010	0.00071	1	02/02/21 09:23	02/02/21 19:51	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/02/21 09:23	02/02/21 19:51	7440-41-7	
Boron	0.19	mg/L	0.10	0.0052	1	02/02/21 09:23	02/02/21 19:51	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/02/21 09:23	02/02/21 19:51	7440-43-9	
Chromium	0.00067J	mg/L	0.010	0.00055	1	02/02/21 09:23	02/02/21 19:51	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/02/21 09:23	02/02/21 19:51	7440-48-4	
Lead	0.000082J	mg/L	0.0050	0.000036	1	02/02/21 09:23	02/02/21 19:51	7439-92-1	
Lithium	0.0025J	mg/L	0.030	0.00081	1	02/02/21 09:23	02/02/21 19:51	7439-93-2	
Molybdenum	0.0063J	mg/L	0.010	0.00069	1	02/02/21 09:23	02/02/21 19:51	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/02/21 09:23	02/02/21 19:51	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/02/21 09:23	02/02/21 19:51	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	01/26/21 07:45	01/26/21 10:57	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		01/22/21 16:45		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	3.5	mg/L	1.0	0.60	1		01/26/21 22:24	16887-00-6	
Fluoride	0.22	mg/L	0.10	0.050	1		01/26/21 22:24	16984-48-8	
Sulfate	14.2	mg/L	1.0	0.50	1		01/26/21 22:24	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 04, 07

Pace Project No.: 92517909

Sample: HGWC-126		Lab ID: 92517909005		Collected: 01/20/21 13:16		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 09:44		
pH	6.99	Std. Units			1		02/04/21 09:44		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	131	mg/L	1.0	0.070	1	02/01/21 11:28	02/01/21 21:50	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 19:57	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/02/21 09:23	02/02/21 19:57	7440-38-2	
Barium	0.25	mg/L	0.010	0.00071	1	02/02/21 09:23	02/02/21 19:57	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/02/21 09:23	02/02/21 19:57	7440-41-7	
Boron	ND	mg/L	0.10	0.0052	1	02/02/21 09:23	02/02/21 19:57	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/02/21 09:23	02/02/21 19:57	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/02/21 09:23	02/02/21 19:57	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/02/21 09:23	02/02/21 19:57	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/02/21 09:23	02/02/21 19:57	7439-92-1	
Lithium	0.0038J	mg/L	0.030	0.00081	1	02/02/21 09:23	02/02/21 19:57	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/02/21 09:23	02/02/21 19:57	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/02/21 09:23	02/02/21 19:57	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/02/21 09:23	02/02/21 19:57	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	01/26/21 07:45	01/26/21 10:59	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	472	mg/L	20.0	20.0	1		01/22/21 16:45		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	8.5	mg/L	1.0	0.60	1		01/26/21 23:09	16887-00-6	
Fluoride	0.44	mg/L	0.10	0.050	1		01/26/21 23:09	16984-48-8	
Sulfate	66.6	mg/L	1.0	0.50	1		01/26/21 23:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 BKG 04, 07
Pace Project No.: 92517909

Sample: EB-01		Lab ID: 92517909006		Collected: 01/20/21 14:00	Received: 01/21/21 11:30	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
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		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 04, 07
Pace Project No.: 92517909

QC Batch: 596653 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92517909001, 92517909002, 92517909003, 92517909004, 92517909005, 92517909006

METHOD BLANK: 3146677 Matrix: Water
Associated Lab Samples: 92517909001, 92517909002, 92517909003, 92517909004, 92517909005, 92517909006

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

LABORATORY CONTROL SAMPLE: 3146678

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3146679 3146681

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3146682 3146683

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 04, 07
Pace Project No.: 92517909

QC Batch: 596887 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92517909001, 92517909002, 92517909003, 92517909004, 92517909005, 92517909006

METHOD BLANK: 3147679 Matrix: Water
Associated Lab Samples: 92517909001, 92517909002, 92517909003, 92517909004, 92517909005, 92517909006

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

LABORATORY CONTROL SAMPLE: 3147680

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3147681 3147682

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 04, 07

Pace Project No.: 92517909

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 04, 07
Pace Project No.: 92517909

QC Batch: 594784 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92517909001, 92517909002, 92517909003, 92517909004, 92517909005, 92517909006

METHOD BLANK: 3138045 Matrix: Water
Associated Lab Samples: 92517909001, 92517909002, 92517909003, 92517909004, 92517909005, 92517909006

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

LABORATORY CONTROL SAMPLE: 3138046

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3138047 3138048

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

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 04, 07

Pace Project No.: 92517909

QC Batch: 594633	Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92517909001, 92517909003

METHOD BLANK: 3137200 Matrix: Water

Associated Lab Samples: 92517909001, 92517909003

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

LABORATORY CONTROL SAMPLE: 3137201

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

SAMPLE DUPLICATE: 3137203

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

SAMPLE DUPLICATE: 3137350

Parameter	Units	92517894002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	64.0	67.0	5	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 04, 07
Pace Project No.: 92517909

QC Batch: 594779 Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92517909002, 92517909004, 92517909005, 92517909006

METHOD BLANK: 3137995 Matrix: Water
Associated Lab Samples: 92517909002, 92517909004, 92517909005, 92517909006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	01/22/21 16:40	

LABORATORY CONTROL SAMPLE: 3137996

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	394	98	84-108	

SAMPLE DUPLICATE: 3137997

Parameter	Units	92517969001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

SAMPLE DUPLICATE: 3138171

Parameter	Units	92517909004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	289	270	7	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 04, 07

Pace Project No.: 92517909

QC Batch: 594878 Analysis Method: EPA 300.0 Rev 2.1 1993
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
 Laboratory: Pace Analytical Services - Asheville
 Associated Lab Samples: 92517909001, 92517909003, 92517909006

METHOD BLANK: 3138480 Matrix: Water
 Associated Lab Samples: 92517909001, 92517909003, 92517909006

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	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92517740005	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	ND	50	50	53.9	53.4	108	107	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	103	98	90-110	5	10		
Sulfate	mg/L	ND	50	50	55.4	54.9	111	110	90-110	1	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3138484 3138485

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92517704001	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	377	50	50	439	424	124	93	90-110	3	10	M6	
Fluoride	mg/L	0.23	2.5	2.5	ND	ND	-9	-9	90-110		10	M1	
Sulfate	mg/L	597	50	50	676	646	158	99	90-110	4	10	M6	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 BKG 04, 07

Pace Project No.: 92517909

QC Batch: 595172 Analysis Method: EPA 300.0 Rev 2.1 1993
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
 Laboratory: Pace Analytical Services - Asheville
 Associated Lab Samples: 92517909002, 92517909004, 92517909005

METHOD BLANK: 3139608 Matrix: Water
 Associated Lab Samples: 92517909002, 92517909004, 92517909005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	01/26/21 18:25	
Fluoride	mg/L	ND	0.10	0.050	01/26/21 18:25	
Sulfate	mg/L	ND	1.0	0.50	01/26/21 18:25	

LABORATORY CONTROL SAMPLE: 3139609

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.7	99	90-110	
Fluoride	mg/L	2.5	2.3	93	90-110	
Sulfate	mg/L	50	51.5	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3139610 3139611

Parameter	Units	92517999001		3139610		3139611		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result				
Chloride	mg/L	6.1	50	50	58.6	58.9	105	106	90-110	1	10
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	102	102	90-110	0	10
Sulfate	mg/L	5.0	50	50	59.1	59.4	108	109	90-110	1	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3139612 3139613

Parameter	Units	92517909004		3139612		3139613		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result				
Chloride	mg/L	3.5	50	50	56.5	56.6	106	106	90-110	0	10
Fluoride	mg/L	0.22	2.5	2.5	2.5	2.5	92	93	90-110	0	10
Sulfate	mg/L	14.2	50	50	67.4	67.7	106	107	90-110	1	10

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: HAMMOND AP-3 BKG 04, 07

Pace Project No.: 92517909

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 BKG 04, 07

Pace Project No.: 92517909

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92517909001	HGWA-43D				
92517909002	HGWC-125				
92517909003	HGWA-44D				
92517909004	HGWA-45D				
92517909005	HGWC-126				
92517909001	HGWA-43D	EPA 3010A	596653	EPA 6010D	596772
92517909002	HGWC-125	EPA 3010A	596653	EPA 6010D	596772
92517909003	HGWA-44D	EPA 3010A	596653	EPA 6010D	596772
92517909004	HGWA-45D	EPA 3010A	596653	EPA 6010D	596772
92517909005	HGWC-126	EPA 3010A	596653	EPA 6010D	596772
92517909006	EB-01	EPA 3010A	596653	EPA 6010D	596772
92517909001	HGWA-43D	EPA 3005A	596887	EPA 6020B	597015
92517909002	HGWC-125	EPA 3005A	596887	EPA 6020B	597015
92517909003	HGWA-44D	EPA 3005A	596887	EPA 6020B	597015
92517909004	HGWA-45D	EPA 3005A	596887	EPA 6020B	597015
92517909005	HGWC-126	EPA 3005A	596887	EPA 6020B	597015
92517909006	EB-01	EPA 3005A	596887	EPA 6020B	597015
92517909001	HGWA-43D	EPA 7470A	594784	EPA 7470A	595259
92517909002	HGWC-125	EPA 7470A	594784	EPA 7470A	595259
92517909003	HGWA-44D	EPA 7470A	594784	EPA 7470A	595259
92517909004	HGWA-45D	EPA 7470A	594784	EPA 7470A	595259
92517909005	HGWC-126	EPA 7470A	594784	EPA 7470A	595259
92517909006	EB-01	EPA 7470A	594784	EPA 7470A	595259
92517909001	HGWA-43D	SM 2450C-2011	594633		
92517909002	HGWC-125	SM 2450C-2011	594779		
92517909003	HGWA-44D	SM 2450C-2011	594633		
92517909004	HGWA-45D	SM 2450C-2011	594779		
92517909005	HGWC-126	SM 2450C-2011	594779		
92517909006	EB-01	SM 2450C-2011	594779		
92517909001	HGWA-43D	EPA 300.0 Rev 2.1 1993	594878		
92517909002	HGWC-125	EPA 300.0 Rev 2.1 1993	595172		
92517909003	HGWA-44D	EPA 300.0 Rev 2.1 1993	594878		
92517909004	HGWA-45D	EPA 300.0 Rev 2.1 1993	595172		
92517909005	HGWC-126	EPA 300.0 Rev 2.1 1993	595172		
92517909006	EB-01	EPA 300.0 Rev 2.1 1993	594878		

REPORT OF LABORATORY ANALYSIS

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Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
 Page 1 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
 Upon Receipt

Client Name:
GA Power

Project #:
WO# : 92517909

Courier: Fed Ex UPS USPS Client
 Commercial Paet Other: _____



92517909

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: **11/21/21 C/g**

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Thermometer: IR Gun ID: **233** Type of Ice: Wet Blue None

Yes No N/A

Cooler Temp: **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)?

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

Yes No

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Document Name:
 Sample Condition Upon Receipt(SCUR)
 Document No.:
 F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
 Page 2 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

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

Project #

W0# : 92517909

PM: KLH1

Due Date: 02/04/21

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

CLIENT: GA-GA Power

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

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

BPIN

pH Adjustment Log for Preserved Samples

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information		Section B Required Project Information		Section C Invoice Information	
Company: GA Power	Address: Atlanta, GA	Report To: SCS Contacts	Copy To: Geosynlec Contacts	Address: Pace Quality Reference Pace Project Manager: Kevin Herring Pace Invoice #: 10939-4	Company Name: Southern Co.
Requested Due Date/TAT: 10 day	Project Name: Plant Hammond AP-3 BKG 04, 07	Purchase Order No.:	Project Number: GWS681	Requested Analysis Filtered (Y/N)	REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER ccrk
Site Location: STATE: GA	Temperature: °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)	Page: 1 of 3

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE	Section E Required Project Information MATRIX CODE (see valid codes to left)	Section F Sample Information SAMPLE TYPE (G=GRAB C=COMP)	Section G Collection Information DATE	Section H Sample Temperature DATE	Section I Containers DATE	Section J Preservatives DATE	Section K Analysis Test	Section L Residual Chlorine (Y/N)	Section M pH	Section N Temperature	Section O Received on Ice	Section P Custody Sealed Cooler	Section Q Samples Intact	
															DATE
1	HQWA-43D	WT G	G	11/9/14	12:45	5	2	3	X	X	X	X	X	X	X
2	HQWA-44D	WT G	G	11/9/14	12:45	5	2	3	X	X	X	X	X	X	X
3	HQWA-45D	WT G	G	11/9/14	12:45	5	2	3	X	X	X	X	X	X	X
4	HQWC-125	WT G	G	11/20/14	13:10	5	2	3	X	X	X	X	X	X	X
5	HQWG-126	WT G	G	11/20/14	13:10	5	2	3	X	X	X	X	X	X	X
6	EB-01	WT G	G	11/20/14	13:10	5	2	3	X	X	X	X	X	X	X
7															
8															
9															
10															
11															
12															

Additional Comments: Please note dry wells, state though any wells not sampled, and note when the test results for the event has been taken.
 Full App III & IV Metals - Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, U, Hg, Mo, Se, Ti
 1 sample set for HQWA-43D and HQWA-44D, reported for AP-12024 SCOS
 1/20/14, 13:20
 1/20/14, 13:20
 1/20/14, 13:20
 1/20/14, 13:20

Relinquished By / Affiliation: [Signature]
Accepted By / Affiliation: [Signature]
Sampler Name and Signature: [Signature]
Date Signed: 1/20/14

Temperature: _____ °C
Received on Ice: _____ (Y/N)
Custody Sealed Cooler: _____ (Y/N)
Samples Intact: _____ (Y/N)

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
Required Client Information

Company: **GA Power**
Address: **Atlanta, GA**

Request To: **SCS Contacts**
Copy To: **Geosyntec Contacts**

Email To: **SCS Contacts**
Purchase Order No.:

Project Name: **Plant Hammond AP-3 BKG 04, 07**
Project Number: **GW6581**

Requested Due Date/TAT: **10 Day**

Section B
Required Project Information

Address: **Southern Co.**
Company Name: **Southern Co.**

Address: **111**
City/State: **GA**

Phone: **404-521-1234**
Fax: **404-521-1234**

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

Section C
Invoice Information

Company Name: **Southern Co.**
Address: **111**
City/State: **GA**

Invoice Number: **10839-4**

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER

UST RCRA OTHER CCR

Site Location: **GA**

Section D
Required Client Information

ITEM #	Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No/ Lab ID.			
			DATE	TIME								H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other					Chloride, Fluoride, Sulfate	TDS	*Full App. III&IV Metals
1	HGWA-43D	WT G								5	2	3													
2	HGWA-44D	WT G	1/19	1702			15			5	2	3	X	X	X	X	X	X	X	X	X	X	X		
3	HGWA-45D	WT G								5	2	3	X	X	X	X	X	X	X	X	X	X	X		
4	HGWC-125	WT G								5	2	3	X	X	X	X	X	X	X	X	X	X	X		
5	HGWC-126	WT G								5	2	3	X	X	X	X	X	X	X	X	X	X	X		
6	EB-01	WT G								5	2	3	X	X	X	X	X	X	X	X	X	X	X		
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS

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

*Full App. III & IV Metals-Sr, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, U, Hg Mo, Se, Ti

1 sample set for HGWA-43D and HGWA-44D recorded for AP-1213. 1 sample set for EB-01, reported for AP-1213/1213A SDCs

RELINQUISHED BY / AFFILIATION: **[Signature]** DATE: **1/20/21** TIME: **1000** ACCEPTED BY / AFFILIATION: **[Signature]** DATE: **1/24/21** TIME: **1600**

SAMPLER NAME AND SIGNATURE: **Chad Russo**

PRINT Name of SAMPLER: **Chad Russo**

SIGNATURE of SAMPLER: **[Signature]**

DATE Signed (MM/DD/YY): **1/19/2021**

Temp in °C: _____

Received on Ice (Y/N): _____

Custody Sealed Cooler (Y/N): _____

Samples Intact (Y/N): _____



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information Company: GA Power Address: Atlanta, GA		Section B Required Project Information Report To: SCS Contacts Copy To: Geosyntec Contacts		Section C Invoice Information Address: Southern Co		REGULATORY AGENCY NPDES <input type="checkbox"/> GROUND WAT <input type="checkbox"/> DRINKING WATER UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER COM <input type="checkbox"/>	
Email To: SCS Contacts Phone: _____ Requested Due Date/TAT: to Day		Purchase Order No.: _____ Project Name: Plant Hammond AP-3 BKG 04_07 Project Number: GW6561		Company Name: _____ Address: _____ Price Quote Reviewer: _____ Price Project Manager: Kevin Herring Price Quote # 10839-4		Site Location: _____ STATE: GA	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATERIAL CODE WATER WASTE SLURRY SOLID/LIQUID DIL WVP AIR OTHER TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analytic Filtered (Y/N)	Residual Chlorine (Y/N)	pH = 7.97		
					DATE	TIME	DATE			TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃					Methanol	Other
1	HGWA-43D																					
2	HGWA-44D																					
3	HGWA-45D																					
4	HGWC-125																					
5	HGWC-126																					
6	EB-01																					
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS				RELINQUISHED BY / AFFILIATION				ACCEPTED BY / AFFILIATION				SAMPLE CONDITIONS			
Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken. *Full App. III & IV Metals-Sb, As, Ba, Be, B, Cd, Cr, Co, Pb, U, Hg, Mo, Se, Tl 1 sample set for HGWA-43D and HGWA-44D, reported for AP-1273, 1 sample set for EG-01, reported for AP-1273/4 SDCs				1/20/21				1/20/21				Temp in °C _____ Received on ice (Y/N) _____ Custody Sealed Cooler (Y/N) _____ Samples Intact (Y/N) _____			
SAMPLER NAME AND SIGNATURE				DATE				DATE				DATE			
PRINT Name of SAMPLER: _____				1/20/21				1/20/21				1/20/21			
SIGNATURE of SAMPLER: _____				1/20/21				1/20/21				1/20/21			

February 15, 2021

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

RE: Project: HAMMOND AP-3 BKG 04, 07 RADS
Pace Project No.: 92517869

Dear Joju Abraham:

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

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-3 BKG 04, 07 RADS
Pace Project No.: 92517869

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-3 BKG 04, 07 RADS

Pace Project No.: 92517869

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92517869001	HGWA-43D	Water	01/19/21 16:45	01/21/21 11:30
92517869002	HGWC-125	Water	01/20/21 13:20	01/21/21 11:30
92517869003	HGWA-44D	Water	01/19/21 17:42	01/21/21 11:30
92517869004	HGWA-45D	Water	01/20/21 11:11	01/21/21 11:30
92517869005	HGWC-126	Water	01/20/21 13:16	01/21/21 11:30
92517869006	EB-01	Water	01/20/21 14:00	01/21/21 11:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 BKG 04, 07 RAD5

Pace Project No.: 92517869

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92517869001	HGWA-43D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92517869002	HGWC-125	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92517869003	HGWA-44D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92517869004	HGWA-45D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92517869005	HGWC-126	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92517869006	EB-01	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 04, 07 RADJS
Pace Project No.: 92517869

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92517869001	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	
92517869002	HGWC-125					
EPA 9315	Radium-226	0.456 ± 0.275 (0.371) C:95% T:NA	pCi/L		02/09/21 08:41	
EPA 9320	Radium-228	0.552 ± 0.416 (0.820) C:71% T:92%	pCi/L		02/12/21 11:38	
Total Radium Calculation	Total Radium	1.01 ± 0.691 (1.19)	pCi/L		02/12/21 14:52	
92517869003	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	
92517869004	HGWA-45D					
EPA 9315	Radium-226	0.334 ± 0.285 (0.518) C:85% T:NA	pCi/L		02/09/21 08:42	
EPA 9320	Radium-228	0.348 ± 0.426 (0.906) C:70% T:91%	pCi/L		02/12/21 11:38	
Total Radium Calculation	Total Radium	0.682 ± 0.711 (1.42)	pCi/L		02/12/21 14:52	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 BKG 04, 07 RADDS

Pace Project No.: 92517869

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92517869005	HGWC-126					
EPA 9315	Radium-226	0.661 ± 0.362 (0.536) C:86% T:NA	pCi/L		02/09/21 08:43	
EPA 9320	Radium-228	0.324 ± 0.421 (0.899) C:73% T:93%	pCi/L		02/12/21 11:38	
Total Radium Calculation	Total Radium	0.985 ± 0.783 (1.44)	pCi/L		02/12/21 14:52	
92517869006	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

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 04, 07 RADS

Pace Project No.: 92517869

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-43D Lab ID: 92517869001 Collected: 01/19/21 16:45 Received: 01/21/21 11:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	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

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 04, 07 RADS

Pace Project No.: 92517869

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-125 Lab ID: 92517869002 Collected: 01/20/21 13:20 Received: 01/21/21 11:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.456 ± 0.275 (0.371) C:95% T:NA	pCi/L	02/09/21 08:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.552 ± 0.416 (0.820) C:71% T:92%	pCi/L	02/12/21 11:38	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.01 ± 0.691 (1.19)	pCi/L	02/12/21 14:52	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 04, 07 RADS

Pace Project No.: 92517869

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-44D Lab ID: 92517869003 Collected: 01/19/21 17:42 Received: 01/21/21 11:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	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	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 04, 07 RADS

Pace Project No.: 92517869

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-45D Lab ID: 92517869004 Collected: 01/20/21 11:11 Received: 01/21/21 11:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.334 ± 0.285 (0.518) C:85% T:NA	pCi/L	02/09/21 08:42	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.348 ± 0.426 (0.906) C:70% T:91%	pCi/L	02/12/21 11:38	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.682 ± 0.711 (1.42)	pCi/L	02/12/21 14:52	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 04, 07 RADS

Pace Project No.: 92517869

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-126 Lab ID: 92517869005 Collected: 01/20/21 13:16 Received: 01/21/21 11:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.661 ± 0.362 (0.536) C:86% T:NA	pCi/L	02/09/21 08:43	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.324 ± 0.421 (0.899) C:73% T:93%	pCi/L	02/12/21 11:38	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.985 ± 0.783 (1.44)	pCi/L	02/12/21 14:52	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 04, 07 RADS

Pace Project No.: 92517869

Sample: EB-01 **Lab ID: 92517869006** 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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 04, 07 RADS

Pace Project No.: 92517869

QC Batch:	433216	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92517869002, 92517869004, 92517869005

METHOD BLANK: 2091814 Matrix: Water

Associated Lab Samples: 92517869002, 92517869004, 92517869005

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 04, 07 RADS

Pace Project No.: 92517869

QC Batch: 432561

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92517869001, 92517869003, 92517869006

METHOD BLANK: 2088957

Matrix: Water

Associated Lab Samples: 92517869001, 92517869003, 92517869006

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.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 BKG 04, 07 RADS

Pace Project No.: 92517869

QC Batch: 433326

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92517869001, 92517869002, 92517869003, 92517869004, 92517869005, 92517869006

METHOD BLANK: 2092294

Matrix: Water

Associated Lab Samples: 92517869001, 92517869002, 92517869003, 92517869004, 92517869005, 92517869006

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.

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QUALIFIERS

Project: HAMMOND AP-3 BKG 04, 07 RADS

Pace Project No.: 92517869

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE


Project: HAMMOND AP-3 BKG 04, 07 RAD5

Pace Project No.: 92517869

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92517869001	HGWA-43D	EPA 9315	433326		
92517869002	HGWC-125	EPA 9315	433326		
92517869003	HGWA-44D	EPA 9315	433326		
92517869004	HGWA-45D	EPA 9315	433326		
92517869005	HGWC-126	EPA 9315	433326		
92517869006	EB-01	EPA 9315	433326		
92517869001	HGWA-43D	EPA 9320	432561		
92517869002	HGWC-125	EPA 9320	433216		
92517869003	HGWA-44D	EPA 9320	432561		
92517869004	HGWA-45D	EPA 9320	433216		
92517869005	HGWC-126	EPA 9320	433216		
92517869006	EB-01	EPA 9320	432561		
92517869001	HGWA-43D	Total Radium Calculation	434357		
92517869002	HGWC-125	Total Radium Calculation	434825		
92517869003	HGWA-44D	Total Radium Calculation	434357		
92517869004	HGWA-45D	Total Radium Calculation	434825		
92517869005	HGWC-126	Total Radium Calculation	434825		
92517869006	EB-01	Total Radium Calculation	434357		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: October 28, 2020 Page 1 of 2
	Document No.:	Issuing Authority:
	F-CAR-CS-033-Rev.07	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# : 92517869



92517869

Courier: Fed Ex UPS USPS Client
 Commercial Pace Other: _____

Custody Seal Present? Yes No Seals Intact? .. Yes No

Date/Initials Person Examining Contents: *11/21/21 CJK*

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

IR Gun ID:

233

Type of Ice:

Wet

Blue

None

Cooler Temp:

4.1

Correction Factor:

Add/Subtract (°C)

-0.2

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C):

3.9

USDA Regulated Soil (N/A, water sample)

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

Yes No

Did samples originate from a foreign source (Internationally, including Hawaii and Puerto Rico)?

Yes No

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



Document Name:
Sample Condition Upon Receipt(SCUR)
 Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
 Page 2 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

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

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

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

Project #

WO#: 92517869

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-)	WGJU-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 No2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9, 3-9, 7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

BPIN

pH Adjustment Log for Preserved Samples

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 3

Section A Required Client Information Company: GA Power Address: Atlanta, GA Email To: SCS Contacts Phone: <input type="checkbox"/> 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-3 BKG 04, 07 Project Number: GW5581		Section C Invoice Information Address: Southern Co. Company Name: Southern Co. Address: Pace Quote Reference: Kevin Herring Pace Project Manager: Kevin Herring Pace Quote # 10839-4	
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER CER			Site Location: <u>GA</u> STATE: <u>GA</u>		

ITEM #	Section D Required Client Information	Valid Matrix Codes CODE MATERIALS WATER WASTE WATER PRODUCT SOIL/SOLID OIL WIFE AIR OR/HEM TISSE	MATRIX CODE (See valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Preservatives		Analysis Test		Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH = <u>7.68</u> pH = <u>6.23</u> pH = <u>6.23</u>			
												Y	N	Y	N				Y	N	
1	HGWA-43D		WT G	G	1/19/12	1245			7.68	5	2	3			X	X	X	X			
2	HGWA-44D		WT G	G						5	2	3			X	X	X	X			
3	HGWA-45D		WT G	G						5	2	3			X	X	X	X			
4	HGWA-125		WT G	G	1/20/12	1310		18.15		5	2	3			X	X	X	X			
5	HGWA-126		WT G	G						4	2	3			X	X	X	X			
6	EB-01		WT G	G						5	2	3			X	X	X	X			
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken. *Full App. III & IV Metals-Sb, As, Ba, Bi, B, Cd, Ca, Cr, Cu, Pb, Li, Hg, Mn, Se, Si, Tl		RELINQUISHED BY / AFFILIATION [Signature] / GBE		DATE 1/21/12		TIME 1330		ACCEPTED BY / AFFILIATION [Signature] / Pace Analytical		DATE 1/21/12		TIME 1136		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: CONOR SEAN SIGNATURE of SAMPLER: [Signature]		DATE Signed 1/20/12													



CHAIN-OF-CUSTODY / Analytical Request Document

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

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

Section B Required Project Information
 Report To: SCS Contacts
 Copy To: Geosyntec Contacts

Section C Invoicing Information
 Attention: Southern Co.
 Company Name: Southern Co.
 Address:
 Project Name: Plant Hammond AP-3 BKG 04, 07
 Reference:
 Kevin Herring
 Manual:
 Pass Profile #: 10839-4

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER (see
 Site Location:
 STATE: GA

Page: 2 of 3

Section D Valid Matrix Codes
 MATRIX CODE (see valid codes to left)
 SAMPLE TYPE (G-GRAB C-COMP)

Section E Additional Comments
 Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.
 Full App III&IV Metals SD, As Ba, Be, B, Cd, Cr, Co, Pb, U, Vg, Mo, Se, Tl
 1 sample set for HQWA-43D and HQWA-44D, reported for AP-12/3
 1 sample set for EB-01, reported for AP-12/3/4 SDOs

Requested Analysis Filtered (Y/N)
 Residual Chlorine (Y/N)
 pH = 7.86
 Pace Project No./ Lab I.D. 62517864

ITEM #	MATRIX CODE	SAMPLE TYPE	COLLECTED			DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Requested Analysis Filtered (Y/N)				
			DATE	TIME	DATE					TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH			Na ₂ S ₂ O ₃	Methanol	Other	
1	HQWA-43D	WT G	1/19	179L			15	5	2	3						X	X	X	X		
2	HQWA-44D	WT G						5	2	3						X	X	X	X		
3	HQWA-45D	WT G						5	2	3						X	X	X	X		
4	HQWC-125	WT G						5	2	3						X	X	X	X		
5	HQWC-126	WT G						5	2	3						X	X	X	X		
6	EB-01	WT G						5	2	3						X	X	X	X		
7																					
8																					
9																					
10																					
11																					
12																					

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
[Signature]	1/20/21	1600	[Signature]	1/21/21	1600	
[Signature]	1/21/21	1136	[Signature]	1/21/21	1136	
[Signature]	1/21/21	1336	[Signature]	1/21/21	1336	

SAMPLER NAME AND SIGNATURE
 PRINT NAME OF SAMPLER: Chad Russb
 SIGNATURE OF SAMPLER: [Signature]

DATE SIGNED (MM/DD/YY): 1/19/2021

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

Important Note: By signing this form you are accepting Pace's H2O Day Payment terms and agreeing to base charges of 1.5% per month for any invoices not paid within 30 days

FALL-0-020rev 07.16-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
Required Client Information

Company: GA Power
Address: Atlanta, GA
Email To: SCS Contacts
Phone: _____
Requested Due Date/TAT: to buy

Section B
Required Project Information

Report To: SCS Contacts
Copy To: Geosyntec Contacts
Purchase Order No.: _____
Project Name: Plant Hammond AP-3 BKG 04_07
Project Number: QW6581

Section C
Invoice Information

Agency: Southern Co.
Company Name: _____
Address: _____
Page Date: _____
Requester: Kevin Herring
Pace Project Manager: _____
Pace Profile #: 10839-4

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER CWH

Site Location: _____
STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Requested Analysis Filtered (Y/N)				Residual Chlorine (Y/N)																			
					DATE	TIME	DATE			UNPRESERVED	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol	Other	Chloride, Fluoride, Sulfate	TDS		*Full App. III&IV Metals	RAD 226/228																	
1	HGWA-43D	WT G	WT G	WT G	1/20/21	11:11	15	5	2	3																													
2	HGWA-44D	WT G	WT G	WT G	1/20/21	11:11	15	5	2	3																													
3	HGWA-45D	WT G	WT G	WT G	1/20/21	11:11	15	5	2	3																													
4	HGWC-125	WT G	WT G	WT G	1/20/21	13:16	15:00	5	2	3																													
5	HGWC-126	WT G	WT G	WT G	1/20/21	13:16	15:00	5	2	3																													
6	EB-01	WT G	WT G	WT G	1/20/21	13:16	15:00	5	2	3																													

92517664
Pace Project No./Lab ID.

ADDITIONAL COMMENTS
Please note dry wells, stink through any wells not sampled, and note when the last sample for the event has been taken.
*Full App. III & IV Metals: Sp. Ar, Ba, Be, B, Cd, Ca, Cr, Co, Pb, U, Hg, Mg, Se, Sn, Ti

1 sample set for HGWA-43D and HGWA-44D, reported for AP-1023.
1 sample set for EB-01, reported for AP-1023A SOCKS

RELOQUISHED BY / AFFILIATION
Date: 1/20/21
Signature: [Signature]

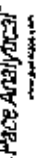
ACCEPTED BY / AFFILIATION
Date: 1/20/21
Time: 1600
Signature: [Signature]

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Chad Russo
SIGNATURE of SAMPLER: [Signature]
DATE Signed: 1/20/2021

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

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

Quality Control Sample Performance Assessment



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

Analyt Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID: 2091814
 MB Concentration: 0.138
 MB 2 Sigma CSU: 0.328
 MB MDC: 0.728
 MB Numerical Performance Indicator: 0.83
 MB Status vs Numerical Indicator: Pass
 MB Status vs MDC: Pass

Laboratory Control Sample Assessment		LCS01(Y or N)?	Y
Count Date:		LCS058611	2/12/2021
Spike I.D.:		LCS06611	21-003
Delay Corrected Spike Concentration (pCi/mL):			38.853
Volume Used (mL):			0.10
Aliquot Volume (L, g, F):			0.812
Target Conc. (pCi/L, g, F):			4.783
Uncertainty (Calculated):			0.234
Result (pCi/L, g, F):			4.855
LCS0-CSD 2 Sigma CSU (pCi/L, g, F):			1.066
Numerical Performance Indicator:			0.90
Percent Recovery:			97.36%
Status vs Numerical Indicator:			N/A
Status vs Recovery:			Pass
Upper % Recovery Limit:			135%
Lower % Recovery Limit:			60%

Sample Matrix Spike Control Assessment

Sample Collection Date:
 Sample I.D.:
 Sample MS I.D.:
 Sample MSD I.D.:
 Spike I.D.:

MS/MSD Decay Corrected Spike Concentration (pCi/mL):
 Spike Volume Used in MS (mL):
 Spike Volume Used in MSD (mL):
 MS Aliquot (L, g, F):
 MS Target Conc. (pCi/L, g, F):
 MSD Aliquot (L, g, F):
 MSD Target Conc. (pCi/L, g, F):
 MS Spike Uncertainty (calculated):
 MSD Spike Uncertainty (calculated):
 MS/MSD Spike Status vs Recovery:

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 Limit:
 MS/MSD Lower % Recovery Limit:

Duplicate Sample Assessment

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

Enter Duplicate sample IDs if other than LCS0-CSD in the space below:

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:
 Sample MS I.D.:
 Sample MSD I.D.:
 Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):
 Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):
 Duplicate Numerical Performance Indicator
 Duplicate Numerical Performance Indicator
 Matrix Spike Status vs Numerical Indicator
 Matrix Spike Duplicate Status vs Numerical Indicator
 MS/MSD Duplicate Status vs RPD
 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.

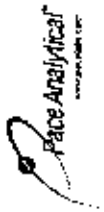
Comments:

Opt 2/24/21

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JJY
Date: 2/8/2021
Worksheet: 58638
Matrix: QW



Method Blank Assessment	
MB Sample ID	2092294
MB Concentration	0.140
MB 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	
Count Date	LCSD, % of MV?
2/9/2021	LCSD 58638
2/9/2021	25/2021
Count Date	Y
Sample I.D.	19-033
Decay Corrected Spike Concentration (pCi/mL)	24.040
Volume Used (mL)	0.10
Aliquot Volume (L, g, F)	0.507
Target Conc. (pCi/L, g, F)	4.765
Uncertainty (Calculated)	0.057
Result (pCi/L, g, F)	4.773
LCSD/Counting Uncertainty (pCi/L, g, F)	0.809
Numerical Performance Indicator	0.02
Percent Recovery	100.16%
Status vs Numerical Indicator	N/A
Status vs Recovery	Pass
Upper % Recovery Limit	125%
Lower % Recovery Limit	75%

Duplicate Sample Assessment	
Sample I.D.	LC558638
Duplicate Sample I.D.	LCSD 58638
Sample Result (pCi/L, g, F)	4.773
Sample Duplicate Result (pCi/L, g, F)	0.609
Sample Duplicate Counting Uncertainty (pCi/L, g, F)	5.375
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	0.863
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator	-0.969
(Based on the LCSD/Counting Uncertainty) Duplicate RPD	12.37%
Duplicate Status vs Numerical Indicator	N/A
Duplicate Status vs RPD	Pass
% RPD Limit	25%

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

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

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

Comments:

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Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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



Method Blank Assessment	
MB Sample ID	2092294
MB Concentration	0.150
%B Counting Uncertainty	0.192
MB MDC	0.387
MB Numerical Performance Indicator	1.53
MB Status vs Numerical Indicator	N/A
MB Status vs MDC	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	N
LCS58638	LCS058638
Count Date	2/5/2021
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 (Calculation)	0.057
Result (pCi/L, g, F)	4.773
LCS/LCSO Counting Uncertainty (pCi/L, g, F)	0.806
Numerical Performance Indicator	0.92
Percent Recovery	100.16%
Status vs Numerical Indicator	N/A
Status vs Recovery	Pass
Upper % Recovery Limits	125%
Lower % Recovery Limits	75%

Duplicate Sample Assessment	
Sample I.D.	92517856001
Duplicate Sample I.D.	92517856001DUP
Sample Result (pCi/L, g, F)	0.209
Sample Duplicate Result (pCi/L, g, F)	0.222
Sample Duplicate Counting Uncertainty (pCi/L, g, F)	0.681
Are sample and/or duplicate results below RL?	0.370
Duplicate Numerical Performance Indicator	See Below ##
Duplicate RPD	-4.171
Duplicate Status vs Numerical Indicator	108.17%
Duplicate Status vs RPD	N/A
% RPD Limit	Fail*** 25%

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

Comments:

NI C3 accepted
Nu 2/9/21

***Batch must be reprocessed due to unacceptable precision.

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

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

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 2/2/2021
Worksheet: 58538
Matrix: WWT

Method Blank Assessment	
MB Sample ID	2089957
MB Concentration:	0.423
MB 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	
Count Date:	2/4/2021
Spike I.D.	20-030
Decay Corrected Spike Concentration (pCi/mL)	36.635
Volume Used (mL)	0.10
Aliquot Volume (L, g, F)	0.803
Target Conc. (pCi/L, g, F)	4.563
Uncertainty (Calculated):	0.224
Result (pCi/L, g, F)	2.734
LCS/LCSD 2 Sigma CSU (pCi/L, g, F)	0.942
Numerical Performance Indicator:	-3.70
Percent Recovery:	99.92%
Status vs Numerical Indicator:	Fail**
Status vs Recovery:	Pass
Upper % Recovery Limit:	135%
Lower % Recovery Limit:	60%

Duplicate Sample Assessment	
Sample I.D.	LCS59539
Duplicate Sample I.D.	LCS58538
Sample Result (pCi/L, g, F)	2.734
Sample Result 2 Sigma CSU (pCi/L, g, F)	0.842
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
Duplicate (Percent Recoveries) Duplicate RPD:	13.75%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	24%

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

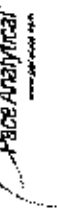
Comments:

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

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: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limit: MS/MSD Lower % Recovery Limit:		

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:

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Method Blank Assessment

MB Sample ID
MB Concentration:
MB MDC:
MB Numerical Performance Indicator:
MB Status vs Numerical Indicator:
MB Status vs MDC:

Laboratory Control Sample Assessment

LCS ID (Y or N)?	Y
LCS58538	
2/8/2021	2/8/2021
Count Date:	2/8/2021
Spike I.D.:	23-030
Decay Corrected Spike Concentration (pCi/mL):	36.590
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.809
Target Conc. (pCi/L, g, F):	4.357
Uncertainty (Calculated):	0.223
Result (pCi/L, g, F):	4.275
Numerical Performance Indicator:	1.024
Percent Recovery:	-0.53
Status vs Numerical Indicator:	93.60%
Upper % Recovery Limits:	Pass
Lower % Recovery Limits:	135%
	60%

Duplicate Sample Assessment

Sample I.D.	Duplicate Sample I.D.	Sample Result (pCi/L, g, F)	Duplicate Result (pCi/L, g, F)	Are sample and/or duplicate results below RL?
LCS58538	LCS58538	4.275	4.275	Duplicate Numerical Performance Indicator: -0.192
1.024	1.024	4.409	4.409	Duplicate RPD: 3.53%
1.024	1.024	1.024	1.024	Duplicate Status vs Numerical Indicator: Pass
				Duplicate Status vs RPD: Pass
				% RPD Limit: 35%

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

Sample Matrix Spike Control Assessment

Sample Collection Date:
Sample I.D.
Sample MS I.D.
Sample MSD I.D.
Spike I.D.:

MS/MSD Decay Corrected Spike Concentration (pCi/mL):
Spike Volume Used in MS (mL):
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:

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:
MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:
% RPD Limit:

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

Comments:

Handwritten signature/initials

March 2021

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.: 92526541

Dear Kelley Sharpe:

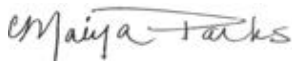
Enclosed are the analytical results for sample(s) received by the laboratory on March 09, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Ben Hodges, Georgia Power
Warren Johnson, ARCADIS - Atlanta



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526541

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

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SAMPLE SUMMARY

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526541

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92526541001	H-SCC NBR	Water	03/08/21 17:50	03/09/21 15:44
92526541002	H-SCC E41	Water	03/08/21 16:20	03/09/21 15:44
92526541003	H-SCC	Water	03/08/21 15:30	03/09/21 15:44

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SAMPLE ANALYTE COUNT

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526541

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92526541001	H-SCC NBR	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		EPA 7470A	VB	1	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
92526541002	H-SCC E41	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		EPA 7470A	VB	1	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
92526541003	H-SCC	EPA 6010D	KH	4	PASI-GA
		EPA 6020B	CW1	3	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2450C-2011	ALW	1	PASI-GA
		EPA 9040C	AW1	1	PASI-GA
		SM 2320B-2011	ECH	3	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526541

Sample: H-SCC NBR	Lab ID: 92526541001	Collected: 03/08/21 17:50	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	0.78	mg/L	0.20	1	03/11/21 10:50	03/12/21 04:16	7440-09-7	
Sodium	1.8	mg/L	1.0	1	03/11/21 10:50	03/12/21 04:16	7440-23-5	
Calcium	15.3	mg/L	1.0	1	03/11/21 10:50	03/12/21 04:16	7440-70-2	
Magnesium	3.1	mg/L	0.050	1	03/11/21 10:50	03/12/21 04:16	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.061	mg/L	0.040	1	03/11/21 12:04	03/11/21 17:12	7440-42-8	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 17:12	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 17:12	7439-98-7	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	1	03/10/21 13:05	03/11/21 11:28	7439-97-6	
2540C Total Dissolved Solids								
Analytical Method: SM 2450C-2011								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	51.0	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 22:48		H3,H6
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	42.6	mg/L	5.0	1		03/15/21 16:45		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/15/21 16:45		
Alkalinity, Total as CaCO3	42.6	mg/L	5.0	1		03/15/21 16:45		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	1.3	mg/L	1.0	1		03/11/21 23:34	16887-00-6	R1
Fluoride	ND	mg/L	0.10	1		03/11/21 23:34	16984-48-8	M1,R1
Sulfate	9.8	mg/L	1.0	1		03/11/21 23:34	14808-79-8	M1,R1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond
 Pace Project No.: 92526541

Sample: H-SCC E41		Lab ID: 92526541002		Collected: 03/08/21 16:20	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	0.74	mg/L	0.20	1	03/11/21 10:50	03/12/21 04:21	7440-09-7	
Sodium	1.8	mg/L	1.0	1	03/11/21 10:50	03/12/21 04:21	7440-23-5	
Calcium	16.3	mg/L	1.0	1	03/11/21 10:50	03/12/21 04:21	7440-70-2	M1
Magnesium	3.3	mg/L	0.050	1	03/11/21 10:50	03/12/21 04:21	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA						
Boron	0.063	mg/L	0.040	1	03/11/21 12:04	03/11/21 17:18	7440-42-8	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 17:18	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 17:18	7439-98-7	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA						
Mercury	ND	mg/L	0.00020	1	03/10/21 13:05	03/11/21 11:37	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	63.0	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	7.2	Std. Units	0.10	1		03/11/21 22:25		H3,H6
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville						
Alkalinity,Bicarbonate (CaCO3)	45.2	mg/L	5.0	1		03/15/21 17:14		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/15/21 17:14		
Alkalinity, Total as CaCO3	45.2	mg/L	5.0	1		03/15/21 17:14		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	1.3	mg/L	1.0	1		03/12/21 00:49	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 00:49	16984-48-8	
Sulfate	10.1	mg/L	1.0	1		03/12/21 00:49	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526541

Sample: H-SCC	Lab ID: 92526541003	Collected: 03/08/21 15:30	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	0.97	mg/L	0.20	1	03/11/21 10:50	03/12/21 04:50	7440-09-7	
Sodium	2.3	mg/L	1.0	1	03/11/21 10:50	03/12/21 04:50	7440-23-5	
Calcium	18.1	mg/L	1.0	1	03/11/21 10:50	03/12/21 04:50	7440-70-2	
Magnesium	3.3	mg/L	0.050	1	03/11/21 10:50	03/12/21 04:50	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.066	mg/L	0.040	1	03/11/21 12:04	03/11/21 17:24	7440-42-8	
Lithium	ND	mg/L	0.030	1	03/11/21 12:04	03/11/21 17:24	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	03/11/21 12:04	03/11/21 17:24	7439-98-7	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	1	03/10/21 13:05	03/11/21 11:40	7439-97-6	
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	7.2	Std. Units	0.10	1		03/11/21 22:18		H3,H6
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	49.7	mg/L	5.0	1		03/15/21 17:23		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1		03/15/21 17:23		
Alkalinity, Total as CaCO3	49.7	mg/L	5.0	1		03/15/21 17:23		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	1.6	mg/L	1.0	1		03/12/21 01:04	16887-00-6	
Fluoride	ND	mg/L	0.10	1		03/12/21 01:04	16984-48-8	
Sulfate	11.5	mg/L	1.0	1		03/12/21 01:04	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526541

QC Batch: 605887 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92526541001, 92526541002, 92526541003

METHOD BLANK: 3191972 Matrix: Water

Associated Lab Samples: 92526541001, 92526541002, 92526541003

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		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result					
Calcium	mg/L	16.3	1	17.0	1	17.1	67	74	75-125	0	20 M1
Magnesium	mg/L	3.3	1	4.3	1	4.2	100	94	75-125	1	20
Potassium	mg/L	0.74	1	1.9	1	1.8	113	107	75-125	4	20
Sodium	mg/L	1.8	1	2.8	1	2.8	99	98	75-125	0	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526541

QC Batch: 605915 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92526541001, 92526541002, 92526541003

METHOD BLANK: 3192197 Matrix: Water
Associated Lab Samples: 92526541001, 92526541002, 92526541003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	mg/L	ND	0.040	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	
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		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result							
Boron	mg/L	0.049	1	1	1.0	1.0	95	97	97	75-125	3	20		
Lithium	mg/L	ND	0.1	0.1	0.099	0.10	98	99	99	75-125	1	20		
Molybdenum	mg/L	ND	0.1	0.1	0.098	0.099	98	99	99	75-125	1	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526541

QC Batch:	605556	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92526541001, 92526541002, 92526541003

METHOD BLANK: 3190111 Matrix: Water

Associated Lab Samples: 92526541001, 92526541002, 92526541003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	03/11/21 11:23	

LABORATORY CONTROL SAMPLE: 3190112

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: 3190113 3190114

Parameter	Units	3190113		3190114		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0023	0.0024	91	94	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526541

QC Batch: 605516

Analysis Method: SM 2450C-2011

QC Batch Method: SM 2450C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92526541001, 92526541002, 92526541003

METHOD BLANK: 3189891

Matrix: Water

Associated Lab Samples: 92526541001, 92526541002, 92526541003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	03/10/21 17:21	

LABORATORY CONTROL SAMPLE: 3189892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	370	92	90-111	

SAMPLE DUPLICATE: 3189893

Parameter	Units	92524831026 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	798	800	0	10	

SAMPLE DUPLICATE: 3189894

Parameter	Units	92526337002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	415	425	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526541

QC Batch:	606012	Analysis Method:	EPA 9040C
QC Batch Method:	EPA 9040C	Analysis Description:	9040 pH
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92526541001, 92526541002, 92526541003

SAMPLE DUPLICATE: 3192744

Parameter	Units	92525947001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.9	6.9	0	9	H3,H6

SAMPLE DUPLICATE: 3193332

Parameter	Units	92526541002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.2	1	9	H3,H6

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QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526541

QC Batch: 606583 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92526541001, 92526541002, 92526541003

METHOD BLANK: 3195778 Matrix: Water
Associated Lab Samples: 92526541001, 92526541002, 92526541003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	03/15/21 16:33	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	03/15/21 16:33	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	03/15/21 16:33	

LABORATORY CONTROL SAMPLE: 3195779

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	50.9	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3195780 3195781

Parameter	Units	92526541001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO ₃	mg/L	42.6	50	50	91.9	91.7	99	98	80-120	0	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3195782 3195783

Parameter	Units	92525478002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO ₃	mg/L	12.6	50	50	64.0	64.4	103	104	80-120	1	25	

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QUALITY CONTROL DATA

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526541

QC Batch: 605465 Analysis Method: EPA 300.0 Rev 2.1 1993
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
 Laboratory: Pace Analytical Services - Asheville
 Associated Lab Samples: 92526541001, 92526541002, 92526541003

METHOD BLANK: 3189694 Matrix: Water
 Associated Lab Samples: 92526541001, 92526541002, 92526541003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	03/11/21 23:04	
Fluoride	mg/L	ND	0.10	03/11/21 23:04	
Sulfate	mg/L	ND	1.0	03/11/21 23:04	

LABORATORY CONTROL SAMPLE: 3189695

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.7	101	90-110	
Fluoride	mg/L	2.5	2.6	105	90-110	
Sulfate	mg/L	50	51.0	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3189696 3189697

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526541001 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	1.3	50	50	48.9	56.2	95	110	90-110	14	10	R1	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.9	97	113	90-110	15	10	M1,R1	
Sulfate	mg/L	9.8	50	50	58.6	65.8	98	112	90-110	12	10	M1,R1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3189698 3189699

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526574005 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	4.3	50	50	54.7	52.6	101	97	90-110	4	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	101	98	90-110	3	10		
Sulfate	mg/L	4.3	50	50	55.1	53.2	102	98	90-110	3	10		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant Hammond-CCR Ash Pond

Pace Project No.: 92526541

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

H3 Sample was received or analysis requested beyond the recognized method holding time.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

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

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant Hammond-CCR Ash Pond
Pace Project No.: 92526541

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92526541001	H-SCC NBR	EPA 3010A	605887	EPA 6010D	605937
92526541002	H-SCC E41	EPA 3010A	605887	EPA 6010D	605937
92526541003	H-SCC	EPA 3010A	605887	EPA 6010D	605937
92526541001	H-SCC NBR	EPA 3005A	605915	EPA 6020B	606002
92526541002	H-SCC E41	EPA 3005A	605915	EPA 6020B	606002
92526541003	H-SCC	EPA 3005A	605915	EPA 6020B	606002
92526541001	H-SCC NBR	EPA 7470A	605556	EPA 7470A	605621
92526541002	H-SCC E41	EPA 7470A	605556	EPA 7470A	605621
92526541003	H-SCC	EPA 7470A	605556	EPA 7470A	605621
92526541001	H-SCC NBR	SM 2450C-2011	605516		
92526541002	H-SCC E41	SM 2450C-2011	605516		
92526541003	H-SCC	SM 2450C-2011	605516		
92526541001	H-SCC NBR	EPA 9040C	606012		
92526541002	H-SCC E41	EPA 9040C	606012		
92526541003	H-SCC	EPA 9040C	606012		
92526541001	H-SCC NBR	SM 2320B-2011	606583		
92526541002	H-SCC E41	SM 2320B-2011	606583		
92526541003	H-SCC	SM 2320B-2011	606583		
92526541001	H-SCC NBR	EPA 300.0 Rev 2.1 1993	605465		
92526541002	H-SCC E41	EPA 300.0 Rev 2.1 1993	605465		
92526541003	H-SCC	EPA 300.0 Rev 2.1 1993	605465		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
Required Client Information:

Company: ABCADIS - Atlanta
 Address: 2838 Peach Ferry Rd
 Atlanta, GA 30338
 Email: kathy.shupe@abcadis.com
 Phone: (770)944-6564 Fax:
 Requested Date Date:

Section B
Required Project Information:

Report To: Kathy Shupe, Warren Johnson
 Copy To: Ben Hoopes, Jiju Abraham
 Purchase Order #: GFC01104488
 Project Name: Plum Hammond/COR-4th Pond Closure
 Project #:

Section C
Invoice Information:

Attention: Company Name:
 Address:
 Phone Order:
 Price Project Manager: natya.parku@abcadis.com
 Price Profile #: 12560

Page: 1 of 1

Regulatory Agency: State / Location: GA

#	H-SCC NBR	WT	DATE	TIME	DATE	TIME	DATE	TIME	ANALYSES TEST	RESIDUAL CHLORINE (Y/N)
1	H-SCC NBR	WT	3.9.21	1750					X	
2	H-SCC 641	WT	3.9.21	1620					X	
3	H-SCC	WT	3.9.21	1530					X	
4										
5										
6										
7										
8										
9										
10										
11										
12										

ADDITIONAL COMMENTS

Approved by: Ben Johnson, Charles Funder, Pat Sizer, Todd Dierker, Stefan (TDB)

Major Issue: Mr. H. K. total alkalinity, bicarbonate alkalinity

Requester Name and Signature: *Kathy Shupe* DATE: 3.9.21

Accepted by Affiliation: *Ben Hoopes* DATE: 3.9.21

Signature of Sampler: *Ben Hoopes* DATE Signed: 3.9.21

TEMP in C: _____

Received on for (Y/N): _____

Custody Sealed Cooler (Y/N): _____

Samples Intact (Y/N): _____

WO#: 92526541



92526541

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

Sample Condition: **Upon Receipt** Client Name: Arcadis Project # _____
 Courier: Fed Ex UPS USPS Client
 Commercial Pace Other: _____

WO#: 92526541

PM: MP Due Date: 03/16/21
 CLIENT: GA-Arcadis

Custody Seal Present? Yes No Seals Intact? Yes No
 Packing Material: Bubble Wrap Bubble Bags None Other
 Thermometer: IR GuA ID: 214 Type of Ice: dry Wet Blue None
 Cooler Temp: 4.0 Correction Factor: Add/Subtract (°C) 0.1

Date/Initials Person Examining Contents: 7/4/21
CDJ
 Biological Tissue Frozen? Yes No N/A

Cooler Temp Corrected (°C): 4.1
 USDA Regulated Soil (N/A, water sample)
 Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

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

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: _____

April 05, 2021

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

RE: Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Dear Joju Abraham:

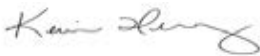
Enclosed are the analytical results for sample(s) received by the laboratory between March 11, 2021 and March 16, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

Pace Analytical Services Charlotte

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

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

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

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SAMPLE SUMMARY

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92527261001	HGWA-1	Water	03/10/21 16:10	03/11/21 15:55
92527261002	HGWA-44D	Water	03/10/21 14:30	03/11/21 15:55
92527261003	HGWA-2	Water	03/11/21 09:59	03/12/21 13:43
92527261004	HGWA-3	Water	03/11/21 11:25	03/12/21 13:43
92527261005	HGWA-43D	Water	03/11/21 09:57	03/12/21 13:43
92527261006	HGWA-122	Water	03/11/21 12:34	03/12/21 13:43
92527261007	HGWA-45D	Water	03/12/21 12:05	03/15/21 12:00
92527261008	HGWC-120	Water	03/12/21 16:25	03/15/21 12:00
92527261009	HGWC-125	Water	03/12/21 15:13	03/15/21 12:00
92527261010	HGWC-126	Water	03/12/21 16:50	03/15/21 12:00
92527261011	MW-46D	Water	03/12/21 14:50	03/15/21 12:00
92527261012	DUP-3	Water	03/12/21 00:00	03/15/21 12:00
92527261013	HGWC-121A	Water	03/15/21 14:46	03/16/21 13:42
92527261014	HGWC-124	Water	03/15/21 10:15	03/16/21 13:42
92527261015	MW-32	Water	03/15/21 10:04	03/16/21 13:42
92527261016	MW-39	Water	03/15/21 11:55	03/16/21 13:42
92527261017	MW-41	Water	03/15/21 13:14	03/16/21 13:42
92527261018	EB-3	Water	03/15/21 15:25	03/16/21 13:42
92527261019	FB-3	Water	03/15/21 15:30	03/16/21 13:42

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92527261001	HGWA-1	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527261002	HGWA-44D	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527261003	HGWA-2	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527261004	HGWA-3	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527261005	HGWA-43D	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527261006	HGWA-122	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527261007	HGWA-45D	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527261008	HGWC-120	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527261009	HGWC-125	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527261010	HGWC-126	EPA 6010D	DRB	1

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527261011	MW-46D	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527261012	DUP-3	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527261013	HGWC-121A	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527261014	HGWC-124	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527261015	MW-32	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527261016	MW-39	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527261017	MW-41	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527261018	EB-3	EPA 6010D	DRB	1
		EPA 6020B	CW1	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527261019	FB-3	EPA 6010D	DRB	1
		EPA 6020B	CW1	9

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527261001	HGWA-1					
	Performed by	CUSTOME			03/22/21 11:56	
		R				
	pH	6.95	Std. Units		03/22/21 11:56	
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	
SM 2450C-2011	Total Dissolved Solids	348	mg/L	10.0	03/15/21 13:15	
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	
92527261002	HGWA-44D					
	Performed by	CUSTOME			03/22/21 11:56	
		R				
	pH	7.92	Std. Units		03/22/21 11:56	
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	
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	
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	
92527261003	HGWA-2					
	Performed by	CUSTOME			03/22/21 11:56	
		R				
	pH	5.80	Std. Units		03/22/21 11:56	
EPA 6010D	Calcium	43.8	mg/L	1.0	03/22/21 20:09	
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	03/19/21 00:00	
EPA 300.0 Rev 2.1 1993	Fluoride	0.10	mg/L	0.10	03/19/21 00:00	
EPA 300.0 Rev 2.1 1993	Sulfate	52.9	mg/L	1.0	03/19/21 00:00	
92527261004	HGWA-3					
	Performed by	CUSTOME			03/22/21 11:56	
		R				
	pH	7.33	Std. Units		03/22/21 11:56	
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	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527261004	HGWA-3					
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	03/19/21 00:00	
EPA 300.0 Rev 2.1 1993	Sulfate	50.4	mg/L	1.0	03/19/21 00:00	
92527261005	HGWA-43D					
	Performed by	CUSTOME			03/22/21 11:56	
		R				
	pH	7.46	Std. Units		03/22/21 11:56	
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	Barium	0.30	mg/L	0.025	03/19/21 21:12	
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	03/19/21 00:00	
EPA 300.0 Rev 2.1 1993	Fluoride	0.20	mg/L	0.10	03/19/21 00:00	
EPA 300.0 Rev 2.1 1993	Sulfate	38.6	mg/L	1.0	03/19/21 00:00	
92527261006	HGWA-122					
	Performed by	CUSTOME			03/22/21 11:56	
		R				
	pH	6.65	Std. Units		03/22/21 11:56	
EPA 6010D	Calcium	60.4	mg/L	1.0	03/23/21 17:05	M1
EPA 6020B	Barium	0.032	mg/L	0.0050	03/29/21 15:23	
EPA 6020B	Boron	0.20	mg/L	0.040	03/29/21 15:23	
EPA 6020B	Chromium	0.0017J	mg/L	0.0050	03/29/21 15:23	
EPA 6020B	Lead	0.000093J	mg/L	0.0010	03/29/21 15:23	
EPA 6020B	Molybdenum	0.0014J	mg/L	0.010	03/29/21 15:23	
SM 2450C-2011	Total Dissolved Solids	206	mg/L	10.0	03/17/21 17:40	
EPA 300.0 Rev 2.1 1993	Chloride	2.3	mg/L	1.0	03/20/21 04:29	
EPA 300.0 Rev 2.1 1993	Fluoride	0.059J	mg/L	0.10	03/20/21 04:29	
EPA 300.0 Rev 2.1 1993	Sulfate	40.7	mg/L	1.0	03/20/21 04:29	
92527261007	HGWA-45D					
	Performed by	CUSTOME			03/22/21 11:56	
		R				
	pH	7.52	Std. Units		03/22/21 11:56	
EPA 6010D	Calcium	56.5	mg/L	1.0	03/23/21 17:34	
EPA 6020B	Antimony	0.00030J	mg/L	0.0030	03/29/21 15:29	
EPA 6020B	Barium	0.54	mg/L	0.0050	03/29/21 15:29	
EPA 6020B	Boron	0.19	mg/L	0.040	03/29/21 15:29	
EPA 6020B	Lead	0.000055J	mg/L	0.0010	03/29/21 15:29	
EPA 6020B	Lithium	0.0050J	mg/L	0.030	03/29/21 15:29	
EPA 6020B	Molybdenum	0.0019J	mg/L	0.010	03/29/21 15:29	
SM 2450C-2011	Total Dissolved Solids	260	mg/L	10.0	03/17/21 17:40	
EPA 300.0 Rev 2.1 1993	Chloride	3.3	mg/L	1.0	03/20/21 22:34	
EPA 300.0 Rev 2.1 1993	Fluoride	0.20	mg/L	0.10	03/20/21 22:34	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527261007	HGWA-45D					
EPA 300.0 Rev 2.1 1993	Sulfate	8.7	mg/L	1.0	03/20/21 22:34	
92527261008	HGWC-120					
	Performed by	CUSTOME			03/22/21 11:56	
		R				
	pH	6.95	Std. Units		03/22/21 11:56	
EPA 6010D	Calcium	174	mg/L	1.0	03/23/21 17:39	
EPA 6020B	Antimony	0.0018J	mg/L	0.0030	03/29/21 15:52	
EPA 6020B	Barium	0.047	mg/L	0.0050	03/29/21 15:52	
EPA 6020B	Boron	1.1	mg/L	0.040	03/29/21 15:52	
EPA 6020B	Cobalt	0.0027J	mg/L	0.0050	03/29/21 15:52	
EPA 6020B	Lithium	0.023J	mg/L	0.030	03/29/21 15:52	
EPA 6020B	Molybdenum	0.033	mg/L	0.010	03/29/21 15:52	
SM 2450C-2011	Total Dissolved Solids	584	mg/L	20.0	03/17/21 17:40	
EPA 300.0 Rev 2.1 1993	Chloride	2.4	mg/L	1.0	03/20/21 22:49	
EPA 300.0 Rev 2.1 1993	Fluoride	0.42	mg/L	0.10	03/20/21 22:49	
EPA 300.0 Rev 2.1 1993	Sulfate	210	mg/L	5.0	03/23/21 17:42	
92527261009	HGWC-125					
	Performed by	CUSTOME			03/22/21 11:56	
		R				
	pH	6.18	Std. Units		03/22/21 11:56	
EPA 6010D	Calcium	165	mg/L	1.0	03/23/21 17:44	
EPA 6020B	Antimony	0.00061J	mg/L	0.0030	03/29/21 15:57	
EPA 6020B	Barium	0.043	mg/L	0.0050	03/29/21 15:57	
EPA 6020B	Boron	1.5	mg/L	0.040	03/29/21 15:57	
EPA 6020B	Cobalt	0.014	mg/L	0.0050	03/29/21 15:57	
EPA 6020B	Lead	0.000044J	mg/L	0.0010	03/29/21 15:57	
EPA 6020B	Lithium	0.0039J	mg/L	0.030	03/29/21 15:57	
EPA 6020B	Molybdenum	0.0012J	mg/L	0.010	03/29/21 15:57	
SM 2450C-2011	Total Dissolved Solids	664	mg/L	20.0	03/19/21 18:44	
EPA 300.0 Rev 2.1 1993	Chloride	10.8	mg/L	1.0	03/20/21 23:36	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	03/20/21 23:36	
EPA 300.0 Rev 2.1 1993	Sulfate	293	mg/L	7.0	03/23/21 17:57	
92527261010	HGWC-126					
	Performed by	CUSTOME			03/22/21 11:56	
		R				
	pH	7.05	Std. Units		03/22/21 11:56	
EPA 6010D	Calcium	138	mg/L	1.0	03/23/21 17:49	
EPA 6020B	Antimony	0.00043J	mg/L	0.0030	03/29/21 16:03	
EPA 6020B	Barium	0.27	mg/L	0.0050	03/29/21 16:03	
EPA 6020B	Boron	0.016J	mg/L	0.040	03/29/21 16:03	
EPA 6020B	Lead	0.000046J	mg/L	0.0010	03/29/21 16:03	
EPA 6020B	Lithium	0.0038J	mg/L	0.030	03/29/21 16:03	
SM 2450C-2011	Total Dissolved Solids	474	mg/L	20.0	03/19/21 18:45	
EPA 300.0 Rev 2.1 1993	Chloride	8.5	mg/L	1.0	03/20/21 23:51	
EPA 300.0 Rev 2.1 1993	Fluoride	0.46	mg/L	0.10	03/20/21 23:51	
EPA 300.0 Rev 2.1 1993	Sulfate	69.7	mg/L	1.0	03/20/21 23:51	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527261011	MW-46D					
	Performed by	CUSTOME			03/22/21 11:56	
		R				
	pH	7.70	Std. Units		03/22/21 11:56	
EPA 6010D	Calcium	55.7	mg/L	1.0	03/23/21 17:54	
EPA 6020B	Antimony	0.00041J	mg/L	0.0030	03/29/21 16:28	
EPA 6020B	Barium	0.030	mg/L	0.0050	03/29/21 16:28	
EPA 6020B	Boron	0.69	mg/L	0.040	03/29/21 16:28	
EPA 6020B	Lithium	0.0084J	mg/L	0.030	03/29/21 16:28	
EPA 6020B	Molybdenum	0.0033J	mg/L	0.010	03/29/21 16:28	
SM 2450C-2011	Total Dissolved Solids	590	mg/L	20.0	03/19/21 18:45	
EPA 300.0 Rev 2.1 1993	Chloride	3.6	mg/L	1.0	03/21/21 00:07	
EPA 300.0 Rev 2.1 1993	Fluoride	0.88	mg/L	0.10	03/21/21 00:07	
EPA 300.0 Rev 2.1 1993	Sulfate	155	mg/L	4.0	03/23/21 18:12	
92527261012	DUP-3					
EPA 6010D	Calcium	62.9	mg/L	1.0	03/23/21 17:59	
EPA 6020B	Antimony	0.00039J	mg/L	0.0030	03/29/21 16:33	
EPA 6020B	Barium	0.032	mg/L	0.0050	03/29/21 16:33	
EPA 6020B	Boron	0.78	mg/L	0.040	03/29/21 16:33	
EPA 6020B	Lithium	0.012J	mg/L	0.030	03/29/21 16:33	
EPA 6020B	Molybdenum	0.0045J	mg/L	0.010	03/29/21 16:33	
SM 2450C-2011	Total Dissolved Solids	578	mg/L	20.0	03/19/21 18:45	
EPA 300.0 Rev 2.1 1993	Chloride	3.2	mg/L	1.0	03/21/21 00:22	
EPA 300.0 Rev 2.1 1993	Fluoride	0.83	mg/L	0.10	03/21/21 00:22	
EPA 300.0 Rev 2.1 1993	Sulfate	166	mg/L	4.0	03/23/21 18:27	M1, R1
92527261013	HGWC-121A					
	Performed by	CUSTOME			03/22/21 11:56	
		R				
	pH	6.87	Std. Units		03/22/21 11:56	
EPA 6010D	Calcium	167	mg/L	1.0	03/23/21 18:03	
EPA 6020B	Barium	0.059	mg/L	0.0050	03/29/21 16:39	
EPA 6020B	Boron	1.9	mg/L	0.040	03/29/21 16:39	
EPA 6020B	Lead	0.00015J	mg/L	0.0010	03/29/21 16:39	
EPA 6020B	Lithium	0.0077J	mg/L	0.030	03/29/21 16:39	
SM 2450C-2011	Total Dissolved Solids	614	mg/L	20.0	03/22/21 15:09	
EPA 300.0 Rev 2.1 1993	Chloride	21.8	mg/L	1.0	03/20/21 14:03	
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	03/20/21 14:03	
EPA 300.0 Rev 2.1 1993	Sulfate	177	mg/L	4.0	03/21/21 05:02	
92527261014	HGWC-124					
	Performed by	CUSTOME			03/22/21 11:56	
		R				
	pH	7.22	Std. Units		03/22/21 11:56	
EPA 6010D	Calcium	103	mg/L	1.0	03/23/21 18:08	
EPA 6020B	Barium	0.071	mg/L	0.0050	03/29/21 16:45	
EPA 6020B	Boron	0.40	mg/L	0.040	03/29/21 16:45	
EPA 6020B	Lithium	0.0010J	mg/L	0.030	03/29/21 16:45	
EPA 6020B	Molybdenum	0.00092J	mg/L	0.010	03/29/21 16:45	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527261014	HGWC-124					
SM 2450C-2011	Total Dissolved Solids	340	mg/L	10.0	03/22/21 15:09	
EPA 300.0 Rev 2.1 1993	Chloride	2.9	mg/L	1.0	03/20/21 14:17	
EPA 300.0 Rev 2.1 1993	Sulfate	74.0	mg/L	1.0	03/20/21 14:17	
92527261015	MW-32					
	Performed by	CUSTOME			03/22/21 11:56	
		R				
	pH	6.98	Std. Units		03/22/21 11:56	
EPA 6010D	Calcium	172	mg/L	1.0	03/23/21 18:13	
EPA 6020B	Barium	0.057	mg/L	0.0050	03/29/21 16:51	
EPA 6020B	Boron	1.2	mg/L	0.040	03/29/21 16:51	
EPA 6020B	Cobalt	0.0044J	mg/L	0.0050	03/29/21 16:51	
EPA 6020B	Lithium	0.033	mg/L	0.030	03/29/21 16:51	
EPA 6020B	Molybdenum	0.061	mg/L	0.010	03/29/21 16:51	
SM 2450C-2011	Total Dissolved Solids	630	mg/L	20.0	03/22/21 15:09	
EPA 300.0 Rev 2.1 1993	Chloride	2.5	mg/L	1.0	03/20/21 14:30	
EPA 300.0 Rev 2.1 1993	Fluoride	0.30	mg/L	0.10	03/20/21 14:30	
EPA 300.0 Rev 2.1 1993	Sulfate	236	mg/L	5.0	03/21/21 05:17	
92527261016	MW-39					
	Performed by	CUSTOME			03/22/21 11:56	
		R				
	pH	7.04	Std. Units		03/22/21 11:56	
EPA 6010D	Calcium	186	mg/L	1.0	03/23/21 18:28	
EPA 6020B	Barium	0.059	mg/L	0.0050	03/29/21 16:56	
EPA 6020B	Boron	1.2	mg/L	0.040	03/29/21 16:56	
EPA 6020B	Cobalt	0.0024J	mg/L	0.0050	03/29/21 16:56	
EPA 6020B	Lithium	0.032	mg/L	0.030	03/29/21 16:56	
EPA 6020B	Molybdenum	0.062	mg/L	0.010	03/29/21 16:56	
SM 2450C-2011	Total Dissolved Solids	628	mg/L	20.0	03/22/21 15:09	
EPA 300.0 Rev 2.1 1993	Chloride	2.5	mg/L	1.0	03/20/21 15:10	
EPA 300.0 Rev 2.1 1993	Fluoride	0.33	mg/L	0.10	03/20/21 15:10	
EPA 300.0 Rev 2.1 1993	Sulfate	234	mg/L	5.0	03/21/21 06:00	
92527261017	MW-41					
	Performed by	CUSTOME			03/22/21 11:56	
		R				
	pH	7.06	Std. Units		03/22/21 11:56	
EPA 6010D	Calcium	172	mg/L	1.0	03/23/21 18:32	
EPA 6020B	Barium	0.063	mg/L	0.0050	03/29/21 17:02	
EPA 6020B	Boron	1.1	mg/L	0.040	03/29/21 17:02	
EPA 6020B	Chromium	0.00090J	mg/L	0.0050	03/29/21 17:02	
EPA 6020B	Cobalt	0.00057J	mg/L	0.0050	03/29/21 17:02	
EPA 6020B	Lithium	0.030J	mg/L	0.030	03/29/21 17:02	
EPA 6020B	Molybdenum	0.046	mg/L	0.010	03/29/21 17:02	
SM 2450C-2011	Total Dissolved Solids	582	mg/L	20.0	03/22/21 15:09	
EPA 300.0 Rev 2.1 1993	Chloride	2.5	mg/L	1.0	03/20/21 15:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.26	mg/L	0.10	03/20/21 15:24	
EPA 300.0 Rev 2.1 1993	Sulfate	225	mg/L	5.0	03/21/21 06:15	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Sample: HGWA-1		Lab ID: 92527261001		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 11:56		
pH	6.95	Std. Units			1		03/22/21 11:56		
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	
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	
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	
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 13:15		
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	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Sample: HGWA-44D		Lab ID: 92527261002		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 11:56		
pH	7.92	Std. Units			1		03/22/21 11:56		
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	
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	
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	
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	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Sample: HGWA-2		Lab ID: 92527261003		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 11:56		
pH	5.80	Std. Units			1		03/22/21 11:56		
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	
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	
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	
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	
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		03/19/21 00:00	16887-00-6	
Fluoride	0.10	mg/L	0.10	0.050	1		03/19/21 00:00	16984-48-8	
Sulfate	52.9	mg/L	1.0	0.50	1		03/19/21 00:00	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Sample: HGWA-3		Lab ID: 92527261004		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 11:56		
pH	7.33	Std. Units			1		03/22/21 11:56		
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	
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	
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	
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		03/19/21 00:00	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/19/21 00:00	16984-48-8	
Sulfate	50.4	mg/L	1.0	0.50	1		03/19/21 00:00	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Sample: HGWA-43D		Lab ID: 92527261005		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 11:56		
pH	7.46	Std. Units			1		03/22/21 11:56		
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	
Barium	0.30	mg/L	0.025	0.0036	5	03/19/21 12:10	03/19/21 21:12	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	
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	
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		03/19/21 00:00	16887-00-6	
Fluoride	0.20	mg/L	0.10	0.050	1		03/19/21 00:00	16984-48-8	
Sulfate	38.6	mg/L	1.0	0.50	1		03/19/21 00:00	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Sample: HGWA-122		Lab ID: 92527261006		Collected: 03/11/21 12:34	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 11:56		
pH	6.65	Std. Units			1		03/22/21 11:56		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	60.4	mg/L	1.0	0.070	1	03/23/21 09:55	03/23/21 17:05	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	03/26/21 11:52	03/29/21 15:23	7440-36-0	
Barium	0.032	mg/L	0.0050	0.00071	1	03/26/21 11:52	03/29/21 15:23	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/26/21 11:52	03/29/21 15:23	7440-41-7	
Boron	0.20	mg/L	0.040	0.0052	1	03/26/21 11:52	03/29/21 15:23	7440-42-8	
Chromium	0.0017J	mg/L	0.0050	0.00055	1	03/26/21 11:52	03/29/21 15:23	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/26/21 11:52	03/29/21 15:23	7440-48-4	
Lead	0.000093J	mg/L	0.0010	0.000036	1	03/26/21 11:52	03/29/21 15:23	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/26/21 11:52	03/29/21 15:23	7439-93-2	
Molybdenum	0.0014J	mg/L	0.010	0.00069	1	03/26/21 11:52	03/29/21 15:23	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	206	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	2.3	mg/L	1.0	0.60	1		03/20/21 04:29	16887-00-6	
Fluoride	0.059J	mg/L	0.10	0.050	1		03/20/21 04:29	16984-48-8	
Sulfate	40.7	mg/L	1.0	0.50	1		03/20/21 04:29	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Sample: HGWA-45D		Lab ID: 92527261007		Collected: 03/12/21 12:05		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 11:56		
pH	7.52	Std. Units			1		03/22/21 11:56		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	56.5	mg/L	1.0	0.070	1	03/23/21 09:55	03/23/21 17:34	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00030J	mg/L	0.0030	0.00028	1	03/26/21 11:52	03/29/21 15:29	7440-36-0	
Barium	0.54	mg/L	0.0050	0.00071	1	03/26/21 11:52	03/29/21 15:29	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/26/21 11:52	03/29/21 15:29	7440-41-7	
Boron	0.19	mg/L	0.040	0.0052	1	03/26/21 11:52	03/29/21 15:29	7440-42-8	
Chromium	ND	mg/L	0.0050	0.00055	1	03/26/21 11:52	03/29/21 15:29	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/26/21 11:52	03/29/21 15:29	7440-48-4	
Lead	0.000055J	mg/L	0.0010	0.000036	1	03/26/21 11:52	03/29/21 15:29	7439-92-1	
Lithium	0.0050J	mg/L	0.030	0.00081	1	03/26/21 11:52	03/29/21 15:29	7439-93-2	
Molybdenum	0.0019J	mg/L	0.010	0.00069	1	03/26/21 11:52	03/29/21 15:29	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	260	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	3.3	mg/L	1.0	0.60	1		03/20/21 22:34	16887-00-6	
Fluoride	0.20	mg/L	0.10	0.050	1		03/20/21 22:34	16984-48-8	
Sulfate	8.7	mg/L	1.0	0.50	1		03/20/21 22:34	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Sample: HGWC-120 Lab ID: 92527261008 Collected: 03/12/21 16:25 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 11:56		
pH	6.95	Std. Units			1		03/22/21 11:56		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	174	mg/L	1.0	0.070	1	03/23/21 09:55	03/23/21 17:39	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0018J	mg/L	0.0030	0.00028	1	03/26/21 11:52	03/29/21 15:52	7440-36-0	
Barium	0.047	mg/L	0.0050	0.00071	1	03/26/21 11:52	03/29/21 15:52	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/26/21 11:52	03/29/21 15:52	7440-41-7	
Boron	1.1	mg/L	0.040	0.0052	1	03/26/21 11:52	03/29/21 15:52	7440-42-8	
Chromium	ND	mg/L	0.0050	0.00055	1	03/26/21 11:52	03/29/21 15:52	7440-47-3	
Cobalt	0.0027J	mg/L	0.0050	0.00038	1	03/26/21 11:52	03/29/21 15:52	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/26/21 11:52	03/29/21 15:52	7439-92-1	
Lithium	0.023J	mg/L	0.030	0.00081	1	03/26/21 11:52	03/29/21 15:52	7439-93-2	
Molybdenum	0.033	mg/L	0.010	0.00069	1	03/26/21 11:52	03/29/21 15:52	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	584	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	2.4	mg/L	1.0	0.60	1		03/20/21 22:49	16887-00-6	
Fluoride	0.42	mg/L	0.10	0.050	1		03/20/21 22:49	16984-48-8	
Sulfate	210	mg/L	5.0	2.5	5		03/23/21 17:42	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

Sample: HGWC-125		Lab ID: 92527261009		Collected: 03/12/21 15:13		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 11:56		
pH	6.18	Std. Units			1		03/22/21 11:56		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	165	mg/L	1.0	0.070	1	03/23/21 09:55	03/23/21 17:44	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00061J	mg/L	0.0030	0.00028	1	03/26/21 11:52	03/29/21 15:57	7440-36-0	
Barium	0.043	mg/L	0.0050	0.00071	1	03/26/21 11:52	03/29/21 15:57	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/26/21 11:52	03/29/21 15:57	7440-41-7	
Boron	1.5	mg/L	0.040	0.0052	1	03/26/21 11:52	03/29/21 15:57	7440-42-8	
Chromium	ND	mg/L	0.0050	0.00055	1	03/26/21 11:52	03/29/21 15:57	7440-47-3	
Cobalt	0.014	mg/L	0.0050	0.00038	1	03/26/21 11:52	03/29/21 15:57	7440-48-4	
Lead	0.000044J	mg/L	0.0010	0.000036	1	03/26/21 11:52	03/29/21 15:57	7439-92-1	
Lithium	0.0039J	mg/L	0.030	0.00081	1	03/26/21 11:52	03/29/21 15:57	7439-93-2	
Molybdenum	0.0012J	mg/L	0.010	0.00069	1	03/26/21 11:52	03/29/21 15:57	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	664	mg/L	20.0	20.0	1		03/19/21 18:44		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	10.8	mg/L	1.0	0.60	1		03/20/21 23:36	16887-00-6	
Fluoride	0.12	mg/L	0.10	0.050	1		03/20/21 23:36	16984-48-8	
Sulfate	293	mg/L	7.0	3.5	7		03/23/21 17:57	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Sample: HGWC-126		Lab ID: 92527261010		Collected: 03/12/21 16:50		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 11:56		
pH	7.05	Std. Units			1		03/22/21 11:56		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	138	mg/L	1.0	0.070	1	03/23/21 09:55	03/23/21 17:49	7440-70-2	
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	03/26/21 11:52	03/29/21 16:03	7440-36-0	
Barium	0.27	mg/L	0.0050	0.00071	1	03/26/21 11:52	03/29/21 16:03	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/26/21 11:52	03/29/21 16:03	7440-41-7	
Boron	0.016J	mg/L	0.040	0.0052	1	03/26/21 11:52	03/29/21 16:03	7440-42-8	
Chromium	ND	mg/L	0.0050	0.00055	1	03/26/21 11:52	03/29/21 16:03	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/26/21 11:52	03/29/21 16:03	7440-48-4	
Lead	0.000046J	mg/L	0.0010	0.000036	1	03/26/21 11:52	03/29/21 16:03	7439-92-1	
Lithium	0.0038J	mg/L	0.030	0.00081	1	03/26/21 11:52	03/29/21 16:03	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/26/21 11:52	03/29/21 16:03	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	474	mg/L	20.0	20.0	1		03/19/21 18:45		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	8.5	mg/L	1.0	0.60	1		03/20/21 23:51	16887-00-6	
Fluoride	0.46	mg/L	0.10	0.050	1		03/20/21 23:51	16984-48-8	
Sulfate	69.7	mg/L	1.0	0.50	1		03/20/21 23:51	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

Sample: MW-46D		Lab ID: 92527261011		Collected: 03/12/21 14:50		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 11:56		
pH	7.70	Std. Units			1		03/22/21 11:56		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	55.7	mg/L	1.0	0.070	1	03/23/21 09:55	03/23/21 17:54	7440-70-2	
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	03/26/21 11:52	03/29/21 16:28	7440-36-0	
Barium	0.030	mg/L	0.0050	0.00071	1	03/26/21 11:52	03/29/21 16:28	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/26/21 11:52	03/29/21 16:28	7440-41-7	
Boron	0.69	mg/L	0.040	0.0052	1	03/26/21 11:52	03/29/21 16:28	7440-42-8	
Chromium	ND	mg/L	0.0050	0.00055	1	03/26/21 11:52	03/29/21 16:28	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/26/21 11:52	03/29/21 16:28	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/26/21 11:52	03/29/21 16:28	7439-92-1	
Lithium	0.0084J	mg/L	0.030	0.00081	1	03/26/21 11:52	03/29/21 16:28	7439-93-2	
Molybdenum	0.0033J	mg/L	0.010	0.00069	1	03/26/21 11:52	03/29/21 16:28	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	590	mg/L	20.0	20.0	1		03/19/21 18:45		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	3.6	mg/L	1.0	0.60	1		03/21/21 00:07	16887-00-6	
Fluoride	0.88	mg/L	0.10	0.050	1		03/21/21 00:07	16984-48-8	
Sulfate	155	mg/L	4.0	2.0	4		03/23/21 18:12	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Sample: DUP-3		Lab ID: 92527261012		Collected: 03/12/21 00:00		Received: 03/15/21 12:00		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	62.9	mg/L	1.0	0.070	1	03/23/21 09:55	03/23/21 17:59	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	0.00039J	mg/L	0.0030	0.00028	1	03/26/21 11:52	03/29/21 16:33	7440-36-0	
Barium	0.032	mg/L	0.0050	0.00071	1	03/26/21 11:52	03/29/21 16:33	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/26/21 11:52	03/29/21 16:33	7440-41-7	
Boron	0.78	mg/L	0.040	0.0052	1	03/26/21 11:52	03/29/21 16:33	7440-42-8	
Chromium	ND	mg/L	0.0050	0.00055	1	03/26/21 11:52	03/29/21 16:33	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/26/21 11:52	03/29/21 16:33	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/26/21 11:52	03/29/21 16:33	7439-92-1	
Lithium	0.012J	mg/L	0.030	0.00081	1	03/26/21 11:52	03/29/21 16:33	7439-93-2	
Molybdenum	0.0045J	mg/L	0.010	0.00069	1	03/26/21 11:52	03/29/21 16:33	7439-98-7	
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	578	mg/L	20.0	20.0	1		03/19/21 18:45		
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		03/21/21 00:22	16887-00-6	
Fluoride	0.83	mg/L	0.10	0.050	1		03/21/21 00:22	16984-48-8	
Sulfate	166	mg/L	4.0	2.0	4		03/23/21 18:27	14808-79-8	M1, R1

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Sample: HGWC-121A		Lab ID: 92527261013		Collected: 03/15/21 14:46		Received: 03/16/21 13:42		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 11:56		
pH	6.87	Std. Units			1		03/22/21 11:56		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	167	mg/L	1.0	0.070	1	03/23/21 09:55	03/23/21 18:03	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	03/26/21 11:52	03/29/21 16:39	7440-36-0	
Barium	0.059	mg/L	0.0050	0.00071	1	03/26/21 11:52	03/29/21 16:39	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/26/21 11:52	03/29/21 16:39	7440-41-7	
Boron	1.9	mg/L	0.040	0.0052	1	03/26/21 11:52	03/29/21 16:39	7440-42-8	
Chromium	ND	mg/L	0.0050	0.00055	1	03/26/21 11:52	03/29/21 16:39	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/26/21 11:52	03/29/21 16:39	7440-48-4	
Lead	0.00015J	mg/L	0.0010	0.000036	1	03/26/21 11:52	03/29/21 16:39	7439-92-1	
Lithium	0.0077J	mg/L	0.030	0.00081	1	03/26/21 11:52	03/29/21 16:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/26/21 11:52	03/29/21 16:39	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	614	mg/L	20.0	20.0	1		03/22/21 15:09		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	21.8	mg/L	1.0	0.60	1		03/20/21 14:03	16887-00-6	
Fluoride	0.16	mg/L	0.10	0.050	1		03/20/21 14:03	16984-48-8	
Sulfate	177	mg/L	4.0	2.0	4		03/21/21 05:02	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Sample: HGWC-124		Lab ID: 92527261014		Collected: 03/15/21 10:15	Received: 03/16/21 13:42	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 11:56		
pH	7.22	Std. Units			1		03/22/21 11:56		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	103	mg/L	1.0	0.070	1	03/23/21 09:55	03/23/21 18:08	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	03/26/21 11:52	03/29/21 16:45	7440-36-0	
Barium	0.071	mg/L	0.0050	0.00071	1	03/26/21 11:52	03/29/21 16:45	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/26/21 11:52	03/29/21 16:45	7440-41-7	
Boron	0.40	mg/L	0.040	0.0052	1	03/26/21 11:52	03/29/21 16:45	7440-42-8	
Chromium	ND	mg/L	0.0050	0.00055	1	03/26/21 11:52	03/29/21 16:45	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/26/21 11:52	03/29/21 16:45	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/26/21 11:52	03/29/21 16:45	7439-92-1	
Lithium	0.0010J	mg/L	0.030	0.00081	1	03/26/21 11:52	03/29/21 16:45	7439-93-2	
Molybdenum	0.00092J	mg/L	0.010	0.00069	1	03/26/21 11:52	03/29/21 16:45	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	340	mg/L	10.0	10.0	1		03/22/21 15:09		
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		03/20/21 14:17	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/20/21 14:17	16984-48-8	
Sulfate	74.0	mg/L	1.0	0.50	1		03/20/21 14:17	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Sample: MW-32		Lab ID: 92527261015		Collected: 03/15/21 10:04		Received: 03/16/21 13:42		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 11:56		
pH	6.98	Std. Units			1		03/22/21 11:56		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	172	mg/L	1.0	0.070	1	03/23/21 09:55	03/23/21 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	03/26/21 11:52	03/29/21 16:51	7440-36-0	
Barium	0.057	mg/L	0.0050	0.00071	1	03/26/21 11:52	03/29/21 16:51	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/26/21 11:52	03/29/21 16:51	7440-41-7	
Boron	1.2	mg/L	0.040	0.0052	1	03/26/21 11:52	03/29/21 16:51	7440-42-8	
Chromium	ND	mg/L	0.0050	0.00055	1	03/26/21 11:52	03/29/21 16:51	7440-47-3	
Cobalt	0.0044J	mg/L	0.0050	0.00038	1	03/26/21 11:52	03/29/21 16:51	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/26/21 11:52	03/29/21 16:51	7439-92-1	
Lithium	0.033	mg/L	0.030	0.00081	1	03/26/21 11:52	03/29/21 16:51	7439-93-2	
Molybdenum	0.061	mg/L	0.010	0.00069	1	03/26/21 11:52	03/29/21 16:51	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	630	mg/L	20.0	20.0	1		03/22/21 15:09		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	2.5	mg/L	1.0	0.60	1		03/20/21 14:30	16887-00-6	
Fluoride	0.30	mg/L	0.10	0.050	1		03/20/21 14:30	16984-48-8	
Sulfate	236	mg/L	5.0	2.5	5		03/21/21 05:17	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Sample: MW-39		Lab ID: 92527261016		Collected: 03/15/21 11:55		Received: 03/16/21 13:42		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 11:56		
pH	7.04	Std. Units			1		03/22/21 11:56		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	186	mg/L	1.0	0.070	1	03/23/21 09:55	03/23/21 18:28	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	03/26/21 11:52	03/29/21 16:56	7440-36-0	
Barium	0.059	mg/L	0.0050	0.00071	1	03/26/21 11:52	03/29/21 16:56	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/26/21 11:52	03/29/21 16:56	7440-41-7	
Boron	1.2	mg/L	0.040	0.0052	1	03/26/21 11:52	03/29/21 16:56	7440-42-8	
Chromium	ND	mg/L	0.0050	0.00055	1	03/26/21 11:52	03/29/21 16:56	7440-47-3	
Cobalt	0.0024J	mg/L	0.0050	0.00038	1	03/26/21 11:52	03/29/21 16:56	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/26/21 11:52	03/29/21 16:56	7439-92-1	
Lithium	0.032	mg/L	0.030	0.00081	1	03/26/21 11:52	03/29/21 16:56	7439-93-2	
Molybdenum	0.062	mg/L	0.010	0.00069	1	03/26/21 11:52	03/29/21 16:56	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	628	mg/L	20.0	20.0	1		03/22/21 15:09		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	2.5	mg/L	1.0	0.60	1		03/20/21 15:10	16887-00-6	
Fluoride	0.33	mg/L	0.10	0.050	1		03/20/21 15:10	16984-48-8	
Sulfate	234	mg/L	5.0	2.5	5		03/21/21 06:00	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Sample: MW-41		Lab ID: 92527261017		Collected: 03/15/21 13:14		Received: 03/16/21 13:42		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 11:56		
pH	7.06	Std. Units			1		03/22/21 11:56		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	172	mg/L	1.0	0.070	1	03/23/21 09:55	03/23/21 18:32	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	03/26/21 11:52	03/29/21 17:02	7440-36-0	
Barium	0.063	mg/L	0.0050	0.00071	1	03/26/21 11:52	03/29/21 17:02	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/26/21 11:52	03/29/21 17:02	7440-41-7	
Boron	1.1	mg/L	0.040	0.0052	1	03/26/21 11:52	03/29/21 17:02	7440-42-8	
Chromium	0.00090J	mg/L	0.0050	0.00055	1	03/26/21 11:52	03/29/21 17:02	7440-47-3	
Cobalt	0.00057J	mg/L	0.0050	0.00038	1	03/26/21 11:52	03/29/21 17:02	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/26/21 11:52	03/29/21 17:02	7439-92-1	
Lithium	0.030J	mg/L	0.030	0.00081	1	03/26/21 11:52	03/29/21 17:02	7439-93-2	
Molybdenum	0.046	mg/L	0.010	0.00069	1	03/26/21 11:52	03/29/21 17:02	7439-98-7	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	582	mg/L	20.0	20.0	1		03/22/21 15:09		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	2.5	mg/L	1.0	0.60	1		03/20/21 15:24	16887-00-6	
Fluoride	0.26	mg/L	0.10	0.050	1		03/20/21 15:24	16984-48-8	
Sulfate	225	mg/L	5.0	2.5	5		03/21/21 06:15	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

Sample: EB-3		Lab ID: 92527261018		Collected: 03/15/21 15:25	Received: 03/16/21 13:42	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	03/23/21 09:55	03/23/21 18:37	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00028	1	03/26/21 11:52	03/29/21 17:08	7440-36-0	
Barium	ND	mg/L	0.0050	0.00071	1	03/26/21 11:52	03/29/21 17:08	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/26/21 11:52	03/29/21 17:08	7440-41-7	
Boron	ND	mg/L	0.040	0.0052	1	03/26/21 11:52	03/29/21 17:08	7440-42-8	
Chromium	ND	mg/L	0.0050	0.00055	1	03/26/21 11:52	03/29/21 17:08	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/26/21 11:52	03/29/21 17:08	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/26/21 11:52	03/29/21 17:08	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/26/21 11:52	03/29/21 17:08	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/26/21 11:52	03/29/21 17:08	7439-98-7	
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/22/21 15:09		
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		03/20/21 15:38	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/20/21 15:38	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		03/20/21 15:38	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-3 SEMIANNUAL
 Pace Project No.: 92527261

Sample: FB-3		Lab ID: 92527261019		Collected: 03/15/21 15:30	Received: 03/16/21 13:42	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	03/23/21 09:55	03/23/21 18:42	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/26/21 11:52	03/29/21 17:13	7440-36-0		
Barium	ND	mg/L	0.0050	0.00071	1	03/26/21 11:52	03/29/21 17:13	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	03/26/21 11:52	03/29/21 17:13	7440-41-7		
Boron	ND	mg/L	0.040	0.0052	1	03/26/21 11:52	03/29/21 17:13	7440-42-8		
Chromium	ND	mg/L	0.0050	0.00055	1	03/26/21 11:52	03/29/21 17:13	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	03/26/21 11:52	03/29/21 17:13	7440-48-4		
Lead	ND	mg/L	0.0010	0.000036	1	03/26/21 11:52	03/29/21 17:13	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	03/26/21 11:52	03/29/21 17:13	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	03/26/21 11:52	03/29/21 17:13	7439-98-7		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/22/21 15:10			
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		03/20/21 16:33	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		03/20/21 16:33	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		03/20/21 16:33	14808-79-8		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

QC Batch: 606634

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527261001, 92527261002

METHOD BLANK: 3196175

Matrix: Water

Associated Lab Samples: 92527261001, 92527261002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/19/21 03:10	

LABORATORY CONTROL SAMPLE: 3196176

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196177 3196178

Parameter	Units	3196177		3196178		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	207	1	1	209	202	181	-447	75-125	3	20 M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

QC Batch: 608195 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527261003, 92527261004, 92527261005

METHOD BLANK: 3204024 Matrix: Water
Associated Lab Samples: 92527261003, 92527261004, 92527261005

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	3204026		3204027		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	43.8	1	44.4	43.0	63	-72	75-125	3	20	M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

QC Batch:	608469	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527261006, 92527261007, 92527261008, 92527261009, 92527261010, 92527261011, 92527261012, 92527261013, 92527261014, 92527261015, 92527261016, 92527261017, 92527261018, 92527261019

METHOD BLANK: 3205055 Matrix: Water

Associated Lab Samples: 92527261006, 92527261007, 92527261008, 92527261009, 92527261010, 92527261011, 92527261012, 92527261013, 92527261014, 92527261015, 92527261016, 92527261017, 92527261018, 92527261019

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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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
 Pace Project No.: 92527261

QC Batch: 606644 Analysis Method: EPA 6020B
 QC Batch Method: EPA 3005A Analysis Description: 6020 MET
 Laboratory: Pace Analytical Services - Peachtree Corners, GA
 Associated Lab Samples: 92527261001, 92527261002

METHOD BLANK: 3196234 Matrix: Water
 Associated Lab Samples: 92527261001, 92527261002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00035J	0.0030	0.00028	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	
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	

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	
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	
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	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196236 3196237

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92526031002	Result	Spike Conc.	Spike Conc.							Result
Antimony	mg/L	0.00079J	0.1	0.1	0.098	0.099	98	98	75-125	0	20	
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	
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	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
 Pace Project No.: 92527261

QC Batch: 607964 Analysis Method: EPA 6020B
 QC Batch Method: EPA 3005A Analysis Description: 6020 MET
 Laboratory: Pace Analytical Services - Peachtree Corners, GA
 Associated Lab Samples: 92527261003, 92527261004, 92527261005

METHOD BLANK: 3202640 Matrix: Water
 Associated Lab Samples: 92527261003, 92527261004, 92527261005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	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	
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	

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	
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	
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	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202642 3202643

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526941001 Result	Spike Conc.	Spike Conc.	Conc.								
Antimony	mg/L	ND	0.1	0.1	0.12	0.12	118	118	75-125	0	20		
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		
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		

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

QC Batch: 609351 Analysis Method: EPA 6020B
 QC Batch Method: EPA 3005A Analysis Description: 6020 MET
 Laboratory: Pace Analytical Services - Peachtree Corners, GA
 Associated Lab Samples: 92527261006, 92527261007, 92527261008, 92527261009, 92527261010, 92527261011, 92527261012, 92527261013, 92527261014, 92527261015, 92527261016, 92527261017, 92527261018, 92527261019

METHOD BLANK: 3209699 Matrix: Water
 Associated Lab Samples: 92527261006, 92527261007, 92527261008, 92527261009, 92527261010, 92527261011, 92527261012, 92527261013, 92527261014, 92527261015, 92527261016, 92527261017, 92527261018, 92527261019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	03/29/21 15:12	
Barium	mg/L	ND	0.0050	0.00071	03/29/21 15:12	
Beryllium	mg/L	ND	0.00050	0.000046	03/29/21 15:12	
Boron	mg/L	ND	0.040	0.0052	03/29/21 15:12	
Chromium	mg/L	ND	0.0050	0.00055	03/29/21 15:12	
Cobalt	mg/L	ND	0.0050	0.00038	03/29/21 15:12	
Lead	mg/L	ND	0.0010	0.000036	03/29/21 15:12	
Lithium	mg/L	ND	0.030	0.00081	03/29/21 15:12	
Molybdenum	mg/L	ND	0.010	0.00069	03/29/21 15:12	

LABORATORY CONTROL SAMPLE: 3209700

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	107	80-120	
Barium	mg/L	0.1	0.097	97	80-120	
Beryllium	mg/L	0.1	0.11	105	80-120	
Boron	mg/L	1	1.1	105	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.10	104	80-120	
Molybdenum	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3210399 3210400

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92527261007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Antimony	mg/L	0.00030J	0.1	0.1	0.11	0.11	109	107	75-125	2	20	
Barium	mg/L	0.54	0.1	0.1	0.65	0.64	113	101	75-125	2	20	
Beryllium	mg/L	ND	0.1	0.1	0.10	0.099	101	99	75-125	2	20	
Boron	mg/L	0.19	1	1	1.2	1.2	100	100	75-125	0	20	
Chromium	mg/L	ND	0.1	0.1	0.099	0.098	99	97	75-125	2	20	
Cobalt	mg/L	ND	0.1	0.1	0.096	0.095	96	95	75-125	1	20	
Lead	mg/L	0.000055J	0.1	0.1	0.098	0.097	98	97	75-125	1	20	
Lithium	mg/L	0.0050J	0.1	0.1	0.11	0.10	101	98	75-125	3	20	
Molybdenum	mg/L	0.0019J	0.1	0.1	0.10	0.10	101	101	75-125	0	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

QC Batch: 606587 Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527261001, 92527261002

METHOD BLANK: 3195825 Matrix: Water
Associated Lab Samples: 92527261001, 92527261002

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-3 SEMIANNUAL

Pace Project No.: 92527261

QC Batch:	607316	Analysis Method:	SM 2450C-2011
QC Batch Method:	SM 2450C-2011	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527261006, 92527261007, 92527261008

METHOD BLANK: 3199480 Matrix: Water

Associated Lab Samples: 92527261006, 92527261007, 92527261008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/17/21 17:40	

LABORATORY CONTROL SAMPLE: 3199481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	400	100	90-111	

SAMPLE DUPLICATE: 3199482

Parameter	Units	92527256010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	279	278	0	10	

SAMPLE DUPLICATE: 3199483

Parameter	Units	92526996006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	255	258	1	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

QC Batch:	607345	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: 92527261003, 92527261004, 92527261005

METHOD BLANK: 3199736 Matrix: Water

Associated Lab Samples: 92527261003, 92527261004, 92527261005

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: 3199737

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	386	96	90-111	

SAMPLE DUPLICATE: 3213092

Parameter	Units	92527261005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	279	278	0	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

QC Batch:	608067	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: 92527261009, 92527261010, 92527261011, 92527261012

METHOD BLANK: 3203362 Matrix: Water

Associated Lab Samples: 92527261009, 92527261010, 92527261011, 92527261012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/19/21 18:44	

LABORATORY CONTROL SAMPLE: 3203363

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	391	98	90-111	

SAMPLE DUPLICATE: 3203364

Parameter	Units	92527261009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	664	690	4	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

QC Batch: 608133 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: 92527261013, 92527261014, 92527261015, 92527261016, 92527261017, 92527261018, 92527261019

METHOD BLANK: 3203640 Matrix: Water
Associated Lab Samples: 92527261013, 92527261014, 92527261015, 92527261016, 92527261017, 92527261018, 92527261019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/22/21 15:08	

LABORATORY CONTROL SAMPLE: 3203641

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	370	92	90-111	

SAMPLE DUPLICATE: 3203642

Parameter	Units	92527261013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	614	640	4	10	

SAMPLE DUPLICATE: 3203644

Parameter	Units	92527234025 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	11.0	18.0	48	10	D6

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

QC Batch: 607170 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527261001, 92527261002

METHOD BLANK: 3198670 Matrix: Water
Associated Lab Samples: 92527261001, 92527261002

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		3198672		3198673		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	7.4	7.4	50	50	59.6	59.8	104	105	90-110	0	10	
Fluoride	mg/L	0.079J	0.079J	2.5	2.5	2.7	2.7	106	107	90-110	0	10	
Sulfate	mg/L	49.6	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		3198674		3198675		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	2.9	2.9	50	50	54.4	53.4	103	101	90-110	2	10	
Fluoride	mg/L	ND	ND	2.5	2.5	3.0	2.8	118	112	90-110	6	10	M1
Sulfate	mg/L	1.2	1.2	50	50	54.5	53.7	107	105	90-110	1	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

QC Batch: 607751 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92527261003, 92527261004, 92527261005, 92527261006

METHOD BLANK: 3201757 Matrix: Water
Associated Lab Samples: 92527261003, 92527261004, 92527261005, 92527261006

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		3201759		3201760		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	2510	2510	50	50	2520	2520	27	27	90-110	0	10	M6
Fluoride	mg/L	4.6	4.6	2.5	2.5	12.1	11.9	302	294	90-110	2	10	M6
Sulfate	mg/L	1530	1530	50	50	1510	1480	-49	-112	90-110	2	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201761 3201762

Parameter	Units	92527256007		3201761		3201762		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	5.9	5.9	50	50	58.9	57.5	106	103	90-110	2	10	
Fluoride	mg/L	ND	ND	2.5	2.5	2.3	2.3	91	90	90-110	1	10	
Sulfate	mg/L	50.4	50.4	50	50	102	101	103	101	90-110	1	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

QC Batch: 607758 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92527261007, 92527261008, 92527261009, 92527261010, 92527261011, 92527261012

METHOD BLANK: 3201801 Matrix: Water
Associated Lab Samples: 92527261007, 92527261008, 92527261009, 92527261010, 92527261011, 92527261012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/20/21 19:43	
Fluoride	mg/L	ND	0.10	0.050	03/20/21 19:43	
Sulfate	mg/L	ND	1.0	0.50	03/20/21 19:43	

LABORATORY CONTROL SAMPLE: 3201802

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.0	100	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	50	53.0	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201803 3201804

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526996007	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	8.0	50	50	57.8	58.5	99	101	90-110	1	10		
Fluoride	mg/L	0.058J	2.5	2.5	2.5	2.6	98	100	90-110	2	10		
Sulfate	mg/L	154	50	50	255	259	201	210	90-110	2	10	M6	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201805 3201806

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527261012	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	3.2	50	50	53.9	53.4	101	100	90-110	1	10		
Fluoride	mg/L	0.83	2.5	2.5	3.5	3.5	107	106	90-110	1	10		
Sulfate	mg/L	166	50	50	183	208	33	84	90-110	13	10	M1,R1	

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QUALITY CONTROL DATA

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

QC Batch: 607981 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92527261013, 92527261014, 92527261015, 92527261016, 92527261017, 92527261018, 92527261019

METHOD BLANK: 3202723 Matrix: Water
Associated Lab Samples: 92527261013, 92527261014, 92527261015, 92527261016, 92527261017, 92527261018, 92527261019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/20/21 10:55	
Fluoride	mg/L	ND	0.10	0.050	03/20/21 10:55	
Sulfate	mg/L	ND	1.0	0.50	03/20/21 10:55	

LABORATORY CONTROL SAMPLE: 3202724

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	2.5	102	90-110	
Sulfate	mg/L	50	51.5	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202725 3202726

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92528548005 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	363	50	50	402	403	79	81	90-110	0	10	M6	
Fluoride	mg/L	0.13	2.5	2.5	2.6	2.7	100	101	90-110	1	10		
Sulfate	mg/L	27.1	50	50	76.5	77.1	99	100	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202727 3202728

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527261015 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	2.5	50	50	54.6	54.8	104	105	90-110	0	10		
Fluoride	mg/L	0.30	2.5	2.5	2.9	2.9	102	103	90-110	1	10		
Sulfate	mg/L	236	50	50	281	282	90	93	90-110	0	10		

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QUALIFIERS

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

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.

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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527261001	HGWA-1				
92527261002	HGWA-44D				
92527261003	HGWA-2				
92527261004	HGWA-3				
92527261005	HGWA-43D				
92527261006	HGWA-122				
92527261007	HGWA-45D				
92527261008	HGWC-120				
92527261009	HGWC-125				
92527261010	HGWC-126				
92527261011	MW-46D				
92527261013	HGWC-121A				
92527261014	HGWC-124				
92527261015	MW-32				
92527261016	MW-39				
92527261017	MW-41				
92527261001	HGWA-1	EPA 3010A	606634	EPA 6010D	606723
92527261002	HGWA-44D	EPA 3010A	606634	EPA 6010D	606723
92527261003	HGWA-2	EPA 3010A	608195	EPA 6010D	608261
92527261004	HGWA-3	EPA 3010A	608195	EPA 6010D	608261
92527261005	HGWA-43D	EPA 3010A	608195	EPA 6010D	608261
92527261006	HGWA-122	EPA 3010A	608469	EPA 6010D	608544
92527261007	HGWA-45D	EPA 3010A	608469	EPA 6010D	608544
92527261008	HGWC-120	EPA 3010A	608469	EPA 6010D	608544
92527261009	HGWC-125	EPA 3010A	608469	EPA 6010D	608544
92527261010	HGWC-126	EPA 3010A	608469	EPA 6010D	608544
92527261011	MW-46D	EPA 3010A	608469	EPA 6010D	608544
92527261012	DUP-3	EPA 3010A	608469	EPA 6010D	608544
92527261013	HGWC-121A	EPA 3010A	608469	EPA 6010D	608544
92527261014	HGWC-124	EPA 3010A	608469	EPA 6010D	608544
92527261015	MW-32	EPA 3010A	608469	EPA 6010D	608544
92527261016	MW-39	EPA 3010A	608469	EPA 6010D	608544
92527261017	MW-41	EPA 3010A	608469	EPA 6010D	608544
92527261018	EB-3	EPA 3010A	608469	EPA 6010D	608544
92527261019	FB-3	EPA 3010A	608469	EPA 6010D	608544
92527261001	HGWA-1	EPA 3005A	606644	EPA 6020B	606712
92527261002	HGWA-44D	EPA 3005A	606644	EPA 6020B	606712
92527261003	HGWA-2	EPA 3005A	607964	EPA 6020B	608044
92527261004	HGWA-3	EPA 3005A	607964	EPA 6020B	608044
92527261005	HGWA-43D	EPA 3005A	607964	EPA 6020B	608044
92527261006	HGWA-122	EPA 3005A	609351	EPA 6020B	609649
92527261007	HGWA-45D	EPA 3005A	609351	EPA 6020B	609649
92527261008	HGWC-120	EPA 3005A	609351	EPA 6020B	609649
92527261009	HGWC-125	EPA 3005A	609351	EPA 6020B	609649
92527261010	HGWC-126	EPA 3005A	609351	EPA 6020B	609649
92527261011	MW-46D	EPA 3005A	609351	EPA 6020B	609649

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL
Pace Project No.: 92527261

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527261012	DUP-3	EPA 3005A	609351	EPA 6020B	609649
92527261013	HGWC-121A	EPA 3005A	609351	EPA 6020B	609649
92527261014	HGWC-124	EPA 3005A	609351	EPA 6020B	609649
92527261015	MW-32	EPA 3005A	609351	EPA 6020B	609649
92527261016	MW-39	EPA 3005A	609351	EPA 6020B	609649
92527261017	MW-41	EPA 3005A	609351	EPA 6020B	609649
92527261018	EB-3	EPA 3005A	609351	EPA 6020B	609649
92527261019	FB-3	EPA 3005A	609351	EPA 6020B	609649
92527261001	HGWA-1	SM 2450C-2011	606587		
92527261002	HGWA-44D	SM 2450C-2011	606587		
92527261003	HGWA-2	SM 2450C-2011	607345		
92527261004	HGWA-3	SM 2450C-2011	607345		
92527261005	HGWA-43D	SM 2450C-2011	607345		
92527261006	HGWA-122	SM 2450C-2011	607316		
92527261007	HGWA-45D	SM 2450C-2011	607316		
92527261008	HGWC-120	SM 2450C-2011	607316		
92527261009	HGWC-125	SM 2450C-2011	608067		
92527261010	HGWC-126	SM 2450C-2011	608067		
92527261011	MW-46D	SM 2450C-2011	608067		
92527261012	DUP-3	SM 2450C-2011	608067		
92527261013	HGWC-121A	SM 2450C-2011	608133		
92527261014	HGWC-124	SM 2450C-2011	608133		
92527261015	MW-32	SM 2450C-2011	608133		
92527261016	MW-39	SM 2450C-2011	608133		
92527261017	MW-41	SM 2450C-2011	608133		
92527261018	EB-3	SM 2450C-2011	608133		
92527261019	FB-3	SM 2450C-2011	608133		
92527261001	HGWA-1	EPA 300.0 Rev 2.1 1993	607170		
92527261002	HGWA-44D	EPA 300.0 Rev 2.1 1993	607170		
92527261003	HGWA-2	EPA 300.0 Rev 2.1 1993	607751		
92527261004	HGWA-3	EPA 300.0 Rev 2.1 1993	607751		
92527261005	HGWA-43D	EPA 300.0 Rev 2.1 1993	607751		
92527261006	HGWA-122	EPA 300.0 Rev 2.1 1993	607751		
92527261007	HGWA-45D	EPA 300.0 Rev 2.1 1993	607758		
92527261008	HGWC-120	EPA 300.0 Rev 2.1 1993	607758		
92527261009	HGWC-125	EPA 300.0 Rev 2.1 1993	607758		
92527261010	HGWC-126	EPA 300.0 Rev 2.1 1993	607758		
92527261011	MW-46D	EPA 300.0 Rev 2.1 1993	607758		
92527261012	DUP-3	EPA 300.0 Rev 2.1 1993	607758		
92527261013	HGWC-121A	EPA 300.0 Rev 2.1 1993	607981		
92527261014	HGWC-124	EPA 300.0 Rev 2.1 1993	607981		
92527261015	MW-32	EPA 300.0 Rev 2.1 1993	607981		
92527261016	MW-39	EPA 300.0 Rev 2.1 1993	607981		
92527261017	MW-41	EPA 300.0 Rev 2.1 1993	607981		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL

Pace Project No.: 92527261

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527261018	EB-3	EPA 300.0 Rev 2.1 1993	607981		
92527261019	FB-3	EPA 300.0 Rev 2.1 1993	607981		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

GSA power

Project #:

W0#: 92527261



92527261

Courier: Fed Ex UPS USPS Client
 Commercial Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: *ant 3/11/21*

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Thermometer: IR Gun ID: 233 Type of Ice: Wet Blue None

Yes No N/A

Cooler Temp: 2.0 Correction Factor: Add/Subtract (°C) ±0.4

Temp should be above freezing to 6°C

Cooler Temp Corrected (°C): 2.4

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)?

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

Yes No

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURE Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information		Section B Required Project Information		Section C Invoicing Information	
Company: GA Power	Address: Atlanta, GA	Report To: SCS Contacts	Copy To: Geosynlec Contacts	Address: Southern Co.	Company Name: Southern Co.
Phone: SCS Contacts	Requested Date: 18 Day	Purchase Order No:	Project Name: Plant Hammond AP-3 Semiannual	Address:	Company Name:
Fax:	Project Number: GW6561	Plant Name:	Plant Hammond AP-3 Semiannual	Rate Quote Reference:	Rate Project Manager:
		Project Number:	GW6561	Price Profile #:	10839-5
				Analysis Filtered (Y/N):	
				Requested Analysis Filtered (Y/N):	
				Temp in °C:	
				Received on Ice (Y/N):	
				Custody Sealed Cooler (Y/N):	
				Samples Intact (Y/N):	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH =
					DATE	TIME							
1	HGWA-1	WT G	3/10/21	WT G	17	5	2	3	X	X	X	X	pH = 6.95
2	HGWA-2	WT G	3/10/21	WT G	17	5	2	3	X	X	X	X	pH =
3	HGWA-3	WT G	3/10/21	WT G	17	5	2	3	X	X	X	X	pH =
4	HGWA-4	WT G	3/10/21	WT G	17	5	2	3	X	X	X	X	pH =
5	HGWA-5	WT G	3/10/21	WT G	17	5	2	3	X	X	X	X	pH = 7.92
6	HGWA-6	WT G	3/10/21	WT G	17	5	2	3	X	X	X	X	pH =
7	HGWA-7	WT G	3/10/21	WT G	17	5	2	3	X	X	X	X	pH =
8	HGWA-8	WT G	3/10/21	WT G	17	5	2	3	X	X	X	X	pH =
9	HGWA-9	WT G	3/10/21	WT G	17	5	2	3	X	X	X	X	pH =
10	HGWA-10	WT G	3/10/21	WT G	17	5	2	3	X	X	X	X	pH =
11	HGWA-11	WT G	3/10/21	WT G	17	5	2	3	X	X	X	X	pH =
12	HGWA-12	WT G	3/10/21	WT G	17	5	2	3	X	X	X	X	pH =

Section D Additional Comments		Section E Relinquished by / Affiliation		Section F Accepted by / Affiliation	
Please note all wells - strike through any wells not sampled, and note when the last sample for the event has been taken. * App. III & IV Metals = Sb, Ba, Be, B, Ca, Cr, Cu, Fe, Li, Mn, Ni, Pb, Se, V, Zn		Date: 3/10/21		Date: 3/10/21	
One sample set submitted for HGWA-7, HGWA-8, HGWA-9, HGWA-10, HGWA-11, HGWA-12 but they will be reported for AP-1/2/3 SDCs		Signature: <i>[Signature]</i>		Signature: <i>[Signature]</i>	
SAMPLER NAME AND SIGNATURE		DATE		DATE	
PRINT Name of SAMPLER: <i>Deborah Taylor</i>		3/10/21		3/10/21	
SIGNATURE of SAMPLER: <i>[Signature]</i>		TIME: 1730		TIME: 1730	
SAMPLER NAME AND SIGNATURE		DATE		DATE	
PRINT Name of SAMPLER: <i>Deborah Taylor</i>		3/11/21		3/11/21	
SIGNATURE of SAMPLER: <i>[Signature]</i>		TIME: 1555		TIME: 1555	
SAMPLER NAME AND SIGNATURE		DATE		DATE	
PRINT Name of SAMPLER: <i>Deborah Taylor</i>		3/11/21		3/11/21	
SIGNATURE of SAMPLER: <i>[Signature]</i>		TIME: 1040		TIME: 1040	
SAMPLER NAME AND SIGNATURE		DATE		DATE	
PRINT Name of SAMPLER: <i>Deborah Taylor</i>		3/11/21		3/11/21	
SIGNATURE of SAMPLER: <i>[Signature]</i>		TIME: 1555		TIME: 1555	
SAMPLER NAME AND SIGNATURE		DATE		DATE	
PRINT Name of SAMPLER: <i>Deborah Taylor</i>		3/11/21		3/11/21	
SIGNATURE of SAMPLER: <i>[Signature]</i>		TIME: 1555		TIME: 1555	



CHAIN-OF-CUSTODY / Analytical Request Document

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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	Company Name	Southern Co.	REGULATORY AGENCY		
Address	Allentia, GA	Copy To	Geosynlec Contacts	Address		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER		
Email To	SCS Contacts	Purchase Order No.		Reference		<input type="checkbox"/> Site Location STATE: GA		
Phone		Project Name	Plant Hammond AP-3-Semiannual	Price Project Manager	Kevin Herring			
Requested Due Date/TAT:	10 Day	Project Number	GW6581	Price Per Sample	10839-5			
				Requested Analysis Filtered (Y/N)				

ITEM #	Section D Required Client Information	Valid Matrix Codes MATERIAL	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test				Residual Chlorine (Y/N)	Water Use Pace Project No./ Lab ID.												
						DATE	TIME	DATE			TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol	Other	Y/N	Chloride, Fluoride, Sulfate			App. III & IV Metals*	RAD 226/228	TDS									
1	HGWA-1	DOMESTIC WATER	DW	WT-9						5																									
2	HGWA-2	WASTE WATER	WW	WT-9	3/11/12	0958			6	5																									
3	HGWA-3	PRECIPITATION	PR	WT-9	3/11/12	1125			7	5																									
4	HGWA-43D	SOIL/SOLID	SS	WT-9	3/11/12	0757			6	5																									
5	HGWA-44D	CIL	CR	WT-9					4	2																									
6	HGWA-46B	WIRE	WR	WT-9					5	2																									
7	HGWA-122	CIL	CR	WT-9	3/11/12	1234			17	5																									
8	HGWA-120	CIL	CR	WT-9					5	2																									
9	HGWA-121A	CIL	CR	WT-9					5	2																									
10	HGWA-124	CIL	CR	WT-9					5	2																									
11	HGWA-125	CIL	CR	WT-9					5	2																									
12	HGWA-126	CIL	CR	WT-9					5	2																									

RELINQUISHED BY/AFFILIATION	DATE	TIME	ACCEPTED BY/AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Gregory Baselgoe	3/12/12	1310	VANISH THORNTON	3/12/12	1310	
VANISH THORNTON	3/12/12	1343	OR AT Pace	3/12/12	1343	
AT Pace	3/12/12	1639	Clara Hill	3/12/12	1639	

SAMPLER NAME AND SIGNATURE		
PRINT Name of SAMPLER:	Signature of SAMPLER:	DATE SIGNED
	VANISH THORNTON	3/11/12
Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)
Samples Intact (Y/N)		

*App. III & IV Metals - Sp, Bi, Ba, B, Ca, Cr, Co, Pb, U, Mo
 *One sample set submitted for HGWA-125/43D/44D but they will be reported for AP-1/23 SDGs
 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-FALL-0-020REV.07 15-Feb-2007

CHAIN-OF-CUSTODY / Analytical Request Document

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



Section A		Section B		Section C	
Required Client Information:		Required Project Information:		Invoice Information:	
Company: GA Power	Address: Atlanta, GA	Report To: SCS Contacts	Copy To: Geosynlec Contacts	Account: Southern Co.	Company Name: Southern Co.
Project Name: SCS Contacts	Project Number: GWS681	Purchase Order No.:	Plant Name: Plant Hammond AP-3 Semiannual	Address:	Address:
Requested Due Date/TAT: 10 day	Project Number: GWS681	Plant Name: Plant Hammond AP-3 Semiannual	Requested Analysis Filtered (Y/N):	Site Location: GA	State: GA

ITEM #	Valid Matrix Codes MATERIAL CODE DOMESTIC WATER WATER WASTE WATER PRODUCT SOLID/LIQ OIL WIRE MIL OTHER TISSUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Requested Analysis Filtered (Y/N)					Residual Chlorine (Y/N)	pH =	
											Chloride, Fluoride, Sulfate	App. III & IV Metals*	RAD 226/228	TDS	Temp in °C			
1	HGWA-1	WT G	G						5	2	3	X	X	X	X	X		
2	HGWA-2	WT G	G						5	2	3	X	X	X	X	X		
3	HGWA-3	WT G	G						5	2	3	X	X	X	X	X		
4	HGWA-43D	WT G	G						5	2	3	X	X	X	X	X		
5	HGWA-44D	WT G	G						5	2	3	X	X	X	X	X		
6	HGWA-45D	WT G	G						5	2	3	X	X	X	X	X		
7	HGWA-122	WT G	G						5	2	3	X	X	X	X	X		
8	HGWA-120	WT G	G						5	2	3	X	X	X	X	X		
9	HGWA-174	WT G	G						5	2	3	X	X	X	X	X		
10	HGWA-124	WT G	G						5	2	3	X	X	X	X	X		
11	HGWA-125	WT G	G						5	2	3	X	X	X	X	X		
12	HGWA-126	WT G	G						5	2	3	X	X	X	X	X		

ADDITIONAL COMMENTS: Please note dry wells, since through any wells not sampled, and note when the last sample for the event has been taken.
App III & IV Metals: Sb, Ba, Bi, B, Ca, Cr, Co, Fe, Pb, Li, Mo

RELINQUISHED BY / AFFILIATION: *Chad Lewis* / *MOVING Kessler* / *3/15/21* / *1445*

ACCEPTED BY / AFFILIATION: *Kevin Herring* / *Plant Hammond AP-3* / *3/15/21* / *1208*

SAMPLER NAME AND SIGNATURE: *Chad Lewis* / *3/15/21* / *1445*

PRINT NAME OF SAMPLER: *Chad Lewis*

SIGNATURE OF SAMPLER: *TK* / *VT*

DATE SIGNED: *03/10/21*

Temp in °C: _____

Received on Ice (Y/N): _____

Custody Destroyed (Y/N): _____

Samples Intact (Y/N): _____



CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Required Client Information Company: GA Power Address: Atlanta, GA	Section B Required Project Information Report To: SCS Contacts Copy To: Geosyntec Contacts
Section C Invoice Information Attention: Southern Co. Company Name Address Contact Name Phone Reference Project Name Requested Due Date/TAT: 10 Day	Purchase Order No. Project Name: Plant Hammond AP-3-Semiannual Project Number: GWS6581 Address Price Quote Reference Contact Name: Kevin Herring Project Profile #: 10839-5 REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER

ITEM #	Section D Required Client Information	Valid Matrix Codes MATERIALS CODE <small> DRINKING WATER DW WATER WT WASTE WATER WW PROCESS WATER PW SOIL/SOLID S OIL OT WIRE AW AIR AT OTHER TT </small>	MATRIX CODE (set valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test					Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab ID.									
					DATE	TIME							H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol	Other	Y	N	Y	N	Y				N	Y	N						
1			WT	G								5	2																							
2			WT	G								5	7																							
3			WT	G								5	2																							
4			WT	G								5	2																							
5			WT	G								5	2																							
6			WT	G								5	2																							
7			WT	G								5	2																							
8			WT	G								5	2																							
9			WT	G								5	2																							
10			WT	G								5	2																							
11			WT	G								5	2																							
12			WT	G								5	2																							

ADDITIONAL COMMENTS

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

App. III & IV Metals: Sd, Ba, Br, Ca, Cr, Cu, Pb, Li, Mo

One sample set submitted for HSWA-10345644D but they will be reported for AP-1028 SDGS

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
<i>Geosyntec</i>	3/15/21	1145	<i>Kevin Herring</i>	3/16/21	1145
<i>Geosyntec</i>	3/15/21	1859	<i>Kevin Herring</i>	3/16/21	1200

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: *Vaishish Inukoor*

SIGNATURE of SAMPLER: *[Signature]*

DATE Signed (MM/DD/YYYY): *03/12/21*

Temp in °C	Received on Ice (Y/N)	Custody Granted/ Cooler (Y/N)	Samples intact (Y/N)



CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 2

Section A Required Client Information:		Section B Required Project Information:		Section C Invoicing Information:	
Company: GA Power	Address: Atlanta, GA	Report To: SCS Contacts	Copy To: Geosynthetic Contacts	Attention: Southern Co.	REGULATORY AGENCY
Phone: SCS Contacts	Fax: SCS Contacts	Project Name: Plant Hammond AP-3 Semiannual	Purchase Order No:	Address:	<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input checked="" type="checkbox"/> DRINKING WATER
Requested Due Date/TAT: 18 Day	Project Number: GW6591	Reference Price Project: Kevin Herring	Project Number: GW6591	Price Quote: M. Wright	<input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER
		Price Profile #: 10839-5		Site Location: GA	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	COLLECTED	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)	pH =	Face Project No./ Lab ID.
1	HGWA-1	WT G							5	2	3	X	X	X	X
2	HGWA-2	WT G							5	2	3	X	X	X	X
3	HGWA-3	WT G							5	2	3	X	X	X	X
4	HGWA-43D	WT G							5	2	3	X	X	X	X
5	HGWA-44D	WT G							5	2	3	X	X	X	X
6	HGWA-45D	WT G							5	2	3	X	X	X	X
7	HGWA-422	WT G							5	2	3	X	X	X	X
8	HGWC-120	WT G							5	2	3	X	X	X	X
9	HGWC-121A	WT G							5	2	3	X	X	X	X
10	HGWC-124	WT G							5	2	3	X	X	X	X
11	HGWC-125	WT G							5	2	3	X	X	X	X
12	HGWC-126	WT G							5	2	3	X	X	X	X

ADDITIONAL COMMENTS: Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.
*App. III & IV Metals= Sb, Ba, Be, B, Ca, Cr, Co, Fe, U, Mo
One sample set submitted for HGWA-1/2/3/4/5 but they will be reported for AP-1/2/3 SDCs

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Marcus Keshish Ryan W. Hines / Pac	3/14/21	1532	William / Pac	3/14/21	1542	Temp in °C: 15 Received on Ice (Y/N): Y Custody Sealed Cooler (Y/N): Y Samples Intact (Y/N): Y

SAMPLER NAME AND SIGNATURE: PRINT NAME OF SAMPLER: Chris Russo SIGNATURE OF SAMPLER: [Signature]
DATE SIGNED: 3/15/21



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, Requested Due Date/TAT 10 Day

Section B Required Project Information: Report To: SCS Contacts, Copy To: Geosyntec Contacts, Project Name: Plant Hammond AP-3 Semiannual, Project Number: GW65581

Section C Invoice Information: Attention Southern Co., Company Name, Address, PACE DATE, PACE PROJECT MANAGER, PACE PROJECT # 10839-5, REGULATORY AGENCY, NPDES, GROUND WATER, UST, RCRA, DRINKING WATER, OTHER USE, Site Location, STATE: GA

Main data table with columns: ITEM #, Section D Required Client Information, Valid Matrix Codes, MATRIX CODE, SAMPLE TYPE, DATE, TIME, DATE, TIME, SAMPLE TEMP AT COLLECTION, # OF CONTAINERS, Preservatives, Analysis Test, Requested Analysis Filtered (Y/N), Residual Chlorine (Y/N), Pace Project No./ Lab ID., ADDITIONAL COMMENTS, RELINQUISHED BY / AFFILIATION, DATE, TIME, ACCEPTED BY / AFFILIATION, DATE, TIME, SAMPLE CONDITIONS

PRINT NAME AND SIGNATURE: SAMPPLER NAME AND SIGNATURE, PRINT NAME OF SAMPPLER: David Russo, SIGNATURE OF SAMPPLER: [Signature], DATE SIGNED: 3/15/2021

April 13, 2021

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

RE: Project: HAMMOND AP-3 SEMIANNUAL RADS
Pace Project No.: 92527263

Dear Joju Abraham:

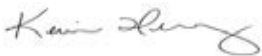
Enclosed are the analytical results for sample(s) received by the laboratory between March 11, 2021 and March 16, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-3 SEMIANNUAL RAD5

Pace Project No.: 92527263

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-3 SEMIANNUAL RADS
Pace Project No.: 92527263

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92527263001	HGWA-1	Water	03/10/21 16:10	03/11/21 15:55
92527263002	HGWA-44D	Water	03/10/21 14:30	03/11/21 15:55
92527263003	HGWA-2	Water	03/11/21 09:59	03/12/21 13:43
92527263004	HGWA-3	Water	03/11/21 11:25	03/12/21 13:43
92527263005	HGWA-43D	Water	03/11/21 09:57	03/12/21 13:43
92527263006	HGWA-122	Water	03/11/21 12:34	03/12/21 13:43
92527263007	HGWA-45D	Water	03/12/21 12:05	03/15/21 12:00
92527263008	HGWC-120	Water	03/12/21 16:25	03/15/21 12:00
92527263009	HGWC-125	Water	03/12/21 15:13	03/15/21 12:00
92527263010	HGWC-126	Water	03/12/21 16:50	03/15/21 12:00
92527263011	MW-46D	Water	03/12/21 14:50	03/15/21 12:00
92527263012	DUP-3	Water	03/12/21 00:00	03/15/21 12:00
92527263013	HGWC-121A	Water	03/15/21 14:46	03/16/21 13:42
92527263014	HGWC-124	Water	03/15/21 10:15	03/16/21 13:42
92527263015	MW-32	Water	03/15/21 10:04	03/16/21 13:42
92527263016	MW-39	Water	03/15/21 11:55	03/16/21 13:42
92527263017	MW-41	Water	03/15/21 13:14	03/16/21 13:42
92527263018	EB-3	Water	03/15/21 15:25	03/16/21 13:42
92527263019	FB-3	Water	03/15/21 15:30	03/16/21 13:42

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL RADS
 Pace Project No.: 92527263

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92527263001	HGWA-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527263002	HGWA-44D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527263003	HGWA-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527263004	HGWA-3	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527263005	HGWA-43D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527263006	HGWA-122	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527263007	HGWA-45D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527263008	HGWC-120	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527263009	HGWC-125	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527263010	HGWC-126	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527263011	MW-46D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527263012	DUP-3	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527263013	HGWC-121A	EPA 9315	LAL	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92527263014	HGWC-124	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527263015	MW-32	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527263016	MW-39	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92527263017	MW-41	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527263018	EB-3	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527263019	FB-3	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527263001	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	
92527263002	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	
92527263003	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	
92527263004	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	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527263005	HGWA-43D					
EPA 9315	Radium-226	0.118 ± 0.160 (0.335)	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	C:68% T:NA 1.39 ± 0.825 (1.53)	pCi/L		04/09/21 19:20	
Total Radium Calculation	Total Radium	C:62% T:77% 1.51 ± 0.985 (1.87)	pCi/L		04/12/21 13:46	
92527263006	HGWA-122					
EPA 9315	Radium-226	0.184 ± 0.145 (0.228)	pCi/L		03/29/21 07:35	
EPA 9320	Radium-228	C:90% T:NA 0.686 ± 0.519 (1.03)	pCi/L		04/07/21 15:56	
Total Radium Calculation	Total Radium	C:73% T:75% 0.870 ± 0.664 (1.26)	pCi/L		04/08/21 10:32	
92527263007	HGWA-45D					
EPA 9315	Radium-226	0.408 ± 0.252 (0.429)	pCi/L		04/05/21 09:32	
EPA 9320	Radium-228	C:82% T:NA 0.559 ± 0.385 (0.743)	pCi/L		04/09/21 15:21	
Total Radium Calculation	Total Radium	C:68% T:92% 0.967 ± 0.637 (1.17)	pCi/L		04/12/21 12:10	
92527263008	HGWC-120					
EPA 9315	Radium-226	0.248 ± 0.181 (0.295)	pCi/L		04/05/21 09:32	
EPA 9320	Radium-228	C:83% T:NA 0.463 ± 0.421 (0.859)	pCi/L		04/09/21 15:21	
Total Radium Calculation	Total Radium	C:67% T:85% 0.711 ± 0.602 (1.15)	pCi/L		04/12/21 12:10	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL RADS
Pace Project No.: 92527263

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527263009	HGWC-125					
EPA 9315	Radium-226	0.141 ± 0.146 (0.280) C:87% T:NA	pCi/L		04/05/21 09:32	
EPA 9320	Radium-228	0.687 ± 0.450 (0.865) C:68% T:87%	pCi/L		04/09/21 15:21	
Total Radium Calculation	Total Radium	0.828 ± 0.596 (1.15)	pCi/L		04/12/21 12:10	
92527263010	HGWC-126					
EPA 9315	Radium-226	0.667 ± 0.289 (0.299) C:68% T:NA	pCi/L		04/05/21 09:32	
EPA 9320	Radium-228	1.19 ± 0.620 (1.14) C:64% T:81%	pCi/L		04/09/21 15:21	
Total Radium Calculation	Total Radium	1.86 ± 0.909 (1.44)	pCi/L		04/12/21 12:10	
92527263011	MW-46D					
EPA 9315	Radium-226	0.0817 ± 0.225 (0.537) C:74% T:NA	pCi/L		04/05/21 08:29	
EPA 9320	Radium-228	0.584 ± 0.433 (0.847) C:68% T:76%	pCi/L		04/09/21 15:21	
Total Radium Calculation	Total Radium	0.666 ± 0.658 (1.38)	pCi/L		04/12/21 12:10	
92527263012	DUP-3					
EPA 9315	Radium-226	0.172 ± 0.201 (0.420) C:80% T:NA	pCi/L		04/05/21 09:20	
EPA 9320	Radium-228	0.630 ± 0.423 (0.803) C:67% T:79%	pCi/L		04/09/21 15:22	
Total Radium Calculation	Total Radium	0.802 ± 0.624 (1.22)	pCi/L		04/12/21 12:10	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL RADS
Pace Project No.: 92527263

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527263013	HGWC-121A					
EPA 9315	Radium-226	0.286 ± 0.239 (0.464) C:82% T:NA	pCi/L		04/05/21 09:20	
EPA 9320	Radium-228	0.699 ± 0.435 (0.811) C:64% T:84%	pCi/L		04/09/21 15:22	
Total Radium Calculation	Total Radium	0.985 ± 0.674 (1.28)	pCi/L		04/12/21 12:10	
92527263014	HGWC-124					
EPA 9315	Radium-226	0.0594 ± 0.187 (0.453) C:77% T:NA	pCi/L		04/05/21 09:20	
EPA 9320	Radium-228	0.681 ± 0.489 (0.953) C:68% T:71%	pCi/L		04/09/21 15:22	
Total Radium Calculation	Total Radium	0.740 ± 0.676 (1.41)	pCi/L		04/12/21 12:10	
92527263015	MW-32					
EPA 9315	Radium-226	0.273 ± 0.225 (0.427) C:82% T:NA	pCi/L		04/05/21 09:22	
EPA 9320	Radium-228	1.51 ± 0.623 (1.00) C:64% T:76%	pCi/L		04/09/21 11:33	
Total Radium Calculation	Total Radium	1.78 ± 0.848 (1.43)	pCi/L		04/12/21 13:21	
92527263016	MW-39					
EPA 9315	Radium-226	0.177 ± 0.243 (0.534) C:83% T:NA	pCi/L		04/05/21 09:23	
EPA 9320	Radium-228	1.17 ± 0.540 (0.915) C:65% T:80%	pCi/L		04/09/21 11:33	
Total Radium Calculation	Total Radium	1.35 ± 0.783 (1.45)	pCi/L		04/12/21 13:21	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527263017	MW-41					
EPA 9315	Radium-226	0.425 ± 0.281 (0.492) C:68% T:NA	pCi/L		04/05/21 09:41	
EPA 9320	Radium-228	0.788 ± 0.490 (0.920) C:62% T:81%	pCi/L		04/09/21 11:33	
Total Radium Calculation	Total Radium	1.21 ± 0.771 (1.41)	pCi/L		04/12/21 13:21	
92527263018	EB-3					
EPA 9315	Radium-226	-0.0573 ± 0.247 (0.640) C:90% T:NA	pCi/L		04/05/21 09:41	
EPA 9320	Radium-228	0.766 ± 0.508 (0.975) C:61% T:82%	pCi/L		04/09/21 11:33	
Total Radium Calculation	Total Radium	0.766 ± 0.755 (1.62)	pCi/L		04/12/21 13:21	
92527263019	FB-3					
EPA 9315	Radium-226	0.0248 ± 0.180 (0.453) C:87% T:NA	pCi/L		04/05/21 09:41	
EPA 9320	Radium-228	-0.572 ± 0.407 (1.03) C:65% T:80%	pCi/L		04/09/21 11:34	
Total Radium Calculation	Total Radium	0.0248 ± 0.587 (1.48)	pCi/L		04/12/21 13:21	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-1 Lab ID: 92527263001 Collected: 03/10/21 16:10 Received: 03/11/21 15:55 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	-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-3 SEMIANNUAL RADS
Pace Project No.: 92527263

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-44D Lab ID: 92527263002 Collected: 03/10/21 14:30 Received: 03/11/21 15:55 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	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	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Sample: HGWA-2 **Lab ID: 92527263003** 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	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-3 Lab ID: 92527263004 Collected: 03/11/21 11:25 Received: 03/12/21 13:43 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	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-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-43D Lab ID: 92527263005 Collected: 03/11/21 09:57 Received: 03/12/21 13:43 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	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	04/12/21 13:46	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-122 Lab ID: 92527263006 Collected: 03/11/21 12:34 Received: 03/12/21 13:43 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.184 ± 0.145 (0.228) C:90% T:NA	pCi/L	03/29/21 07:35	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.686 ± 0.519 (1.03) C:73% T:75%	pCi/L	04/07/21 15:56	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.870 ± 0.664 (1.26)	pCi/L	04/08/21 10:32	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-45D Lab ID: 92527263007 Collected: 03/12/21 12:05 Received: 03/15/21 12:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.408 ± 0.252 (0.429) C:82% T:NA	pCi/L	04/05/21 09:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.559 ± 0.385 (0.743) C:68% T:92%	pCi/L	04/09/21 15:21	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.967 ± 0.637 (1.17)	pCi/L	04/12/21 12:10	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-120 Lab ID: 92527263008 Collected: 03/12/21 16:25 Received: 03/15/21 12:00 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.248 ± 0.181 (0.295) C:83% T:NA	pCi/L	04/05/21 09:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.463 ± 0.421 (0.859) C:67% T:85%	pCi/L	04/09/21 15:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.711 ± 0.602 (1.15)	pCi/L	04/12/21 12:10	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-125 Lab ID: 92527263009 Collected: 03/12/21 15:13 Received: 03/15/21 12:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.141 ± 0.146 (0.280) C:87% T:NA	pCi/L	04/05/21 09:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.687 ± 0.450 (0.865) C:68% T:87%	pCi/L	04/09/21 15:21	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.828 ± 0.596 (1.15)	pCi/L	04/12/21 12:10	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-126 Lab ID: 92527263010 Collected: 03/12/21 16:50 Received: 03/15/21 12:00 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.667 ± 0.289 (0.299) C:68% T:NA	pCi/L	04/05/21 09:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.19 ± 0.620 (1.14) C:64% T:81%	pCi/L	04/09/21 15:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.86 ± 0.909 (1.44)	pCi/L	04/12/21 12:10	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-46D Lab ID: 92527263011 Collected: 03/12/21 14:50 Received: 03/15/21 12:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0817 ± 0.225 (0.537) C:74% T:NA	pCi/L	04/05/21 08:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.584 ± 0.433 (0.847) C:68% T:76%	pCi/L	04/09/21 15:21	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.666 ± 0.658 (1.38)	pCi/L	04/12/21 12:10	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Sample: DUP-3 **Lab ID: 92527263012** Collected: 03/12/21 00:00 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	0.172 ± 0.201 (0.420) C:80% T:NA	pCi/L	04/05/21 09:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.630 ± 0.423 (0.803) C:67% T:79%	pCi/L	04/09/21 15:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.802 ± 0.624 (1.22)	pCi/L	04/12/21 12:10	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-121A Lab ID: 92527263013 Collected: 03/15/21 14:46 Received: 03/16/21 13:42 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.286 ± 0.239 (0.464) C:82% T:NA	pCi/L	04/05/21 09:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.699 ± 0.435 (0.811) C:64% T:84%	pCi/L	04/09/21 15:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.985 ± 0.674 (1.28)	pCi/L	04/12/21 12:10	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-124 Lab ID: 92527263014 Collected: 03/15/21 10:15 Received: 03/16/21 13:42 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0594 ± 0.187 (0.453) C:77% T:NA	pCi/L	04/05/21 09:20	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.681 ± 0.489 (0.953) C:68% T:71%	pCi/L	04/09/21 15:22	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.740 ± 0.676 (1.41)	pCi/L	04/12/21 12:10	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Sample: MW-32 **Lab ID: 92527263015** Collected: 03/15/21 10:04 Received: 03/16/21 13:42 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	0.273 ± 0.225 (0.427) C:82% T:NA	pCi/L	04/05/21 09:22	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.51 ± 0.623 (1.00) C:64% T:76%	pCi/L	04/09/21 11:33	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.78 ± 0.848 (1.43)	pCi/L	04/12/21 13:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Sample: MW-39 **Lab ID: 92527263016** Collected: 03/15/21 11:55 Received: 03/16/21 13:42 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	0.177 ± 0.243 (0.534) C:83% T:NA	pCi/L	04/05/21 09:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.17 ± 0.540 (0.915) C:65% T:80%	pCi/L	04/09/21 11:33	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.35 ± 0.783 (1.45)	pCi/L	04/12/21 13:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Sample: MW-41 **Lab ID: 92527263017** Collected: 03/15/21 13:14 Received: 03/16/21 13:42 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	0.425 ± 0.281 (0.492) C:68% T:NA	pCi/L	04/05/21 09:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.788 ± 0.490 (0.920) C:62% T:81%	pCi/L	04/09/21 11:33	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.21 ± 0.771 (1.41)	pCi/L	04/12/21 13:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Sample: EB-3 **Lab ID: 92527263018** Collected: 03/15/21 15:25 Received: 03/16/21 13:42 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	-0.0573 ± 0.247 (0.640) C:90% T:NA	pCi/L	04/05/21 09:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.766 ± 0.508 (0.975) C:61% T:82%	pCi/L	04/09/21 11:33	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.766 ± 0.755 (1.62)	pCi/L	04/12/21 13:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

Sample: FB-3 **Lab ID: 92527263019** Collected: 03/15/21 15:30 Received: 03/16/21 13:42 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	0.0248 ± 0.180 (0.453) C:87% T:NA	pCi/L	04/05/21 09:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.572 ± 0.407 (1.03) C:65% T:80%	pCi/L	04/09/21 11:34	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.0248 ± 0.587 (1.48)	pCi/L	04/12/21 13:21	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

QC Batch:	440498	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527263017, 92527263018, 92527263019

METHOD BLANK: 2126660 Matrix: Water

Associated Lab Samples: 92527263017, 92527263018, 92527263019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0542 ± 0.165 (0.401) C:87% T:NA	pCi/L	04/05/21 09:41	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

QC Batch: 440194

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527263006

METHOD BLANK: 2125114

Matrix: Water

Associated Lab Samples: 92527263006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.922 ± 0.466 (0.823) C:75% T:77%	pCi/L	04/07/21 12:38	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

QC Batch:	440197	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527263015, 92527263016, 92527263017, 92527263018, 92527263019

METHOD BLANK: 2125126 Matrix: Water

Associated Lab Samples: 92527263015, 92527263016, 92527263017, 92527263018, 92527263019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.833 ± 0.523 (0.984) C:64% T:74%	pCi/L	04/09/21 11:35	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

QC Batch: 440196 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527263007, 92527263008, 92527263009, 92527263010, 92527263011, 92527263012, 92527263013, 92527263014

METHOD BLANK: 2125122 Matrix: Water

Associated Lab Samples: 92527263007, 92527263008, 92527263009, 92527263010, 92527263011, 92527263012, 92527263013, 92527263014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.624 ± 0.351 (0.633) C:78% T:86%	pCi/L	04/09/21 12:05	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

QC Batch:	440497	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527263007, 92527263008, 92527263009, 92527263010, 92527263011, 92527263012, 92527263013, 92527263014, 92527263015, 92527263016

METHOD BLANK: 2126659 Matrix: Water

Associated Lab Samples: 92527263007, 92527263008, 92527263009, 92527263010, 92527263011, 92527263012, 92527263013, 92527263014, 92527263015, 92527263016

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0621 ± 0.152 (0.366) C:63% T:NA	pCi/L	04/05/21 07:59	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

QC Batch: 440490

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527263001

METHOD BLANK: 2126643

Matrix: Water

Associated Lab Samples: 92527263001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.738 ± 0.321 (0.495) C:74% T:97%	pCi/L	04/09/21 12:06	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

QC Batch: 440491

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527263002, 92527263003, 92527263004, 92527263005

METHOD BLANK: 2126646

Matrix: Water

Associated Lab Samples: 92527263002, 92527263003, 92527263004, 92527263005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.826 ± 0.447 (0.791) C:67% T:78%	pCi/L	04/09/21 15:22	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

QC Batch:	439773	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527263001, 92527263002, 92527263003, 92527263004, 92527263005, 92527263006

METHOD BLANK: 2123469 Matrix: Water

Associated Lab Samples: 92527263001, 92527263002, 92527263003, 92527263004, 92527263005, 92527263006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0133 ± 0.113 (0.309) C:70% T:NA	pCi/L	03/29/21 07:58	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: HAMMOND AP-3 SEMIANNUAL RADS

Pace Project No.: 92527263

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL RADS
Pace Project No.: 92527263

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527263001	HGWA-1	EPA 9315	439773		
92527263002	HGWA-44D	EPA 9315	439773		
92527263003	HGWA-2	EPA 9315	439773		
92527263004	HGWA-3	EPA 9315	439773		
92527263005	HGWA-43D	EPA 9315	439773		
92527263006	HGWA-122	EPA 9315	439773		
92527263007	HGWA-45D	EPA 9315	440497		
92527263008	HGWC-120	EPA 9315	440497		
92527263009	HGWC-125	EPA 9315	440497		
92527263010	HGWC-126	EPA 9315	440497		
92527263011	MW-46D	EPA 9315	440497		
92527263012	DUP-3	EPA 9315	440497		
92527263013	HGWC-121A	EPA 9315	440497		
92527263014	HGWC-124	EPA 9315	440497		
92527263015	MW-32	EPA 9315	440497		
92527263016	MW-39	EPA 9315	440497		
92527263017	MW-41	EPA 9315	440498		
92527263018	EB-3	EPA 9315	440498		
92527263019	FB-3	EPA 9315	440498		
92527263001	HGWA-1	EPA 9320	440490		
92527263002	HGWA-44D	EPA 9320	440491		
92527263003	HGWA-2	EPA 9320	440491		
92527263004	HGWA-3	EPA 9320	440491		
92527263005	HGWA-43D	EPA 9320	440491		
92527263006	HGWA-122	EPA 9320	440194		
92527263007	HGWA-45D	EPA 9320	440196		
92527263008	HGWC-120	EPA 9320	440196		
92527263009	HGWC-125	EPA 9320	440196		
92527263010	HGWC-126	EPA 9320	440196		
92527263011	MW-46D	EPA 9320	440196		
92527263012	DUP-3	EPA 9320	440196		
92527263013	HGWC-121A	EPA 9320	440196		
92527263014	HGWC-124	EPA 9320	440196		
92527263015	MW-32	EPA 9320	440197		
92527263016	MW-39	EPA 9320	440197		
92527263017	MW-41	EPA 9320	440197		
92527263018	EB-3	EPA 9320	440197		
92527263019	FB-3	EPA 9320	440197		
92527263001	HGWA-1	Total Radium Calculation	442893		
92527263002	HGWA-44D	Total Radium Calculation	442893		
92527263003	HGWA-2	Total Radium Calculation	442893		
92527263004	HGWA-3	Total Radium Calculation	442893		
92527263005	HGWA-43D	Total Radium Calculation	442893		
92527263006	HGWA-122	Total Radium Calculation	442420		

REPORT OF LABORATORY ANALYSIS

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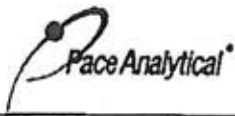
QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-3 SEMIANNUAL RADS
Pace Project No.: 92527263

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527263007	HGWA-45D	Total Radium Calculation	442870		
92527263008	HGWC-120	Total Radium Calculation	442870		
92527263009	HGWC-125	Total Radium Calculation	442870		
92527263010	HGWC-126	Total Radium Calculation	442870		
92527263011	MW-46D	Total Radium Calculation	442870		
92527263012	DUP-3	Total Radium Calculation	442870		
92527263013	HGWC-121A	Total Radium Calculation	442870		
92527263014	HGWC-124	Total Radium Calculation	442870		
92527263015	MW-32	Total Radium Calculation	442890		
92527263016	MW-39	Total Radium Calculation	442890		
92527263017	MW-41	Total Radium Calculation	442890		
92527263018	EB-3	Total Radium Calculation	442890		
92527263019	FB-3	Total Radium Calculation	442890		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

GA Power

Project #

WO# : 92527263



92527263

Courier: Fed Ex UPS USPS Client
 Commercial Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 3/12/24 COX

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:

1.8

Correction Factor: Add/Subtract (°C)

0.0

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C):

1.8

USDA Regulated Soil (N/A, water sample)

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

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?

Yes No

Yes No

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____

Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document

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

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

Section B Required Project Information:
 Report to SCS Contacts: Copy To: Geosyntec Contacts
 Purchase Order No.:
 Project Name: Plant Hammond A/P-3 Semiannual
 Project Number: GW6581

Section C Invoicing Information:
 Attention: Southern Co.
 Company Name:
 Address:
 Pico Quote:
 Reference: Kevin Heffling
 Pico Project Manager:
 Pico Profile #: 10638-5

Page: 1 of 1

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER:

Site Location: GA
 STATE: GA

Section D Required Client Information
Valid Matrix Codes
 MATRIX CODE (see valid codes to left)
 SAMPLE TYPE (G=GRAB C=COMP)
 DATE TIME DATE TIME
 SAMPLE TEMP AT COLLECTION
 # OF CONTAINERS
 Unpreserved
 H₂SO₄
 HNO₃
 HCl
 NaOH
 Na₂S₂O₃
 Methanol
 Other
 Analysis Test
 Chloride, Fluoride, Sulfate
 App. III & IV Metals*
 RAD 226/228
 TDS
 Residual Chlorine (Y/N)
 Pace Project No./ Lab I.D.

ITEM #	MATRIX CODE	SAMPLE TYPE	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Analysis Test	Chloride, Fluoride, Sulfate	App. III & IV Metals*	RAD 226/228	TDS	Residual Chlorine (Y/N)	pH =	
1	HGWA-1	WT G	3/10/21	1730				5	2									X	X	X	X	X	N	6.93
2	HGWA-2	WT G						5	2									X	X	X	X	X	N	
3	HGWA-3	WT G						5	2									X	X	X	X	X	N	
4	HGWA-4	WT G						5	2									X	X	X	X	X	N	
5	HGWA-4AD	WT G	3/10/21	1730				5	2									X	X	X	X	X	N	7.92
6	HGWA-4SD	WT G						5	2									X	X	X	X	X	N	
7	HGWA-122	WT G						5	2									X	X	X	X	X	N	
8	HGWC-120	WT G						5	2									X	X	X	X	X	N	
9	HGWC-121A	WT G						5	2									X	X	X	X	X	N	
10	HGWC-124	WT G						5	2									X	X	X	X	X	N	
11	HGWC-125	WT G						5	2									X	X	X	X	X	N	
12	HGWC-126	WT G						5	2									X	X	X	X	X	N	

ADDITIONAL COMMENTS
 RELINQUISHED BY / AFFILIATION: *Deborah Heisterkamp*
 DATE: 3/10/21
 TIME: 1730

ACCEPTED BY / AFFILIATION
 DATE: 3/10/21
 TIME: 1730

SAMPLE CONDITIONS
 Temp in °C: 2.0
 Received on Ice (Y/N): Y
 Custody Sealed Cooler (Y/N): Y
 Samples Intact (Y/N): Y

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: *Deborah Heisterkamp*
 SIGNATURE of SAMPLER: *[Signature]*
 DATE Signed (MANDATORY): 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.
 F-ALL-Q-020rev.07.15-06-2007



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
Required Client Information:
Company: GA Power
Address: Atlanta, GA
Report to: SCS Contacts
Copy To: Geosynlec Contacts

Section B
Required Project Information
Purchase Order No.
Project Name: Plant Hammond AP-3-Semiannual
Project Number: GWM6561

Section C
Invoice Information:
Attention: Southern Co.
Company Name
Address
Purchase Order Reference
Plant Project Name: Kevin Herring
Purchase Order Number: 10839-5

REGULATORY AGENCY
 NPDES
 GROUND WATER
 UST
 RCRA
 DRINKING WATER
 OTHER

Site Location
 STATE: GA

Requested Analysis Filtered (Y/N)

Requested Due Date/TAT: 10 Day

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH =	
				DATE	TIME	DATE								TIME
1	HGWA-1	WT G	G	3/11/21	0958	6	5	2	3	X	X	X	X	pH = 5.80
2	HGWA-2	WT G	G	3/11/21	1125	7	5	2	3	X	X	X	X	pH = 7.53
3	HGWA-3	WT G	G	3/11/21	0957	6	5	2	3	X	X	X	X	pH = 7.46
4	HGWA-43D	WT G	G							X	X	X	X	
5	HGWA-44D	WT G	G							X	X	X	X	
6	HGWA-46D	WT G	G							X	X	X	X	
7	HGWA-122	WT G	G	3/11/21	1234	17	5	2	3	X	X	X	X	pH = 6.65
8	HGWC-120	WT G	G							X	X	X	X	
9	HGWC-121A	WT G	G							X	X	X	X	
10	HGWC-124	WT G	G							X	X	X	X	
11	HGWC-125	WT G	G							X	X	X	X	
12	HGWC-126	WT G	G							X	X	X	X	

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Allegany Health Dept	3/12/21	1310	Virginia Tech Lab	3/12/21	1310	
Virginia Tech Lab	3/12/21	1343	AP at Pace	3/12/21	1343	
AP at Pace	3/12/21	1639	Charles Hill	3/12/21	1639	

Additional Comments:
 Please note dry wells - sticks through any wells not sampled and note when the last sample for the event has been taken.
 *App III & IV Metals - Sb, Bi, Be, B, Ca, Cr, Co, Pb, U, Mo

One sample set submitted for HGWA-123/4/5/6/4/4/4/4 but they will be reported for AP-12/23 SDCs

RELINQUISHED BY / AFFILIATION: AP at Pace
 DATE: 3/12/21
 TIME: 1639
 ACCEPTED BY / AFFILIATION: Charles Hill
 DATE: 3/12/21
 TIME: 1639

SAMPLER NAME AND SIGNATURE:
 PRINT Name of SAMPLER: James Kessler
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed (MM/DD/YYYY): 3/11/21
 Virginia Tech Lab

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section B Required Project Information: Report To SCS Contacts, Copy To Geosyntec Contacts

Section C Invoice Information: Attention Southern Co, Company Name Southern Co

REGULATORY AGENCY: NPDES, GROUND WATER, DRINKING WATER

Table with columns: ITEM #, Valid Matrix Codes, MATRIX CODE, SAMPLE TYPE, DATE, TIME, SAMPLE TEMP AT COLLECTION, # OF CONTAINERS, Preservatives, Analysis Test, Residual Chlorine (Y/N), Pace Project No./ Lab ID.

Table with columns: RELINQUISHED BY / AFFILIATION, DATE, TIME, ACCEPTED BY / AFFILIATION, DATE, TIME, SAMPLE CONDITIONS

SAMPLER NAME AND SIGNATURE: PRINT Name of SAMPLER: Thomas Kessler, SIGNATURE of SAMPLER: [Signature]

DATE Signed (MM/DD/YYYY): 03/02/21, 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 Face's NET 30 day payment terms and agreeing to the charges of 1.5% per month for any invoices not paid within 30 days.



CHAIN-OF-CUSTODY / Analytical Request Document

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Section A
Required Client Information

Section B
Requested Project Information

Section C
Invoice Information

Page: 2 of 2

Company: GA Power
Address: Atlanta, GA
Copy To: Geosyntec Contacts

Report To: SCS Contacts
Company Name: Southern Co.
Address:
City/State:
Phone: Cell Fax
Project Name: Plant Hammond AP-3 Semiannual
Project Number: GW6581
Requested Date/Time: 10 Day
Reference:
Plant Project: Kevin Herring
Manager:
Price Quote #: 10839-5

REGULATORY AGENCY:
 NPDES GROUND WATER
 DRINKING WATER
 UST RCRA OTHER

Site Location: _____
STATE: GA

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODES DOMESTIC WATER CW WASTE WATER WW INDUSTRIAL WATER IW PRODUCTS P COMBUSTIBLE C AIR A OTHER OT TISSUE T	Section B Requested Project Information Matrix Code (Left Valid Codes to left) SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₅ Methanol Other	Preservatives Y/N	Requested Analysis Filtered (Y/N)					Residual Chlorine (Y/N)	pH Project No/ Lab ID.
											COLLECTED	COMPOSITE	Chloride, Fluoride Sulfate	App. III & IV Metals*	RAO 226/228		
1	NW-92	WT G						5				X	X	X	X	N	
2	MW-39	WT G						5				X	X	X	X	N	
3	MW-41	WT G						5				X	X	X	X	N	
4	MW-46D	WT G	3/12/21	1450			19	5				X	X	X	X	N	
5	Dup-3	WT G						5				X	X	X	X	N	
6	FB-3	WT G						5				X	X	X	X	N	
7	FB-3	WT G						5	2	3		X	X	X	X	N	
8																	
9																	
10																	
11																	
12																	

ADDITIONAL COMMENTS:
Please note dry wells - strike through any wells not sampled, and note when the last sample for the event has been taken.
*App. III & IV Metals: Sb, Ba, Be, B, Ca, Cr, Cu, Pb, U, Mo

RELEASING BY / AFFILIATION: AS (PE)
Hammond Plant
3/15/21
1145

ACCEPTED BY / AFFILIATION: Kevin Herring
3/15/21
1200

SAMPLER NAME AND SIGNATURE:
PRINT Name of SAMPLER: Vashish Kapoor
SIGNATURE of SAMPLER: VT
DATE Signed (MM/DD/YYYY): 03/12/21

SAMPLE CONDITIONS:
Temp in °C _____
Received on ice (Y/N) _____
Custody sealed cooler (Y/N) _____
Sampler intact (Y/N) _____

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

F-ALL-O-020rev 07, 15/Feb-2007



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

Page: **1** of **2**

Section A Required Client Information		Section B Required Project Information		Section C Info on Information:	
Company	GA Power	Report To:	SCS Contacts	Attention:	Southern Co.
Address	Atlanta, GA	Copy To:	Geosyntec Contacts	Address	

Email To: **SCS Contacts** | Project Name: **Plant Hammond AP-3-Semiannual**
 Phone: [] | Fax: [] | Project Number: **GW6581**
 Requested Due Date/FAT: **to Day** | Requested Analyze Filtered (Y/N): []
 PACE PROJECT # **10839-5**

ITEM #	Section D Requested Client Information SAMPLE ID (A-Z, 0-9, /, -) Sample IDs MUST BE UNIQUE	VALID Matrix Codes MATRIX CODE Please use water type codes WATER WET WET PRODUCT # SOLVENTS OIL WIFE WIFE AIR OTHER TISSUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test					Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.							
					DATE	TIME	DATE			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Chloride, Fluoride, Sulfate	App. III & IV Metals*			PAO 226/228	TDS					
1	HQWA-1		WT G		-	-	-	5	2																					
2	HQWA-2		WT G		-	-	-	5	2																					
3	HQWA-3		WT G		-	-	-	5	2																					
4	HQWA-43D		WT G		-	-	-	5	2																					
6	HQWA-44D		WT G		-	-	-	5	2																					
6	HQWA-45D		WT G		-	-	-	5	2																					
7	HQWA-422		WT G		-	-	-	5	2																					
8	HQWC-120		WT G		-	-	-	5	2																					
9	HQWC-121A		WT G	5/15/21	1446	-	-	5	2																					
10	HQWC-124		WT G	5/12/21	1015	-	-	5	2																					
11	HQWC-425		WT G			-	-	5	2																					
12	HQWC-126		WT G			-	-	5	2																					

ADDITIONAL COMMENTS: Please note dry wells, strikes through any wells not sampled, and note when the last sample for the well has been taken.
 *App. III & IV Metals- Sb, Ba, B, Ca, Cr, Co, Fe, Li, Mo
 One sample set submitted for HQWA-1/2/3/4/5 but they will be reported for AP-1/2/3 SDCS

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
<i>Markus Kestler</i>	3/14/21	1532	<i>William Pinn</i>	4/1/21	1542	Temp in °C: 15 Y Received on Ice (Y/N): Y Custody Sealed Cooler (Y/N): Y Samples Intact (Y/N): Y

SAMPLER NAME AND SIGNATURE		
PRINT NAME of SAMPLER:	DATE Signed	SIGNATURE of SAMPLER:
<i>Clay Russo</i>	3/15/21	<i>Clay Russo</i>
<i>Clay Russo</i>		<i>Clay Russo</i>

F-ALL-Q-020rev/07 15-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document

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

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

Section B
 Required Project Information:
 Report To: SCS Contacts
 Copy To: Geosynlec Contacts
 Project Name: Plant Hammond AP-3 Semiannual
 Project Number: GW6581

Section C
 Invoice Information:
 Attention: Southern Co.
 Company Name: Southern Co.
 Address: [Blank]
 PACE Project Manager: Kevin Herring
 PACE Project # 10839-5

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

Site Location: _____ STATE: GA

Page: 2 of 2

Section D
 Required Client Information:
 Valid Matrix Codes
 MATRIX CODE (see valid codes to left)
 SAMPLE TYPE (G=GRAB C=COMP)

ITEM #	MATRIX CODE	SAMPLE TYPE	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1	MW-32	WT G	3/15/21	1604	-	-	12	5	2	3	X	N	X	X	X	X
2	MW-39	WT G	3/15/21	1155	-	-	18	5	2	3	X	N	X	X	X	X
3	MW-41	WT G	3/15/21	1314	-	-	17	5	2	3	X	N	X	X	X	X
4	MW-46B	WT G	-	-	-	-	-	-	-	-	X	N	X	X	X	X
5	EB-3	WT G	3/15/21	1525	-	-	-	5	2	3	X	N	X	X	X	X
6	EB-3	WT G	3/15/21	1530	-	-	-	5	2	3	X	N	X	X	X	X
7	FB-3	WT G	3/15/21	1530	-	-	-	5	2	3	X	N	X	X	X	X
8																
9																
10																
11																
12																

Section D
 Required Client Information:
 Valid Matrix Codes
 MATRIX CODE (see valid codes to left)
 SAMPLE TYPE (G=GRAB C=COMP)

Section E
 ADDITIONAL COMMENTS
 Relinquished by Affiliation: [Blank]
 Accepted by Affiliation: [Blank]

Section F
 SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Ryan Russo
 SIGNATURE OF SAMPLER: [Signature]
 DATE SIGNED: 3/15/2021

Section G
 SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Ryan Russo
 SIGNATURE OF SAMPLER: [Signature]
 DATE SIGNED: 3/15/2021

Please note dry wells, strike through any wells not sampled and note when the last sample for the event has been taken.
 *App. III & IV Metals= Sb, Ba, Be, B, Cd, Cr, Co, Pb, Li, Mo
 One sample set submitted for HGWA-122343044D but they will be recorded for AP-123 SDGS

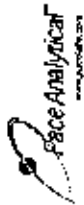
*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms, and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07-15-Feb-2017

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: CLA
Date: 3/26/2021
Worklist: 59450
Matrix: UW



Method Blank Assessment	
MB Sample ID	2122469
MB Concentration:	0.013
MB Counting Uncertainty:	0.113
MB MDC:	0.309
MB Numerical Performance Indicator:	0.23
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS ID # or NIP?	Y
LCS59450	LCS059450
3/29/2021	3/29/2021
19.033	19.033
24.039	24.039
0.10	0.10
0.504	0.504
4.773	4.773
0.057	0.057
5.482	5.482
0.737	0.737
1.38	1.38
93.15%	114.86%
N/A	N/A
Pass	Pass
125%	125%
75%	75%

Duplicate Sample Assessment	
LCS59450	LCS059450
4.437	4.437
0.594	0.594
5.482	5.482
0.737	0.737
N/A	N/A
-2.156	-2.156
20.88%	20.88%
N/A	N/A
Pass	Pass
25%	25%

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample ID:	
Sample MS ID:	
Sample MSD ID:	
Spike I.D.:	
MSMSD Decay Corrected Spike Concentration [pCi/mL]:	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
MS Spike Uncertainty (calculated):	
MSD Spike Uncertainty (calculated):	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
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 Limit:	
MS/MSD Lower % Recovery Limit:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS ID:	
Sample MSD ID:	
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:	
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:

Am 3/29/21

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow

Test: Re-228
 Analyst: CLA
 Date: 3/26/2021
 Worksheet: 59450
 Matrix: DW

Method Blank Assessment	
MB Sample ID	2123468
MB concentration:	0.013
MB 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 TV or N?	N
Count Date:	LCSD:59450
Spike I.D.:	3/25/2021
Decay Corrected Spike Concentration (pCi/mL):	19.033
Volume Used (mL):	24.039
Aliquot Volume (L, g, F):	0.10
Target Conc. (pCi/L, g, F):	4.783
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.437
LCSD Counting Uncertainty (pCi/L, g, F):	0.584
Numerical Performance Indicator:	-1.07
Percent Recovery:	93.15%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	120%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	92527258001
Duplicate Sample I.D.:	92527258001DUP
Sample Result (pCi/L, g, F):	-0.074
Sample Duplicate Result (pCi/L, g, F):	0.070
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.120
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:	-2.967
Duplicate RPD:	852.72%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail
% RPD Limit:	25%

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

Comments:

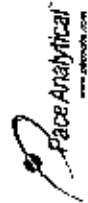
***Batch must be re-prepped due to unacceptable precision.

MS/MSD 1	MS/MSD 2
<p>Sample Matrix Spike Control Assessment</p> <p>Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (Calculated): MSD Spike Uncertainty (Calculated):</p> <p>Sample Result: Sample 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:</p>	

Matrix Spike/Matrix Spike Duplicate Sample Assessment
<p>Sample I.D. Sample MS I.D. Sample MSD I.D.</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): Duplicate Numerical Performance Indicator: Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:</p>

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Quality Control Sample Performance Assessment



Analyt must manually enter all fields highlighted in yellow.

Test: Ra-226
 Analyst: LAL
 Date: 4/5/2021
 Worksheet: 59553
 Matrix: DW

Method Blank Assessment	
MB Sample ID	2126659
MB Concentration	0.062
MB Counting Uncertainty	0.152
MB MDC	0.366
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
LCSD59553	LCSD49559
Count Date:	4/5/2021
Spike ID:	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):	4.717
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.802
LCSD Counting Uncertainty (pCi/L, g, F):	0.640
Numerical Performance Indicator:	-0.50
Percent Recovery:	96.54%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limit:	125%
Lower % Recovery Limit:	75%

Duplicate Sample Assessment	
Sample I.D.:	92527242024
Duplicate Sample I.D.:	92527242024DUP
Sample Result (pCi/L, g, F):	0.093
Sample Result Counting Uncertainty (pCi/L, g, F):	0.130
Sample Duplicate Result (pCi/L, g, F):	0.306
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.260
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	-1.453
Duplicate RPD:	107.80%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail
% RPD Limit:	25%

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:	Sample I.D.:		
Sample MS I.D.:	Sample MS I.D.:		
Sample MS2 I.D.:	Sample MS2 I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	MS Target Conc. (pCi/L, g, F):		
Spike Volume Used in MS (mL):	MSD Target Conc. (pCi/L, g, F):		
Spike Volume Used in MSD (mL):	MSD Spike Uncertainty (calculated):		
MS Aliquot (L, g, F):	Sample Result:		
MS Target Conc. (pCi/L, g, F):	Sample Matrix Spike Result:		
MSD Aliquot (L, g, F):	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
MSD Target Conc. (pCi/L, g, F):	Sample Matrix Spikes Duplicate Result:		
MSD Spike Uncertainty (calculated):	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
MS Numerical Performance Indicator:	MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:	MSD Numerical Performance Indicator:		
MS Percent Recovery:	MS Percent Recovery:		
MSD Percent Recovery:	MSD Percent Recovery:		
MS Status vs Numerical Indicator:	MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:	MSD Status vs Numerical Indicator:		
MS Status vs Recovery:	MS Status vs Recovery:		
MSD Status vs Recovery:	MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limit:	MS/MSD Upper % Recovery Limit:		
MS/MSD Lower % Recovery Limit:	MS/MSD Lower % Recovery Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample I.D.:
Sample MS I.D.:	Sample MS I.D.:
Sample MS2 I.D.:	Sample MS2 I.D.:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Result:	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Duplicate Numerical Performance Indicator:
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Duplicate Numerical Performance Indicator:
(Based on the Percent Recovery) MS/MSD Duplicate RPD:	MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:
MS/MSD Duplicate Status vs RPD:	% RPD Limit:

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

Comments:

*** Blank must be as prepared due to unacceptable precision.

LAL 4/5/21

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-226
 Analyst: LAL
 Date: 4/5/2021
 Worksheet: 59558
 Matrix: DW

Method Blank Assessment

MB Sample ID	2126659
MB Concentration:	0.062
MB Counting Uncertainty:	0.162
MB MDC:	0.366
MB Numerical Performance Indicator:	0.89
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment

LCSD IV or NY?	Y
LCSD59558	4/5/2021
LCSD59558	19-033
Count Date:	24-038
Spike ID:	0.10
Decay Corrected Spike Concentration (pCi/mL):	0.504
Volume Used (mL):	4.767
Aliquot Volume (L, g, F):	4.705
Target Conc. (pCi/L, g, F):	0.057
Uncertainty (Calculated):	4.903
Result (pCi/L, g, F):	0.628
LCSD Counting Uncertainty (pCi/L, g, F):	0.62
Numerical Performance Indicator:	104.21%
Percent Recovery:	N/A
Status vs Numerical Indicator:	Pass
Status vs Recovery:	Pass
Upper % Recovery Limit:	125%
Lower % Recovery Limit:	75%

Duplicate Sample Assessment

Sample ID:	LCSD59558
Duplicate Sample ID:	LCSD59558
Sample Result (pCi/L, g, F):	4.602
Sample Duplicate Result (pCi/L, g, F):	0.640
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	4.903
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.628
Are sample and/or duplicate results below RL?	NQ
Duplicate Numerical Performance Indicator:	0.658
Duplicate Percent Recoveries:	7.66%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Enter Duplicate sample IDs if other than LCSD in the space below:
 925274202A
 925274202DUP

Sample Matrix Spike Control Assessment

Sample Collection Date:	MS/MSD 1	MS/MSD 2
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
MS Aliquot (L, g, F):		
MS Target Conc. (pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Sample Matrix Spike Duplicate 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 Limit:		
MS/MSD Lower % Recovery Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment

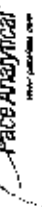
Sample I.D.	
Sample MS I.D.	
Sample MSD I.D.	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
Duplicate Percent Recoveries:	
Duplicate Status vs Numerical Indicator:	
Duplicate Status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

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

Comments:

12/11/21

Quality Control Sample Performance Assessment



Test: Ra-228
Analyst: VAL
Date: 4/5/2021
Worklist: 59551
Matrix: WT

Method Blank Assessment

MB Sample ID	Z126643
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 ID or NP?	Y
LCSD59551	LCSD59551
4/9/2021	4/9/2021
21-003	21-003
38.142	38.142
0.10	0.10
0.904	0.912
4.743	4.687
0.232	0.230
5.331	5.342
1.159	1.184
0.97	1.11
112.40%	114.56%
N/A	N/A
Pass	Pass
135%	135%
65%	60%

Duplicate Sample Assessment

Sample ID	Duplicate Sample ID	Enter Duplicate sample IDs if other than LCSD/CSU in the space below
LCSD59551	LCSD59551	
5.331	5.331	
1.188	1.188	
5.382	5.382	
1.184	1.184	
NO	NO	
0.050	0.050	
1.92%	1.92%	
Pass	Pass	
36%	36%	

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment

Sample Collection Date:	MSMSD 1	MSMSD 2
Sample ID:		
Sample MS ID:		
Sample MSD ID:		
Spike I.D.:		
MSMSD Dvcty Corrected Spike Concentration (pCi/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 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:		
MSMSD Upper % Recovery Limits:		
MSMSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample ID	Sample MS ID	Sample MSD ID
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
Duplicate Percent Recovery:		
MS/MSD Duplicate Status vs Numerical Indicator:		
MS/MSD Duplicate Status vs RPD:		
% RPD Limit:		

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

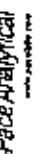
Comments:

*The method blank result is below the reporting limit for this analysis and is acceptable.

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Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 4/8/2021
Worksheet: 59552
Matrix: VWT

Method Blank Assessment	
MB Sample ID	2126846
MB Concentration:	0.826
MB 2 Sigma CSU:	0.447
MB MQC:	0.791
MB Numerical Performance Indicator:	3.42
MB Status vs Numerical Indicator:	Fail
MB Status vs MQC:	See Comment

Laboratory Control Sample Assessment	
LCS ID or N7	Y
LCS59552	LCS049552
4092021	4197021
21-003	21-003
38.140	38.140
0.10	0.10
0.603	0.815
4.742	4.682
0.233	0.229
4.576	4.593
1.068	1.068
-0.31	-0.18
96.36%	97.88%
N/A	N/A
Pass	Pass
135%	135%
60%	60%

Duplicate Sample Assessment	
Sample ID:	LCS59552
Duplicate Sample ID:	LCS049552
Sample Result (pCi/L, g, F):	4.576
Sample Result 2 (pCi/L, g, F):	1.068
Sample Duplicate Result (pCi/L, g, F):	4.583
Sample Duplicate Result 2 (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/CSO Percent Recoveries) Duplicate RPD:	1.62%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	35%

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

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

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

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable

Handwritten signature/initials

Quality Control Sample Performance Assessment

Analyt Must Manually Enter All Fields Highlighted in Yellow.

Test: Rn-228
Analyst: VAL
Date: 4/5/2021
Worklist: 595D1
Matrix: WWT



Method Blank Assessment

MB Sample ID	2125122
MB Concentration:	0.624
MB 2 Sigma CSU:	0.351
MB MDC:	0.623
MB Numerical Performance Indicator:	3.48
MB Status vs Numerical Indicator:	Fail
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment

Count Date	LCSD (Y or N)†	Y
4/9/2021	LCSD39501	4/9/2021
21-003	21-003	38.142
38.142	0.10	0.812
0.811	4.704	4.637
4.704	0.230	0.230
0.230	4.512	5.514
4.512	1.028	1.197
1.028	-0.35	1.31
-0.35	95.92%	117.38%
95.92%	N/A	N/A
N/A	Pass	Pass
Pass	136%	135%
136%	60%	60%

Duplicate Sample Assessment

Sample I.D.	Sample I.D.	Enter Duplicate sample I.D.s if other than LCSD in the space below:
LC955501	LC9035001	
4.512	1.028	
5.514	1.197	
NO	NO	
-1.244	-1.244	
20.11%	20.11%	
Pass	Pass	
35%	35%	

Sample Matrix Spike Control Assessment

Sample Collection Date:	MS/MSD 1	MS/MSD 2
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 Limit:		
MS/MSD Lower % Recovery Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

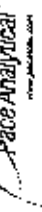
† Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

† If the lower activity sample result is greater than the blank value, the blank is acceptable; otherwise, the blank must be re-processed.

Handwritten notes:
MB < MDC, Pass
4/12/21
VAL

Quality Control Sample Performance Assessment



Test: R0-228
Analyst: VAL
Date: 4/5/2021
Worksheet: 59502
Matrix: WWT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MS Sample ID	2125128
MB Concentration	0.823
MB 2 Sigma CSU	0.523
MB MDC	0.984
MB Numerical Performance Indicator	3.12
MB Status vs Numerical Indicator	Fail
MB Status vs MDC	Pass

Laboratory Control Sample Assessment	LCSD Y or N?	
	LCSD 59502	LCSD 59502
Count Date:	4/8/2021	4/8/2021
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):	0.808	0.810
Target Conc. (pCi/L, g, F):	4.723	4.707
Uncertainty (Calculated):	0.231	0.231
Result (pCi/L, g, F):	5.736	5.058
LCSD 2 Sigma CSU (pCi/L, g, F):	1.327	1.202
Numerical Performance Indicator:	1.47	0.56
Percent Recovery:	121.45%	107.45%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limit:	135%	135%
Lower % Recovery Limit:	60%	60%

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCSD 59502 in the space below
Sample I.D.:	LCSD 59502
Duplicate Sample ID:	LCSD 59502
Sample Result (pCi/L, g, F):	3.736
Sample Duplicate Result (pCi/L, g, F):	1.327
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	3.059
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.202
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.741
Duplicate Percent Recovery:	42.20%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

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

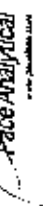
⚠ Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable, otherwise this batch must be re-prepped.

Outlier!

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 4/27/2011
Worklist: 59499
Matrix: W/T

Method Blank Assessment	
MB Sample ID	2125114
MB Concentration	0.922
MB 2 Sigma CSU	0.466
MB MDIC	0.923
MB Numerical Performance Indicator	3.69
MB Status vs Numerical Indicator	Fail
MB Status vs. MDIC	See Comment!

Laboratory Control Sample Assessment		
Count Date	LCSD(Y or N)?	Y
Sample I.D.	LCSD59499	4/7/2011
Decay Corrected Spike Concentration (pCi/mL)	21-003	38.167
Volume Used (mL)	0.10	0.10
Aliquot Volume (L, g, F)	0.814	0.814
Target Conc. (pCi/L, g, F)	4.686	4.686
Uncertainty (Calculated)	0.230	0.230
Result (pCi/L, g, F)	4.985	4.724
LCSD/CSU 2 Sigma CSU (pCi/L, g, F)	1.122	1.103
Numerical Performance Indicator	0.51	0.07
Percent Recovery	106.39%	100.80%
Status vs Numerical Indicator	N/A	N/A
Status vs Recovery	Pass	Pass
Upper % Recovery Limit	135%	135%
Lower % Recovery Limit	60%	60%

Duplicate Sample Assessment		
Sample I.D.	LCSD59499	Enter Duplicate sample IDs if other than LCSD/CSU in the space below.
Duplicate Sample I.D.	LCSD59499	
Sample Result (pCi/L, g, F)	4.985	
Sample Result 2 Sigma CSU (pCi/L, g, F)	1.122	
Sample Duplicate Result (pCi/L, g, F)	4.724	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F)	1.103	
A40 sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator	0.326	
(Based on the LCSD/CSU Percent Recoveries) Duplicate RPD	5.40%	
Duplicate Status vs Numerical Indicator	Pass	
Duplicate Status vs RPD	Pass	
% RPD Limit	36%	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDIC

Comments:

The method blank result is below the reporting limit for this analysis and is acceptable.

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

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

Handwritten note: 10/1/11

VALIDATION REPORTS

August 2020

Memorandum

Date: 9 December 2020
To: Whitney Law
From: Kristoffer Henderson
CC: J. Caprio
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92492413 and 92492418**

SITE: Plant Hammond AP3

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twelve aqueous samples, one field duplicate and one field blank, collected 24-28 August 2020, as part of the Plant Hammond AP3 on-site sampling event.

The samples were analyzed at Pace Analytical Services, LLC, 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 7470
- Total Dissolved Solids (TDS) by Standard Method 2540C

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

- 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, 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
92492413001	HGWA-122
92492413002	HGWA-2
92492413003	HGWA-3
92492413004	HGWC-125
92492413005	HGWC-126
92492413006	FB-01
92492413007	HGWC-121A
92492413008	MW-32
92492413009	MW-39
92492413010	MW-41
92492413011	HGWC-120
92492413012	FD-01
92492413013	HGWC-124
92492413014	HGWA-1

Laboratory ID	Client ID
92492418001	HGWA-122
92492418002	HGWA-2
92492418003	HGWA-3
92492418004	HGWC-125
92492418005	HGWC-126
92492418006	FB-01
92492418007	HGWC-121A
92492418008	MW-32
92492418009	MW-39
92492418010	MW-41
92492418011	HGWC-120
92492418012	FD-01
92492418013	HGWC-124
92492418014	HGWA-1

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

The following issues were noted with the chain of custody (COC) forms:

- 92492413 and 9242418: The year was not documented on the COC for the collection times. The collection times were logged in with the collection year on 2020.

- 92492413 and 9242418: There was a time discrepancy for the second sample transfer on page 1 of the COC. The *relinquished by* time was documented as 8/25/2020 1121 and the *received by* time was documented as 8/25/20 1125. The *relinquished by* signature, date and time were missing for the third sample transfer on page 1 of the COC.
- 92492413 and 9242418: There was a time discrepancy for the third sample transfer on pages 2 and 3 of the COC. The *relinquished by* time was documented as 8/26/2020 0949 and the *received by* time was documented as 8/26/20 0950. The *relinquished by* signatures, dates and times were missing for the fourth sample transfer on page 2 and 3 of the COC.
- 92492413 and 9242418: There was a time discrepancy for the second sample transfer on page 7 of the COC. The *relinquished by* time was documented as 8/28/2020 1105 and the *received by* time was documented as 8/28/20 1108. The *relinquished by* signature, date and time were missing for the third sample transfer on page 7 of the COC.
- 92492413 and 9242418: A collection time was not documented on the COC for the field duplicate. The field duplicate was logged in with the collection time of 00:00.

The field pH data included with the report were not validated.

1.0 METALS

The samples were analyzed for calcium by USEPA methods 3010A/6010D 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 analysis, for the 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). Five method blanks were reported (batches 564973, 562831, 563747, 563754 and 567520). 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 563754 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Since antimony was not detected in the associated samples, no qualifications were applied to the data.

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific MS/MSD pairs were reported, using samples HGWC-125 and HGWA-2. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The MS recovery and RPD of antimony in the MS/MSD pair using sample HGWA-2 were high and outside the laboratory specified acceptance criteria. Since antimony was not detected in sample HGWA-2, no qualifications were applied to the data.

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.

The calcium concentration in sample HGWC-125 was greater than four times the spiked concentrations. Therefore, no qualifications were applied to the calcium data based on the MS/MSD pair results.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Five 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

One field blank was collected with the sample set, FB-01. Metals were not detected in the field blank above the MDLs, with the following exception.

Barium was detected in the field blank at an estimated concentration greater than the MDL and less than the RL. Since barium was detected at concentrations greater than the RL in the associated samples, no qualifications were applied to the data.

1.8 Field Duplicate

One field duplicate sample was collected with the sample sets, FD-01. Acceptable precision (RPD $\leq 20\%$ or the difference between the concentrations $< RL$) was demonstrated between the field duplicate and the original sample, MW-32.

1.9 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flags M1 and R1 used in the level II report was not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

2.0 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 analysis, for the data set is 100%.

2.2 Holding Time

The holding time for the mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported (batches 562436, 563370, 563371 and 564593). Mercury was not detected in the method blanks above the MDL, with the following exception.

Mercury was detected in the method blank in batch 563370 at an estimated concentration greater than the MDL and less than the RL. Since mercury was not detected in the associated samples, no qualifications were applied to the data.

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 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.

2.5 Laboratory Control Sample

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

2.6 Equipment Blank

Equipment blank was not collected with the sample set.

2.7 Field Blank

One field blank was collected with the sample set, FB-01. Mercury was not detected in the field blank above the MDL.

2.8 Field Duplicate

One field duplicate sample was collected with the sample sets, FD-01. Acceptable precision (RPD $\leq 20\%$ or the difference between the concentrations $< RL$) was demonstrated between the field duplicate and the original sample, MW-32.

2.9 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

2.10 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II reports 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 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

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 analysis, for the data set is 100%.

3.2 Holding Times

The holding times for the analysis of a water sample for the wet chemistry parameters are listed below. The holding times were met for the sample analyses, with the following exception.

Analyte	Holding Time
TDS	7 days from collection to analysis
Chloride, Fluoride and Sulfate	28 days from collection to analysis

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported for TDS (batch 563552) and five method blanks were reported for the anions (batches 562433, 562698, 563042, 563290 and 564239). The wet chemistry parameters were not detected in the method blanks above the MDLs.

3.4 Matrix Spike/Matrix Spike Duplicate

One sample set MS/MSD pair was reported for anions using sample MW-41. The RPD and recovery results were within the laboratory specified acceptance criteria.

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.

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 as appropriate. 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 FB-01. 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

Equipment blank were not collected with the sample set.

3.8 Field Blank

One field blank was collected with the sample set, FB-01. The wet chemistry parameters were not detected in the field blank above the MDLs.

3.9 Field Duplicate

One field duplicate sample was collected with the sample sets, FD-01. Acceptable precision (RPD \leq 20% or the difference between the concentrations $<$ RL) was demonstrated between the field duplicate and the original sample, MW-32.

3.10 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

3.11 Electronic Data Deliverable Review

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

4.0 RADIOCHEMISTRY

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

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

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

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 412347, 412653, 412345 and 412346). Four method blanks were reported for the radium-226 data (batches 412356, 412358, 412851 and 412352). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exceptions.

Radium-226 (0.206 pCi/L) was detected in the method blank in batch 412352 at a concentration greater than the MDC. Since radium-226 was not detected at a concentration greater than the MDC in the associated sample, no qualifications were applied to the data.

Radium-228 (0.749 pCi/L) was detected in the method blank in batch 412346 at a concentration greater than the MDC. Therefore, based on professional and technical judgment, the radium-228 and combined radium 226 + 228 concentrations in samples HGWC-125 and HGWC-121A 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-125	Radium-228	1.31	NA	1.31	J+	3
HGWC-125	Combined Radium 226 + 228	1.65	NA	1.65	J+	3
HGWC-121A	Radium-228	1.81	NA	1.81	J+	3
HGWC-121A	Combined Radium 226 + 228	1.96	NA	1.96	J+	3

pCi/L-picocuries per liter

NA-not applicable

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

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

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). Three LCSs and one LCS/LCS duplicate (LCSD) pair were reported for radium-226. Four LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [2 sigma (2σ)] results were within the laboratory specified acceptance criteria.

4.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported using sample HGWC-120. The RER (2σ) result was within the laboratory specified acceptance criteria.

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

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

Equipment blanks were not collected with the sample set.

4.9 Field Blank

One field blank was collected with the sample set, FB-01. Radium-226 and radium-228 were not detected in the field blank above the MDCs.

4.10 Field Duplicate

One field duplicate sample was collected with the sample sets, FD-01. Acceptable precision (RER (2σ) < 3) was demonstrated between the field duplicate and the original sample, MW-32.

4.11 Sensitivity

The samples were reported to the MDCs. Elevated nondetect results were not 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.

* * * * *

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	Extraction or analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits or RPD 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: no validation qualification required

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

September 2020

Memorandum

Date: December 14, 2020
To: Whitney Law
From: Kristoffer Henderson
CC: J. Caprio
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92495892 and 92495904**

SITE: Plant Hammond AP-3

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of sixteen aqueous samples, one field duplicate and one field blank, collected 15-28 September 2020, as part of the Plant Hammond AP on-site sampling event.

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

- Metals by United States (US) Environmental Protection Agency (EPA) Methods 3010A/6010D
- 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:

- Alkalinity by Standard Method 2320B
- Sulfide by Standard Method 4500S2D
- 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, with the following exceptions.

The non-detect mercury results in samples HGWC-126, FB-03 and HGWC-125 were R qualified as rejected due to holding time exceedances.

Qualified data that were not rejected 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, 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
92495892001	HGWA-1
92495892002	HGWA-2
92495892003	HGWA-3
92495892004	HGWA-122
92495892005	HGWA-43D
92495892006	HGWA-44D
92495892007	HGWC-126
92495892008	FB-03
92495892009	HGWC-120
92495892010	FD-03
92495892011	HGWC-125
92495892012	HGWA-45D
92495892013	MW-46D
92495892014	HGWC-121A
92495892015	HGWC-124
92495892016	MW-32
92495892017	MW-39

Laboratory ID	Client ID
92495892018	MW-41
92495904001	HGWA-1
92495904002	HGWA-2
92495904003	HGWA-3
92495904004	HGWA-122
92495904005	HGWA-43D
92495904006	HGWA-44D
92495904007	HGWC-126
92495904008	FB-03
92495904009	HGWC-120
92495904010	FD-03
92495904011	HGWC-125
92495904012	HGWA-45D
92495904013	MW-46D
92495904014	HGWC-121A
92495904015	HGWC-124
92495904016	MW-32

Laboratory ID	Client ID
92495904017	MW-39

Laboratory ID	Client ID
92495904018	MW-41

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 collection times of samples HGWA-3, HGWA-122, MW-43D, MW-44D, HGWC-126, FB-03, HGWC-120, FD-03, HGWC-125, MW-32, MW-39 and MW-41. The samples were logged in with the collection year of 2020.
- There were time discrepancies for the third sample transfer on page 1 of the COC. The *relinquished by* time was documented as 9/16/20 1113 and the *received by* time was documented as 9/16/20 1114.
- There were time discrepancies for the second sample transfer on page 2 of the COC. The *relinquished by* time was documented as 9/16/20 1113 and the *received by* time was documented as 9/16/20 1114.
- The year was not documented for the *relinquished by* date for the first sample transfer on pages 3-4 of the COC.
- The *relinquished by* date was not documented for the third sample transfer on page 3 of the COC.
- The year was not documented for the *received by* date of the first transfer and the *relinquished by* date for the second transfer on pages 7-8 of the COC.
- The *received by* signature, date and time were not documented for the fourth sample transfer on pages 7-8 of the COC.
- A collection time was not documented on the COC for field duplicate, FD-03. FD-03 was logged in with the collection time of 00:00.

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

1.0 METALS

The samples were analyzed for metals by 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). Ten method blanks were reported (batches 568201, 568747, 568748, 570395, 568198, 568417, 568749, 569670, 570626 and 570627). Metals were not detected in the method blanks above the method detection limits (MDLs).

Potassium was detected in the method blanks in batches 568201 and 568748 at estimated concentrations greater than the MDL and less than the reporting limit (RL). Since potassium was detected above the RL in the associated samples, no qualifications were applied to the data.

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported by USEPA method 6010D using sample HGWA-122. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria, with the following exceptions.

The calcium recoveries in the MS/MSD pair using sample HGWA-4 were low and outside the laboratory specified acceptance criteria. Since the calcium concentration in sample HGWA-122 was greater than four times the spiked concentration, no qualifications were applied to the data.

Nine 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). Ten LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 Equipment Blank

An equipment blank was not collected with the sample set.

1.7 Field Blank

One field blank was collected with the sample set, FB-02. Metals were not detected in the field blank above the MDLs, with the following exceptions.

Potassium and boron were detected in FB-03 at estimated concentrations greater than the MDLs and less than the RLs. Since potassium was detected above the RL in the associated samples, no qualifications were applied to the potassium data. However, 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	0.017	J	0.10	U	3
HGWA-2	Boron	0.044	J	0.10	U	3
HGWA-3	Boron	0.0071	J	0.10	U	3
HGWA-43D	Boron	0.061	J	0.10	U	3
HGWC-126	Boron	0.041	J	0.10	U	3

mg/L-milligrams per liter

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

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

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

1.8 Field Duplicate

One field duplicate sample was collected with the sample set, FD-03. Acceptable precision (RPD $\leq 20\%$ or the difference between the concentrations $< RL$) was demonstrated between the field duplicate and the original sample, HGWC-120.

1.9 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flags B and M1 used in the level II report were not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

2.0 MERCURY

The samples were analyzed for mercury by USEPA method 7470A.

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

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

2.1 Overall Assessment

The mercury data reported in this data set are considered usable for meeting project objectives, with the following exceptions. The non-detect mercury results in samples HGWC-126, FB-03 and HGWC-125 were R qualified as rejected due to holding time exceedances. Therefore, 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, with the following exceptions.

The mercury analysis for samples HGWC-126, FB-03 and HGWC-125 were performed outside the holding time. Therefore, the non-detect mercury results in samples HGWC-126, FB-03 and HGWC-125 were R qualified as rejected.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWC-126	Mercury	0.000078	U H1 H2	0.000078	R	2
FB-03	Mercury	0.000078	U H1 H2	0.000078	R	2
HGWC-125	Mercury	0.000078	U H1 H2	0.000078	R	2

mg/L-milligrams per liter

H1-laboratory flag indicating analysis was performed outside the holding time

H2-laboratory flag indicating preparation was performed outside the holding time

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 (batches 572608 and 576048). 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 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.

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). Two LCSs were reported. The recovery result was within the laboratory specified acceptance criteria.

2.6 Equipment Blank

An equipment blank was not collected with the sample set.

2.7 Field Blank

One field blank was collected with the sample set, FB-02. Mercury was not detected in the field blank above the MDL.

2.8 Field Duplicate

One field duplicate sample was collected with the sample set, FD-03. Acceptable precision (RPD \leq 20% or the difference between the concentrations $<$ RL) was demonstrated between the field duplicate and the original sample, HGWC-120.

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. The laboratory flags H1 and H2 used in the level II report were not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

3.0 WET CHEMISTRY

The samples were analyzed for TDS by Standard method 2540C, alkalinity by Standard Method 2320B, sulfide by Standard Method 4500-S2D and anions by USEPA method 300.0.

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

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ⊗ Field Duplicate
- ✓ Sensitivity
- ⊗ 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 alkalinity analysis of a water sample is 14 days from sample collection to analysis. The holding time for the sulfide analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (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). Seven method blanks were reported for TDS (batches 567147, 567872, 568395, 568648, 570219, 570220 and 570638), five method blanks were reported for alkalinity (batches 568673, 568970, 569912, 570242, 571506 and 571655), five method blanks were reported for sulfide (batches 568020, 568022, 568633, 569580 and 570214) and five method blanks were reported for the anions (batches 567529, 567607, 568377, 568379 and 570137). 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 alkalinity using sample MW-41. The recovery and RPD results were within the laboratory specified acceptance criteria.

Eleven batch MS/MSD pairs were reported for alkalinity, nine batch MS/MSD pairs were reported for sulfide and ten 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). Seven LCSs were reported for TDS, five LCSs were reported for alkalinity, five LCSs were reported for sulfide and five LCSs were reported for the anions. The recovery results were within the laboratory specified acceptance criteria.

3.6 Laboratory Duplicate

Nine 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

An equipment blank was not collected with the sample set.

3.8 Field Blank

One field blank was collected with the sample set, FB-02. The wet chemistry parameters were not detected in the field blank above the MDL.

3.9 Field Duplicate

One field duplicate sample was collected with the sample set, FD-03. Acceptable precision (RPD \leq 20% or the difference between the concentrations $<$ RL) was demonstrated between the field duplicate and the original sample, HGWC-120, with the following exceptions.

The RPDs of total alkalinity and bicarbonate alkalinity were greater than 20%; therefore, the total alkalinity and bicarbonate alkalinity 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-120	Alkalinity, Total as CaCO ₃	599	NA	48	599	J	7
FD-03	Alkalinity, Total as CaCO ₃	311	NA		311	J	7
HGWC-120	Alkalinity, Bicarbonate (CaCO ₃)	599	NA	48	599	J	7
FD-03	Alkalinity, Bicarbonate (CaCO ₃)	311	NA		311	J	7

mg/L-milligrams per L

NA-not applicable

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. The laboratory flag M1 used in the level II report was not included in the EDD. No other 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). Three method blanks were reported for the radium-228 data (batches 417131, 417135 and 417137). Five method blanks were reported for the radium-226 data (batches 415616, 417134, 415615, 417130 and 417136). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exception.

Radium-226 was detected above the MDC in the method blank in batch 415617 (1.55 pCi/L). 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). Five LCS/LCS duplicate (LCSD) pairs were reported for radium-226. Three LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [2 sigma (2σ)] results were within the laboratory specified acceptance criteria, with the following exceptions.

The recovery of radium-228 in the LCS in batch 417135 was low and outside the laboratory specified acceptance criteria. Therefore, the non-detect radium-228 and combined radium results in the associated samples were UJ qualified as estimated less than the MDCs and the radium-228 and combined radium concentration in the associated sample greater than the MDCs were J-qualified as estimated with low biases.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
HGWA-43D	Radium-228	-0.0158	U	-0.0158	UJ	5
HGWA-43D	Combined Radium 226 + 228	0.531	U	0.531	UJ	5
HGWA-44D	Radium-228	0.293	U	0.293	UJ	5

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
HGWA-44D	Combined Radium 226 + 228	0.422	U	0.422	UJ	5
HGWC-126	Radium-228	0.472	U	0.472	UJ	5
HGWC-126	Combined Radium 226 + 228	0.841	U	0.841	UJ	5
FB-03	Radium-228	-0.0349	U	-0.0349	UJ	5
FB-03	Combined Radium 226 + 228	0.0162	U	0.0162	UJ	5
HGWC-120	Radium-228	0.454	U	0.454	UJ	5
HGWC-120	Combined Radium 226 + 228	0.553	U	0.553	UJ	5
FD-03	Radium-228	0.127	U	0.127	UJ	5
FD-03	Combined Radium 226 + 228	0.34	U	0.34	UJ	5
HGWC-125	Radium-228	0.824	NA	0.824	J-	5
HGWC-125	Combined Radium 226 + 228	1.45	NA	1.45	J-	5
HGWA-45D	Radium-228	0.622	U	0.622	UJ	5
HGWA-45D	Combined Radium 226 + 228	1.07	U	1.07	UJ	5
MW-46D	Radium-228	0.377	U	0.377	UJ	5
MW-46D	Combined Radium 226 + 228	0.594	U	0.594	UJ	5

pCi/L-picocuries per liter

U-not detected at or above the MDC

NA-not applicable

4.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported using sample HGWA-42D. The RER (2σ) result was within the laboratory specified acceptance criteria.

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

4.7 Tracers and Carriers

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

4.8 Equipment Blank

An equipment blank was not collected with the sample set.

4.9 Field Blank

One field blank was collected with the sample set, FB-02. 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, FD-03. Acceptable precision ($RER(2\sigma) < 3$) was demonstrated between the field duplicate and the original sample, HGWC-120.

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

November 2020

Memorandum

Date: January 12, 2020
To: Whitney Law
From: Kristoffer Henderson
CC: J. Caprio
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92505470 and 92505496**

SITE: Plant Hammond AP-3

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of six aqueous samples, one filtered aqueous sample and one equipment blank, collected 10-12 November 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 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, 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
92505470001	HGWA-43D
92505470002	EB-01
92505470003	HGWA-44D
92505470004	HGWA-44D FILTERED
92505470005	HGWA-45D
92505470006	HGWC-126
92505470007	HGWC-125
92505496001	HGWA-43D

Laboratory ID	Client ID
92505496002	EB-01
92505496003	HGWA-44D
92505496004	HGWA-44D FILTERED
92505496005	HGWA-45D
92505496006	HGWC-126
92505496007	HGWC-125
92505496008	MW-46D

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:

- EB-01 was listed as FB-01 on the COC and the containers were labeled EB-01. The sample was logged in per the sample label per the client's request.
- The year was not documented for the relinquished by date for the first sample transfers on pages one and three of the COC and for the second transfers on pages two and four of the COC.
- The *received by* signature, date and time were not documented for the second sample transfer on page one of the COC and for the third sample transfer on page two of the COC.

- The year was not documented for the *received by* date for the first sample transfers on page two, three and four of the COC and the second sample transfer on page four of the COC.
- The *relinquished by* signature, date and time were not documented for the second sample transfer on page three of the COC and the third sample transfer on page four of the COC.
- The year was not documented for the collection times of samples HGWA-43D, EB-01 HGWA-45D and HGWC-126. The samples were logged in with the collection year of 2020.

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
- ✓ 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 metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported (batches 580529, 581313, 581474 and 581476). 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 581474 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	Validation Qualifier*	Reason Code**
HGWA-43D	Antimony	0.00043	J B	0.0030	U	3
HGWA-45D	Antimony	0.00057	J B	0.0030	U	3
HGWC-126	Antimony	0.00040	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). One sample set specific MS/MSD pair was reported for calcium using sample HGWC-126. The relative percent difference (RPD) result was within the laboratory specified acceptance criteria. The MS/MSD recoveries were low and outside the laboratory specified acceptance criteria. However, since the calcium concentration in sample HGWC-126 was greater than four times the spiked concentration, no qualification was applied to the data.

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). Four 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. Elevated nondetect results were not reported.

1.10 **Total vs Dissolved Metals Assessment**

Sample HGWC-44D was collected as both an unfiltered and filtered sample to report total and dissolved metals, respectively. The total metals concentrations were greater than or equal to the dissolved metals concentrations, with the following exception.

The dissolved barium concentration was greater than the associated total barium concentration. Since the RPD between the total and dissolved concentrations was less than 30%, no qualifications were applied to the data, based on professional and technical judgment.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD
HGWC-44D	Barium	0.38	NA	3
HGWC-44D FILTERED	Barium	0.39	NA	

mg/L-milligrams per liter

NA-not applicable

1.11 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flags M1 and B used in the level II report were not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

2.0 MERCURY

The samples were analyzed for mercury by USEPA method 7470A.

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

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Total vs Dissolved Mercury Assessment
- ✓ 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). Two method blanks were reported (batches 580637 and 580803). 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 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.

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). Two 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-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 Total vs Dissolved Mercury Assessment

Sample HGWC-44D was collected as both an unfiltered and filtered sample to report total and dissolved mercury, respectively. The total mercury concentration was greater than or equal to the dissolved mercury concentration.

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 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
- ✓ 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 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 580910 and 580949) and two method blanks were reported for the anions (batches 580375 and 580771). 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

Two 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, with the following exception.

TDS (13.0 mg/L) was detected in EB-01 at a concentration greater than the RL. Since TDS was detected in the associated samples at concentrations greater than ten times the equipment blank concentration, no qualifications were applied to the data based on technical and professional judgment.

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 Total vs Dissolved Wet Chemistry Assessment

Sample HGWC-44D was collected as both an unfiltered and filtered sample to report total and dissolved wet chemistry, respectively. The total wet chemistry concentrations were greater than or equal to the dissolved wet chemistry concentrations, with the following exception.

The TDS concentration in HGWC-44D FILTERED was greater than the TDS concentration in HGWC-44D. Since the RPD between the TDS concentrations was less than 30%, no qualifications were applied to the data, based on professional and technical judgment.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD
HGWC-44D	TDS	287	NA	5
HGWC-44D FILTERED	TDS	301	NA	

mg/L-milligrams per liter

NA-not applicable

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.

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
- ✓ Total vs Dissolved Radiochemistry Assessment
- ✓ 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 425494 and 426455). One method blank was reported for the radium-226 data (batch 426374). 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) [2 sigma (2σ)] results were within the laboratory specified acceptance criteria.

4.6 Laboratory Duplicate

Laboratory duplicates were not reported with 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 Total vs Dissolved Radiochemistry Assessment

Sample HGWC-44D was collected as both an unfiltered and filtered sample to report total and dissolved radiochemistry, respectively. The total radiochemistry concentration was greater than or equal to the dissolved radiochemistry concentration.

4.13 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.

* * * * *

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

December 2020

Memorandum

Date: February 8, 2021
To: Whitney Law
From: Kristoffer Henderson
CC: J. Caprio
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92512547 and 92512580**

SITE: Plant Hammond AP-3

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of five aqueous samples and one equipment blank, collected 15-16 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
92512547001	HGWA-43D
92512547002	HGWA-44D
92512547003	EB-01
92512547004	HGWA-45D
92512547005	HGWC-125
92512547006	HGWC-126

Laboratory ID	Client ID
92512580001	HGWA-43D
92512580002	HGWA-44D
92512580003	EB-01
92512580004	HGWA-45D
92512580005	HGWC-125
92512580006	HGWC-126

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 transfers on pages one and two of the COC.
- The year was not documented for the collection times of the samples. The samples were logged in with the collection year of 2020.

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 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, 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.

1.7 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. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverable (EDD) Review

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

2.0 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 batch MS/MSD pair was 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). 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). Two method blanks were reported for TDS (batches 3109057 and 3111378) 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). One sample set specific laboratory duplicate was reported for the anions using sample HGWA-45D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

One batch MS/MSD pair was 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.

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

One sample set specific laboratory duplicate was reported for TDS using sample HGWA-45D. The RPD result was within the laboratory specified acceptance criteria.

Three 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

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 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). Two method blanks were reported for the radium-228 data (batches 428750 and 428749). One method blank was reported for the radium-226 data (batch 429175). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exception.

Radium-226 was detected in the method blank in batch 428750 at a concentration greater than the MDC. Since radium-226 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. 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.

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 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.

* * * * *

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

January 2021

Memorandum

Date: April 9, 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 92517869 and 92517909**

SITE: Plant Hammond AP-3

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of five 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
92517869001	HGWA-43D
92517869002	HGWC-125
92517869003	HGWA-44D
92517869004	HGWA-45D
92517869005	HGWC-126
92517869006	EB-01

Laboratory ID	Client ID
92517909001	HGWA-43D
92517909002	HGWC-125
92517909003	HGWA-44D
92517909004	HGWA-45D
92517909005	HGWC-126
92517909006	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 documented on the chain of custody (COC) for the collection dates associated with samples HGWA-44D, HGWA-45D, HGWC-126 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 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-43D	Antimony	0.00029	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). One sample set specific MS/MSD pair was reported using sample HGWC-125.

The relative percent difference (RPD) result was within the laboratory specified acceptance criteria; however, the recoveries of calcium in the MS/MSD pair were high and outside of the laboratory specified acceptance criteria. Since the calcium concentration in sample HGWC-125 was greater than four times the spiked concentration, no qualifications were applied to the data.

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 based on the MS/MSD recovery results.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). 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 batch MS/MSD pair was 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). 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). One sample set specific MS/MSD pair was reported for the anions using sample HGWA-45D. The recovery and RPD results were within the laboratory specified acceptance criteria.

Three 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.

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

One sample set specific laboratory duplicate was reported using sample HGWA-45D. The RPD result was within the laboratory specified acceptance criteria.

Three 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

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 432561 and 433216). 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-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-228. 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.

* * * * *

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

March 2021

Memorandum

Date: April 28, 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 92527261 and 92527263**

SITE: Plant Hammond AP-3

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of sixteen aqueous samples, one field duplicate, one equipment blank and one field blank, collected 10-15 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 United States Environmental Protection Agency (US EPA) Methods 3010A/6010D
- Metals by USEPA Methods 3005A/6020B
- Total Dissolved Solids (TDS) by Standard Method 2540C

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

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

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

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total Radium by Calculation

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. 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
92527261001	HGWA-1
92527261002	HGWA-44D
92527261003	HGWA-2
92527261004	HGWA-3
92527261005	HGWA-43D
92527261006	HGWA-122
92527261007	HGWA-45D
92527261008	HGWC-120
92527261009	HGWC-125
92527261010	HGWC-126
92527261011	MW-46D
92527261012	DUP-3
92527261013	HGWC-121A
92527261014	HGWC-124
92527261015	MW-32
92527261016	MW-39
92527261017	MW-41
92527261018	EB-3
92527261019	FB-3

Laboratory ID	Client ID
92527263001	HGWA-1
92527263002	HGWA-44D
92527263003	HGWA-2
92527263004	HGWA-3
92527263005	HGWA-43D
92527263006	HGWA-122
92527263007	HGWA-45D
92527263008	HGWC-120
92527263009	HGWC-125
92527263010	HGWC-126
92527263011	MW-46D
92527263012	DUP-3
92527263013	HGWC-121A
92527263014	HGWC-124
92527263015	MW-32
92527263016	MW-39
92527263017	MW-41
92527263018	EB-3
92527263019	FB-3

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.

- The collection date and time were not documented on the COC for the field duplicate, DUP-3. The field duplicate was logged in with the collection date and time of 03/12/21 00:00.
- There were time discrepancies for sample transfers on pages 3-4 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.
- The relinquished by signature, date and time were missing for the final sample transfers on pages 4-6 of the COC.
- There were time discrepancies for sample transfers on pages 5-6 of the COC. The relinquished by time was documented as 3/16/21 1340 and the received by time was documented as 3/16/21 1342.
- 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 3010A/6010D and 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, 608469, 606644, 607964 and 609351). 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 result 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	0.0030	U	3

mg/L-milligrams per liter

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

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

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

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific MS/MSD pairs were reported using samples HGWA-122 and HGWA-45D. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

Four 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 based on the MS/MSD recovery results.

For sample concentrations greater than four times the spiked concentration the MS/MSD recovery results were not considered for validation and no qualifications were applied to the data based on the MS/MSD recovery results.

1.5 Laboratory Control Sample (LCS)

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

1.6 Equipment Blank

One equipment blank was collected with the sample set, EB-3. 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-3. Metals were not detected in the field blank above the MDLs.

1.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-3. Acceptable precision (RPD \leq 20% or the difference between the concentrations $<$ RL) was demonstrated between the field duplicate and the original sample, MW-46D.

1.9 Sensitivity

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

1.10 Electronic Data Deliverable (EDD) Review

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

2.0 WET CHEMISTRY

The samples were analyzed for TDS by Standard method 2540C and anions by USEPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues

were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

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

2.1 Overall Assessment

The wet chemistry data reported in 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 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.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Five method blanks were reported for TDS (batches 606587, 607316, 607345, 608067 and 608133) and four method blanks were reported for the anions (batches 607170, 607751, 607758 and 607981). 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). Two sample set specific MS/MSD pairs were reported for the anions using samples DUP-3 and MW-32. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The sulfate recoveries were low and the RPD was high, all outside the laboratory specified acceptance criteria in the MS/MSD pair using sample DUP-3. Therefore, the sulfate concentration in sample DUP-3 was J qualified as estimated.

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
DUP-3	Sulfate	166	M1 R1	166	J	4

mg/L-milligrams per liter

M1-laboratory flag indicating the MS recovery exceeded the QC limits

R1-laboratory flag indicating the RPD was outside the control limits

2.5 Laboratory Control Sample

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

2.6 Laboratory Duplicate

Three sample set specific laboratory duplicates were reported for TDS using samples HGWA-43D, HGWC-125 and HGWC-121A. The RPD results were 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

One equipment blank was collected with the sample set, EB-3. The wet chemistry parameters were not detected in the equipment blank above the MDL.

2.8 Field Blank

One field blank was collected with the sample set, FB-3. The wet chemistry parameters were not detected in the field blank above the MDL.

2.9 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-3. Acceptable precision (RPD $\leq 20\%$ or the difference between the concentrations $< RL$) was demonstrated between the field duplicate and the original sample, MW-46D.

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). Five method blanks were reported for the radium-228 data (batches 440194, 440197, 440196, 440490 and 440491). Three method blanks were reported for the radium-226 data (batches 440498, 440497 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 blanks in batches 440194 (0.922 pCi/L), 440490 (0.738 pCi/L) and 440491 (0.826 pCi/L) at concentrations greater than the MDCs. Since radium-228 was not detected at concentrations greater than the MDCs in the associated samples, no qualifications were applied to the data.

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three LCS/LCS duplicate (LCSD) pairs were reported for radium-226. Five 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

One sample set specific laboratory duplicate was reported using sample MW-41. The RER (1σ) result was within the laboratory specified acceptance criteria.

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

3.7 Tracers and Carriers

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

3.8 Equipment Blank

One equipment blank was collected with the sample set, EB-3. 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-3. 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-3. Acceptable precision ($RER(1\sigma) < 3$) was demonstrated between the field duplicate and the original sample, MW-46D.

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.

* * * * *

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

August 2020

Product Name: Low-Flow System

Date: 2020-08-28 09:18:04

Project Information:

Operator Name Thomas Kessler
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 28 ft

Pump placement from TOC 27 ft

Well Information:

Well ID HGWA-1
Well diameter 2 in
Well Total Depth ft
Screen Length 10 ft
Depth to Water 19.10 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.60998 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	08:54:59	900.00	19.01	7.02	637.97	18.70	19.61	0.21	90.49
Last 5	08:59:59	1199.99	18.93	7.03	641.93	12.60	19.61	0.16	87.99
Last 5	09:04:59	1499.98	18.96	7.02	646.49	11.83	19.61	0.14	85.82
Last 5	09:09:59	1799.97	18.91	7.02	651.14	6.29	19.62	0.13	84.06
Last 5	09:14:59	2099.96	18.86	7.02	651.39	4.58	19.62	0.12	82.67
Variance 0			0.03	-0.00	4.56			-0.02	-2.17
Variance 1			-0.05	0.00	4.65			-0.01	-1.76
Variance 2			-0.05	-0.00	0.25			-0.01	-1.39

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A). Final turbidity: 4.58 NTU, Final depth to water: 19.62ft. Total depth: 32.30ft.

Grab Samples

HGWA-1
Grab

Product Name: Low-Flow System

Date: 2020-08-25 10:35:47

Project Information:

Operator Name Chad Russo
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 643819
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 24 ft

Pump placement from TOC 23 ft

Well Information:

Well ID HGWA-2
Well diameter 2 in
Well Total Depth ft
Screen Length 10 ft
Depth to Water 10.18 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.59212 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:13:45	600.02	19.86	5.24	195.41	7.11	10.25	0.31	65.79
Last 5	10:18:45	900.02	19.82	5.21	194.66	4.62	10.25	0.26	66.95
Last 5	10:23:45	1200.01	19.78	5.19	194.68	4.47	10.25	0.46	67.69
Last 5	10:28:45	1500.00	19.85	5.19	194.27	2.69	10.25	0.28	68.84
Last 5	10:33:45	1800.01	19.77	5.15	193.74	2.65	10.25	0.24	71.11
Variance 0			-0.03	-0.01	0.02			0.20	0.74
Variance 1			0.07	-0.00	-0.42			-0.18	1.15
Variance 2			-0.08	-0.04	-0.52			-0.04	2.28

Notes

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6020B/7470A). Total depth: 28.50'

Grab Samples

HGWA-2
Grab

Product Name: Low-Flow System

Date: 2020-08-25 09:27:32

Project Information:

Operator Name Chad Russo
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 643819
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 41 ft

Pump placement from TOC 40 ft

Well Information:

Well ID HGWA-3
Well diameter 2 in
Well Total Depth ft
Screen Length 10 ft
Depth to Water 10.1 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.668 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 10 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:03:45	1499.93	18.70	7.19	433.16	1.40	10.30	0.94	45.24
Last 5	09:08:45	1799.93	18.70	7.18	304.92	1.18	10.30	1.17	43.66
Last 5	09:13:45	2099.92	18.66	7.18	454.80	1.16	10.30	0.81	40.81
Last 5	09:18:45	2399.92	18.70	7.16	438.95	1.05	10.30	0.70	38.11
Last 5	09:23:45	2699.92	18.70	7.14	440.96	0.98	10.30	0.83	35.51
Variance 0			-0.05	-0.01	149.88			-0.36	-2.85
Variance 1			0.05	-0.02	-15.85			-0.11	-2.69
Variance 2			0.00	-0.02	2.01			0.13	-2.60

Notes

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6020B/7470A). Total depth: 45.20'

Grab Samples

HGWA-3
Grab

Product Name: Low-Flow System

Date: 2020-08-24 16:54:46

Project Information:

Operator Name Aaron Reeder
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 23 ft

Pump placement from TOC 22 ft

Well Information:

Well ID HGWA-122
Well diameter 2 in
Well Total Depth ft
Screen Length 10 ft
Depth to Water 14.20 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.58766 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:31:52	300.08	20.40	6.48	411.73	15.80	14.20	1.30	185.02
Last 5	16:36:52	600.01	20.30	6.49	417.47	12.67	14.20	1.20	165.35
Last 5	16:41:52	900.00	20.31	6.51	422.96	7.56	14.20	1.18	154.85
Last 5	16:46:52	1199.99	20.26	6.53	426.10	5.23	14.20	1.11	152.29
Last 5	16:51:52	1499.98	20.34	6.54	428.95	3.32	14.20	1.08	152.15
Variance 0			0.00	0.02	5.49			-0.02	-10.50
Variance 1			-0.04	0.01	3.14			-0.07	-2.56
Variance 2			0.08	0.01	2.85			-0.03	-0.14

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A). Total depth: 27.80'

Grab Samples

HGWA-122
Grab

Product Name: Low-Flow System

Date: 2020-08-26 16:48:31

Project Information:

Operator Name Chad Russo
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 643819
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 58 ft

Pump placement from TOC 57 ft

Well Information:

Well ID HGWC-120
Well diameter 2 in
Well Total Depth ft
Screen Length 10 ft
Depth to Water 40.4 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.74388 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:25:50	600.06	20.61	6.94	852.57	3.58	40.40	0.50	37.15
Last 5	16:30:50	900.02	20.37	6.97	844.20	2.17	40.40	0.54	39.51
Last 5	16:35:50	1200.02	20.27	6.97	842.43	1.63	40.40	0.44	41.91
Last 5	16:40:50	1500.01	20.54	6.97	841.64	1.53	40.40	0.27	42.84
Last 5	16:45:50	1800.01	20.59	6.96	838.95	1.07	40.40	0.41	42.85
Variance 0			-0.11	0.00	-1.76			-0.10	2.40
Variance 1			0.28	-0.00	-0.80			-0.18	0.93
Variance 2			0.05	-0.01	-2.68			0.15	0.01

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A). Total depth: 62.54'

Grab Samples

HGWC-120
Grab

Product Name: Low-Flow System

Date: 2020-08-26 15:19:29

Project Information:

Operator Name Aaron Reeder
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 37.0 ft

Pump placement from TOC 36 ft

Well Information:

Well ID HGWC-121A
Well diameter 2 in
Well Total Depth 41.0 ft
Screen Length 10 ft
Depth to Water 17.73 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.65015 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:57:36	900.00	21.26	6.73	1071.34	8.25	17.82	0.32	97.57
Last 5	15:02:36	1199.99	21.37	6.73	1067.49	7.50	17.83	0.38	97.77
Last 5	15:07:36	1499.98	21.63	6.73	1066.87	6.25	17.83	0.35	98.32
Last 5	15:12:36	1799.97	21.82	6.73	1063.37	5.20	17.84	0.37	101.09
Last 5	15:17:36	2099.96	22.02	6.73	1059.91	4.82	17.84	0.28	106.21
Variance 0			0.26	-0.00	-0.61			-0.03	0.55
Variance 1			0.19	-0.00	-3.51			0.02	2.77
Variance 2			0.19	0.00	-3.46			-0.09	5.12

Notes

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6020B/7470A).

Grab Samples

HGWC-121A
Grab

Product Name: Low-Flow System

Date: 2020-08-27 11:16:37

Project Information:

Operator Name Chad Russo
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 643819
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 31 ft

Pump placement from TOC 30 ft

Well Information:

Well ID HGWC-124
Well diameter 2 in
Well Total Depth ft
Screen Length 10 ft
Depth to Water 14.84 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.6233661 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 13 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:52:52	2400.03	19.91	7.15	579.76	1.89	15.27	0.80	43.96
Last 5	10:57:52	2700.02	19.87	7.15	580.34	1.60	15.27	0.69	40.84
Last 5	11:02:52	3000.02	19.84	7.15	580.70	1.68	15.27	1.16	39.79
Last 5	11:07:52	3300.01	19.91	7.15	577.85	1.71	15.27	1.15	39.70
Last 5	11:12:52	3600.01	19.82	7.15	581.18	1.76	15.27	1.00	40.39
Variance 0			-0.02	-0.00	0.36			0.47	-1.04
Variance 1			0.06	0.01	-2.86			-0.01	-0.09
Variance 2			-0.09	-0.00	3.33			-0.15	0.69

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A). Total depth: 35.30'

Grab Samples

HGWC-124
Grab

Product Name: Low-Flow System

Date: 2020-08-25 14:48:30

Project Information:

Operator Name Chad Russo
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 643819
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 60 ft

Pump placement from TOC 59 ft

Well Information:

Well ID HGWC-125
Well diameter 2 in
Well Total Depth ft
Screen Length 10 ft
Depth to Water 43.75 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.75281 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:26:17	600.02	19.27	6.31	1038.97	0.89	43.76	0.85	-3.32
Last 5	14:31:17	900.02	19.19	6.35	1057.06	0.74	43.76	0.64	0.31
Last 5	14:36:18	1201.02	19.16	6.36	1068.84	0.76	43.76	0.54	3.39
Last 5	14:41:20	1503.02	19.19	6.36	1082.01	0.93	43.76	0.50	5.80
Last 5	14:46:56	1839.01	19.15	6.36	1086.36	0.77	43.76	0.75	8.49
Variance 0			-0.04	0.00	11.78			-0.10	3.08
Variance 1			0.04	0.01	13.17			-0.04	2.41
Variance 2			-0.05	0.00	4.35			0.25	2.69

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B/7470A). Total depth: 64.40'

Grab Samples

HGWC-125
Grab

Product Name: Low-Flow System

Date: 2020-08-25 12:55:42

Project Information:

Operator Name Chad Russo
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 643819
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 65 ft

Pump placement from TOC 64 ft

Well Information:

Well ID HGWC-126
Well diameter 2 in
Well Total Depth ft
Screen Length 10 ft
Depth to Water 41.54 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.7751225 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:25:22	1500.01	19.82	6.74	867.38	20.00	42.70	0.41	31.24
Last 5	12:30:22	1800.01	19.82	6.75	866.83	14.80	42.80	0.54	26.42
Last 5	12:35:22	2100.00	19.95	6.77	865.43	9.92	42.88	0.46	21.49
Last 5	12:40:22	2400.00	19.95	6.78	866.23	7.24	42.90	0.57	17.03
Last 5	12:50:22	3000.00	19.97	6.78	867.64	4.20	42.99	0.35	10.10
Variance 0			0.13	0.02	-1.40			-0.08	-4.93
Variance 1			0.00	0.01	0.80			0.11	-4.45
Variance 2			0.02	0.00	1.41			-0.22	-6.94

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B/7470A). Total depth: 69.30'

Grab Samples

HGWC-126
Grab

Product Name: Low-Flow System

Date: 2020-08-26 13:13:14

Project Information:

Operator Name Aaron Reeder
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 32.55 ft

Pump placement from TOC 31.55 ft

Well Information:

Well ID MW-32
Well diameter 2 in
Well Total Depth 36.55 ft
Screen Length 10 ft
Depth to Water 20.05 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.23529 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:50:04	900.00	20.62	7.39	981.29	3.95	20.05	0.85	119.66
Last 5	12:55:04	1199.99	20.62	6.89	960.14	4.72	20.05	0.77	105.77
Last 5	13:00:04	1499.98	20.62	6.79	959.89	5.42	20.05	0.75	102.86
Last 5	13:05:04	1800.01	20.63	6.75	958.32	5.00	20.05	0.77	101.67
Last 5	13:10:04	2099.99	20.66	6.74	956.00	4.75	20.05	0.76	101.36
Variance 0			0.00	-0.10	-0.25			-0.02	-2.92
Variance 1			0.01	-0.03	-1.57			0.01	-1.18
Variance 2			0.03	-0.01	-2.32			-0.01	-0.32

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

MW-32
Grab
FD-01
Grab

Product Name: Low-Flow System

Date: 2020-08-26 11:40:39

Project Information:

Operator Name Aaron Reeder
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 20.40 ft

Pump placement from TOC 19.40 ft

Well Information:

Well ID MW-41
Well diameter 2 in
Well Total Depth 24.40 ft
Screen Length 10 ft
Depth to Water 12.00 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.1810538 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:27:17	300.04	19.39	6.75	996.47	0.45	12.05	1.44	90.94
Last 5	11:32:17	600.01	19.97	6.78	980.07	0.78	12.05	0.77	87.91
Last 5	11:37:17	900.00	19.02	6.74	950.92	1.05	12.05	0.15	86.88
Last 5									
Variance 0			nan	nan	nan			nan	nan
Variance 1			0.58	0.03	-16.39			-0.66	-3.03
Variance 2			-0.95	-0.04	-29.15			-0.62	-1.03

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples

MW-41
Grab

September 2020

Product Name: Low-Flow System

Date: 2020-09-15 14:00:40

Project Information:

Operator Name Vashish Taukooor
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 512733
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 29 ft

Pump placement from TOC 28 ft

Well Information:

Well ID HGWA-1
Well diameter 2 in
Well Total Depth 32.30 ft
Screen Length 10 ft
Depth to Water 21.03 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.6144392 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:35:42	1200.02	18.57	7.12	675.09	6.15	21.66	0.73	46.26
Last 5	13:40:42	1500.02	18.61	7.14	640.84	3.75	21.68	0.74	45.86
Last 5	13:45:42	1800.02	18.61	7.13	636.90	2.72	21.68	0.75	45.56
Last 5	13:50:42	2100.02	18.59	7.13	642.42	1.99	21.68	0.84	43.99
Last 5	13:55:42	2400.02	18.57	7.15	637.79	2.15	21.70	0.74	42.92
Variance 0			-0.00	-0.01	-3.93			0.01	-0.30
Variance 1			-0.02	0.00	5.52			0.09	-1.57
Variance 2			-0.02	0.02	-4.63			-0.10	-1.07

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWA-1
Grab

Product Name: Low-Flow System

Date: 2020-09-15 11:00:31

Project Information:

Operator Name Thomas Kessler
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 512733
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 24 ft

Pump placement from TOC 23 ft

Well Information:

Well ID HGWA-2
Well diameter 2 in
Well Total Depth 28.44 ft
Screen Length 10 ft
Depth to Water 11.30 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5921222 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:32:10	899.92	20.15	5.32	195.68	11.60	11.41	0.42	169.65
Last 5	10:37:10	1199.92	20.13	5.28	194.22	8.02	11.42	0.41	173.23
Last 5	10:42:10	1499.91	20.17	5.24	193.95	5.33	11.42	0.40	175.76
Last 5	10:47:10	1799.91	20.12	5.24	192.89	5.42	11.42	0.36	175.10
Last 5	10:52:10	2099.88	20.26	5.22	193.35	3.45	11.42	0.30	177.98
Variance 0			0.05	-0.04	-0.27			-0.01	2.53
Variance 1			-0.05	-0.00	-1.06			-0.04	-0.65
Variance 2			0.14	-0.02	0.45			-0.05	2.88

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWA-2
Grab

Product Name: Low-Flow System

Date: 2020-09-15 11:44:46

Project Information:

Operator Name Chad Russo
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 41 ft

Pump placement from TOC 40 ft

Well Information:

Well ID HGWA-3
Well diameter 2 in
Well Total Depth 45.21 ft
Screen Length 10 ft
Depth to Water 11.14 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.6680003 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:20:49	599.92	19.75	7.20	432.07	2.79	11.14	0.43	135.56
Last 5	11:25:49	899.91	19.67	7.25	431.63	2.66	11.14	0.32	128.09
Last 5	11:30:49	1199.91	19.68	7.26	431.82	1.91	11.14	0.26	123.92
Last 5	11:35:49	1499.90	19.64	7.28	432.89	1.45	11.15	0.22	118.72
Last 5	11:40:49	1799.89	19.73	7.29	433.82	1.39	11.15	0.19	117.44
Variance 0			0.01	0.02	0.19			-0.06	-4.18
Variance 1			-0.04	0.02	1.07			-0.04	-5.20
Variance 2			0.09	0.00	0.93			-0.03	-1.29

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWA-3
Grab

Product Name: Low-Flow System

Date: 2020-09-16 12:15:59

Project Information:

Operator Name Chad Russo
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 58 ft

Pump placement from TOC 57 ft

Well Information:

Well ID HGWA-43D
Well diameter 2 in
Well Total Depth 62.80 ft
Screen Length 10 ft
Depth to Water 20.86 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.3488785 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:53:12	5399.89	19.50	7.52	489.14	2.49	28.90	3.50	123.71
Last 5	11:58:12	5699.88	19.55	7.52	489.23	3.04	29.04	3.51	124.17
Last 5	12:03:12	5999.87	19.55	7.51	489.18	1.70	29.23	3.51	125.27
Last 5	12:08:12	6299.85	19.59	7.51	490.42	4.39	29.34	3.52	127.61
Last 5	12:13:12	6599.86	19.59	7.52	490.47	2.00	29.44	3.55	126.16
Variance 0			0.00	-0.00	-0.05			0.00	1.09
Variance 1			0.04	-0.00	1.24			0.00	2.34
Variance 2			-0.00	0.00	0.05			0.04	-1.45

Notes

Seven bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO₄ (EPA 300.0); one 250-mL plastic bottle with HNO₃ for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWA-43D

Grab

Product Name: Low-Flow System

Date: 2020-09-16 15:15:05

Project Information:

Operator Name Chad Russo
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 109 ft

Pump placement from TOC 108 ft

Well Information:

Well ID HGWA-44D
Well diameter 2 in
Well Total Depth 112.70 ft
Screen Length 10 ft
Depth to Water 19.78 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.9715132 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:52:53	1799.98	18.75	7.82	485.06	7.32	22.23	0.33	82.08
Last 5	14:57:53	2099.97	18.75	7.83	484.75	6.23	22.41	0.31	80.84
Last 5	15:02:53	2399.96	19.01	7.84	485.74	6.11	22.33	0.30	79.80
Last 5	15:07:53	2699.96	19.13	7.84	485.10	4.90	22.25	0.31	80.08
Last 5	15:12:53	2999.95	19.10	7.83	484.70	4.93	22.23	0.31	77.43
Variance 0			0.26	0.01	0.99			-0.01	-1.04
Variance 1			0.12	0.00	-0.64			0.01	0.28
Variance 2			-0.02	-0.01	-0.40			0.00	-2.65

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWA-44D

Grab

Product Name: Low-Flow System

Date: 2020-09-25 13:49:01

Project Information:

Operator Name Vashish Taukooor
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 512733
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 62 ft

Pump placement from TOC 59.20 ft

Well Information:

Well ID HGWA-45D
Well diameter 2 in
Well Total Depth 63.80 ft
Screen Length 10 ft
Depth to Water 13.93 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.7617322 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 6.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:27:01	300.11	19.44	7.61	513.67	2.62	13.87	0.15	-120.71
Last 5	13:32:01	600.05	19.42	7.61	501.66	2.75	13.90	0.13	-118.70
Last 5	13:37:01	900.02	19.38	7.60	494.90	3.25	13.87	0.11	-112.39
Last 5	13:42:01	1200.02	19.45	7.59	492.63	3.32	13.90	0.09	-108.93
Last 5	13:47:01	1500.02	19.46	7.57	491.78	3.02	13.87	0.09	-109.79
Variance 0			-0.04	-0.01	-6.76			-0.02	6.31
Variance 1			0.08	-0.01	-2.27			-0.02	3.45
Variance 2			0.01	-0.01	-0.86			-0.00	-0.86

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWA-45D
Grab

Product Name: Low-Flow System

Date: 2020-09-15 15:40:23

Project Information:

Operator Name Chad Russo
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 25 ft

Pump placement from TOC 24 ft

Well Information:

Well ID HGWA-122
Well diameter 2 in
Well Total Depth 28.52 ft
Screen Length 10 ft
Depth to Water 15.24 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.5965856 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:16:36	1799.98	20.72	6.67	446.60	3.05	15.24	1.53	152.33
Last 5	15:21:36	2099.97	20.67	6.67	450.04	2.28	15.24	1.37	153.83
Last 5	15:26:36	2399.96	20.67	6.67	451.24	1.64	15.24	1.26	156.78
Last 5	15:31:36	2699.96	20.65	6.67	451.53	1.37	15.24	1.15	159.62
Last 5	15:36:36	2999.95	20.59	6.68	453.72	1.39	15.24	1.07	161.41
Variance 0			-0.00	0.00	1.20			-0.12	2.95
Variance 1			-0.02	0.00	0.30			-0.11	2.85
Variance 2			-0.05	0.01	2.19			-0.08	1.78

Notes

Seven bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO₄ (EPA 300.0); one 250-mL plastic bottle with HNO₃ for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWA-122
Grab

Product Name: Low-Flow System

Date: 2020-09-21 13:46:00

Project Information:

Operator Name Chad Russo
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 64 ft

Pump placement from TOC 63 ft

Well Information:

Well ID HGWC-120
Well diameter 2 in
Well Total Depth 67.55 ft
Screen Length 10 ft
Depth to Water 41.16 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.770659 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:23:48	600.01	20.45	6.98	924.84	5.37	41.19	0.36	58.80
Last 5	13:28:48	900.00	20.36	6.98	921.89	2.74	41.19	0.23	68.39
Last 5	13:33:48	1200.00	20.31	6.97	920.72	1.83	41.19	0.19	73.06
Last 5	13:38:48	1500.00	20.31	6.97	920.27	1.25	41.19	0.17	75.81
Last 5	13:43:48	1799.98	20.37	6.98	919.61	1.02	41.19	0.16	78.73
Variance 0			-0.05	-0.00	-1.17			-0.04	4.66
Variance 1			0.01	-0.00	-0.45			-0.02	2.75
Variance 2			0.06	0.00	-0.65			-0.01	2.92

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWC-120

Grab

FD-03

Grab

Product Name: Low-Flow System

Date: 2020-09-28 16:08:12

Project Information:

Operator Name Thomas Kessler
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 512733
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 33.16 ft

Pump placement from TOC 33.16 ft

Well Information:

Well ID HGWC-121A
Well diameter 2 in
Well Total Depth 38.16 ft
Screen Length 10 ft
Depth to Water 18.25 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.6330071 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 4 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:49:25	300.09	19.53	6.94	991.02	2.01	18.40	1.32	515.86
Last 5	15:54:25	600.03	21.21	6.93	1027.43	1.50	18.34	1.14	520.23
Last 5	15:59:25	900.02	20.17	6.94	1034.82	1.66	18.40	1.09	540.13
Last 5	16:04:25	1200.02	20.12	6.93	1036.55	2.64	18.40	1.21	540.22
Last 5									
Variance 0			1.69	-0.01	36.40			-0.19	4.37
Variance 1			-1.04	0.01	7.39			-0.04	19.90
Variance 2			-0.05	-0.01	1.73			0.12	0.09

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWC-121A
Grab

Product Name: Low-Flow System

Date: 2020-09-28 18:01:52

Project Information:

Operator Name Thomas Kessler
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 512733
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 30.52 ft

Pump placement from TOC 30.52 ft

Well Information:

Well ID HGWC-124
Well diameter 2 in
Well Total Depth 35.52 ft
Screen Length 10 ft
Depth to Water 15.70 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.6212237 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	17:40:18	1800.02	20.03	7.31	580.95	12.60	16.00	1.10	276.17
Last 5	17:45:18	2100.02	20.04	7.30	578.20	11.52	15.95	1.09	272.50
Last 5	17:50:18	2400.01	19.91	7.29	561.16	9.51	16.00	1.01	267.47
Last 5	17:55:18	2700.01	19.79	7.28	581.78	7.79	16.00	1.03	260.26
Last 5	18:00:18	3000.01	19.69	7.27	555.95	4.49	16.01	1.01	248.83
Variance 0			-0.13	-0.01	-17.04			-0.08	-5.03
Variance 1			-0.12	-0.01	20.62			0.02	-7.21
Variance 2			-0.09	-0.01	-25.83			-0.02	-11.43

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWC-124
Grab

Product Name: Low-Flow System

Date: 2020-09-21 12:04:37

Project Information:

Operator Name Chad Russo
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 61 ft

Pump placement from TOC 60 ft

Well Information:

Well ID HGWC-125
Well diameter 2 in
Well Total Depth 64.80 ft
Screen Length 10 ft
Depth to Water 44.48 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.7572688 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:42:13	600.01	20.34	6.31	920.53	1.24	44.50	0.23	-70.37
Last 5	11:47:13	900.00	21.43	6.25	932.68	0.99	44.48	0.39	-56.54
Last 5	11:52:13	1199.99	20.15	6.21	939.81	0.25	44.48	0.17	-33.72
Last 5	11:57:13	1499.99	20.26	6.21	970.31	0.27	44.48	0.19	-21.16
Last 5	12:02:13	1799.98	19.86	6.22	987.16	0.41	44.48	0.14	-7.98
Variance 0			-1.28	-0.04	7.13			-0.22	22.82
Variance 1			0.11	0.00	30.50			0.02	12.56
Variance 2			-0.40	0.01	16.85			-0.05	13.18

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWC-125

Grab

Product Name: Low-Flow System

Date: 2020-09-18 15:45:21

Project Information:

Operator Name Chad Russo
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 597519
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 65 ft

Pump placement from TOC 64 ft

Well Information:

Well ID HGWC-126
Well diameter 2 in
Well Total Depth 69.65 ft
Screen Length 10 ft
Depth to Water 42.01 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.7751225 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 6.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:19:30	900.01	20.84	6.98	835.77	0.78	43.07	0.31	-80.18
Last 5	15:24:30	1200.00	20.78	6.98	838.10	0.46	43.15	0.22	-81.36
Last 5	15:29:30	1499.99	21.16	6.97	844.84	0.38	43.15	0.21	-81.67
Last 5	15:34:30	1799.98	21.15	6.97	845.10	0.39	43.20	0.18	-80.14
Last 5	15:39:30	2099.98	21.01	6.97	848.18	--	--	0.17	-78.90
Variance 0			0.38	-0.01	6.74			-0.02	-0.31
Variance 1			-0.01	-0.00	0.26			-0.02	1.53
Variance 2			-0.15	-0.00	3.08			-0.01	1.24

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

HGWC-126
Grab

Product Name: Low-Flow System

Date: 2020-09-28 15:40:11

Project Information:

Operator Name Thomas Kessler
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 646773
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 36 ft

Pump placement from TOC 31 ft

Well Information:

Well ID MW-32
Well diameter 2 in
Well Total Depth 36.68 ft
Screen Length 10 ft
Depth to Water 20.48 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2506832 L
Calculated Sample Rate 300 sec 3.6
Stabilization Drawdown in
Total Volume Pumped 8 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:18:47	1200.03	22.27	6.89	957.14	2.74	20.49	0.13	56.11
Last 5	15:23:47	1500.02	22.54	6.88	952.55	2.88	20.49	0.12	56.59
Last 5	15:28:47	1800.02	22.28	6.89	946.34	3.41	20.49	0.12	57.31
Last 5	15:33:47	2100.01	21.93	6.90	942.07	2.45	20.49	0.11	57.62
Last 5	15:38:47	2400.02	22.00	6.90	941.52	2.43	20.49	0.10	57.73
Variance 0			-0.26	0.00	-6.21			-0.00	0.72
Variance 1			-0.35	0.01	-4.27			-0.01	0.31
Variance 2			0.07	-0.00	-0.54			-0.00	0.11

Notes

Seven bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO₄ (EPA 300.0); one 250-mL plastic bottle with HNO₃ for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

MW-32
Grab

Product Name: Low-Flow System

Date: 2020-09-28 19:01:08

Project Information:

Operator Name Thomas Kessler
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 646773
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 23 ft

Pump placement from TOC 19 ft

Well Information:

Well ID MW-41
Well diameter 2 in
Well Total Depth 24.40 ft
Screen Length 10 ft
Depth to Water 12.45 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.1926587 L
Calculated Sample Rate 300 sec 3.6
Stabilization Drawdown in
Total Volume Pumped 7 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	18:40:10	900.02	19.06	7.00	997.25	2.00	12.56	0.15	22.42
Last 5	18:45:10	1200.01	18.96	7.00	997.70	1.87	12.56	0.15	23.39
Last 5	18:50:10	1500.01	18.88	7.00	994.45	2.39	12.56	0.12	24.56
Last 5	18:55:10	1800.01	19.02	7.00	994.29	3.18	12.56	0.13	25.41
Last 5	19:00:10	2100.00	18.97	7.00	991.82	2.78	12.56	0.13	27.77
Variance 0			-0.08	0.00	-3.26			-0.03	1.17
Variance 1			0.14	-0.00	-0.16			0.01	0.85
Variance 2			-0.05	0.00	-2.47			0.00	2.36

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

MW-41
Grab

Product Name: Low-Flow System

Date: 2020-09-25 11:11:38

Project Information:

Operator Name Vashish Taukoor
Company Name Geosyntec Consultants
Project Name GP-Plant Hammond
Site Name Plant Hammond
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 512733
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in
Tubing Length 101 ft

Pump placement from TOC 99.5 ft

Well Information:

Well ID MW-46D
Well diameter 2 in
Well Total Depth >100 ft
Screen Length 10 ft
Depth to Water 41.70 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.9358057 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:48:02	300.11	19.91	7.56	727.40	3.82	41.50	0.39	-117.65
Last 5	10:53:02	600.02	19.86	7.57	728.26	2.88	41.40	0.35	-117.80
Last 5	10:58:02	900.02	19.89	7.56	725.92	2.42	41.38	0.31	-117.62
Last 5	11:03:02	1200.02	19.95	7.56	728.82	2.53	41.33	0.27	-117.53
Last 5	11:08:02	1500.02	20.06	7.56	727.34	2.45	41.33	0.27	-116.86
Variance 0			0.03	-0.00	-2.34			-0.04	0.18
Variance 1			0.06	-0.00	2.90			-0.04	0.09
Variance 2			0.11	-0.00	-1.48			-0.00	0.66

Notes

Seven bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); one 250-mL plastic bottle with HNO3 for metals (EPA 6010D/6020B); one 250-mL plastic bottle for Alkalinity (2320B); and one 125-mL plastic bottle with ZnAc + NaOH for sulfide (4500S2D).

Grab Samples

MW-46D
Grab

November 2020

Low-Flow Test Report:

Test Date / Time: 11/10/2020 9:26:05 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 Initial Depth to Water: 17.63 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 56.25 ft Estimated Total Volume Pumped: 5000 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 2.52 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Five bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO₄ (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 61.80 ft.

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	+/- 3 %	+/- 0.3	+/- 10	+/- 10	+/- 0.3	
11/10/2020 9:26 AM	00:00	7.43 pH	19.51 °C	519.66 µS/cm	2.23 mg/L	13.90 NTU	66.7 mV	17.63 ft	100.00 ml/min
11/10/2020 9:31 AM	05:00	7.31 pH	18.97 °C	526.55 µS/cm	0.85 mg/L	13.90 NTU	36.6 mV	18.00 ft	100.00 ml/min
11/10/2020 9:36 AM	10:00	7.30 pH	18.73 °C	526.05 µS/cm	0.47 mg/L	11.52 NTU	27.9 mV	18.54 ft	100.00 ml/min
11/10/2020 9:41 AM	15:00	7.30 pH	18.70 °C	529.05 µS/cm	0.41 mg/L	8.72 NTU	21.7 mV	18.75 ft	100.00 ml/min
11/10/2020 9:46 AM	20:00	7.29 pH	18.70 °C	531.52 µS/cm	0.35 mg/L	6.87 NTU	15.7 mV	19.08 ft	100.00 ml/min
11/10/2020 9:51 AM	25:00	7.28 pH	18.66 °C	532.18 µS/cm	0.31 mg/L	6.52 NTU	10.3 mV	19.26 ft	100.00 ml/min
11/10/2020 9:56 AM	30:00	7.28 pH	18.61 °C	533.94 µS/cm	0.30 mg/L	3.33 NTU	4.6 mV	19.45 ft	100.00 ml/min
11/10/2020 10:01 AM	35:00	7.27 pH	18.62 °C	533.72 µS/cm	0.26 mg/L	3.21 NTU	-0.3 mV	19.55 ft	100.00 ml/min
11/10/2020 10:06 AM	40:00	7.27 pH	18.55 °C	526.45 µS/cm	0.23 mg/L	3.37 NTU	-6.1 mV	19.75 ft	100.00 ml/min
11/10/2020 10:11 AM	45:00	7.28 pH	18.47 °C	524.76 µS/cm	0.20 mg/L	2.55 NTU	-12.1 mV	19.95 ft	100.00 ml/min
11/10/2020 10:16 AM	50:00	7.27 pH	18.43 °C	522.45 µS/cm	0.18 mg/L	2.29 NTU	-16.8 mV	20.15 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-43D	Grab Sample

Low-Flow Test Report:

Test Date / Time: 11/10/2020 1:01:59 PM

Project: GP-Plant Hammond

Operator Name: Shawn Lin

Location Name: HGWA-44D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 103.28 ft Initial Depth to Water: 16.81	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 108.28 m Estimated Total Volume Pumped: 23.7 liter Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 19.75 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

AquaTroll battery died at 13:11, continued purge to lower turbidity while charging the AquaTroll. Restarted purge at 14:27.

Five bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO₄ (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. III and IV metals (EPA 6010D/6020B/7470A). Measured total depth = 113.30 ft.

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 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
11/10/2020 1:01 PM	00:00	7.82 pH	18.48 °C	491.24 µS/cm	0.35 mg/L	--	-85.8 mV	--	200.00 ml/min
11/10/2020 1:06 PM	05:00	7.82 pH	18.44 °C	496.57 µS/cm	0.28 mg/L	58.10 NTU	-88.6 mV	18.72 ft	200.00 ml/min
11/10/2020 1:11 PM	10:00	7.83 pH	18.42 °C	497.00 µS/cm	0.24 mg/L	61.30 NTU	-80.0 mV	18.72 ft	200.00 ml/min
11/10/2020 1:14 PM	12:41	7.83 pH	18.40 °C	495.66 µS/cm	0.24 mg/L	72.00 NTU	-94.2 mV	18.72 ft	200.00 ml/min
11/10/2020 2:27 PM	01:25:08	7.82 pH	18.71 °C	509.00 µS/cm	0.18 mg/L	39.00 NTU	-52.0 mV	19.51 ft	120.00 ml/min
11/10/2020 2:32 PM	01:30:35	7.82 pH	18.69 °C	507.62 µS/cm	0.17 mg/L	34.10 NTU	-83.2 mV	19.51 ft	120.00 ml/min
11/10/2020 2:37 PM	01:35:35	7.83 pH	18.68 °C	506.98 µS/cm	0.16 mg/L	28.00 NTU	-78.6 mV	19.55 ft	120.00 ml/min
11/10/2020 2:42 PM	01:40:35	7.83 pH	18.64 °C	507.98 µS/cm	0.15 mg/L	28.40 NTU	-78.0 mV	19.55 ft	120.00 ml/min
11/10/2020 2:47 PM	01:45:35	7.83 pH	18.60 °C	507.25 µS/cm	0.15 mg/L	26.80 NTU	-77.8 mV	19.60 ft	120.00 ml/min

11/10/2020 2:52 PM	01:50:35	7.83 pH	18.57 °C	506.67 µS/cm	0.15 mg/L	26.90 NTU	-77.7 mV	19.60 ft	120.00 ml/min
11/10/2020 2:57 PM	01:55:35	7.83 pH	18.60 °C	505.33 µS/cm	0.13 mg/L	26.00 NTU	-78.2 mV	19.63 ft	120.00 ml/min
11/10/2020 3:02 PM	02:00:35	7.84 pH	18.59 °C	505.55 µS/cm	0.13 mg/L	26.30 NTU	-78.3 mV	19.69 ft	120.00 ml/min
11/10/2020 3:07 PM	02:05:35	7.84 pH	18.54 °C	504.45 µS/cm	0.13 mg/L	25.80 NTU	-78.1 mV	19.69 ft	120.00 ml/min
11/10/2020 3:12 PM	02:10:35	7.84 pH	18.51 °C	504.23 µS/cm	0.12 mg/L	24.40 NTU	-78.3 mV	19.69 ft	120.00 ml/min
11/10/2020 3:17 PM	02:15:35	7.84 pH	18.51 °C	503.85 µS/cm	0.12 mg/L	22.90 NTU	-78.1 mV	19.69 ft	120.00 ml/min
11/10/2020 3:22 PM	02:20:35	7.84 pH	18.52 °C	503.63 µS/cm	0.12 mg/L	22.20 NTU	-77.9 mV	19.69 ft	120.00 ml/min
11/10/2020 3:27 PM	02:25:35	7.84 pH	18.51 °C	502.69 µS/cm	0.13 mg/L	20.60 NTU	-78.3 mV	19.69 ft	120.00 ml/min
11/10/2020 3:32 PM	02:30:35	7.84 pH	18.51 °C	501.88 µS/cm	0.12 mg/L	22.00 NTU	-78.4 mV	19.69 ft	120.00 ml/min
11/10/2020 3:37 PM	02:35:35	7.84 pH	18.51 °C	501.99 µS/cm	0.11 mg/L	21.40 NTU	-78.3 mV	19.71 ft	120.00 ml/min
11/10/2020 3:42 PM	02:40:35	7.84 pH	18.53 °C	502.57 µS/cm	0.12 mg/L	20.40 NTU	-78.4 mV	19.71 ft	120.00 ml/min
11/10/2020 3:47 PM	02:45:35	7.84 pH	18.51 °C	501.78 µS/cm	0.12 mg/L	19.60 NTU	-78.7 mV	19.71 ft	120.00 ml/min
11/10/2020 3:52 PM	02:50:35	7.84 pH	18.52 °C	502.02 µS/cm	0.12 mg/L	19.80 NTU	-78.8 mV	19.71 ft	120.00 ml/min

Samples

Sample ID:	Description:
HGWA-44D	Grab Sample
HGWA-44D, filtered	Grab Sample

Low-Flow Test Report:

Test Date / Time: 11/11/2020 2:29:29 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWA-45D Well Diameter: 2 ft Casing Type: PVC Screen Length: 10 ft Top of Screen: 52.87 ft Initial Depth to Water: 11.47 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 57.87 ft Estimated Total Volume Pumped: 7846.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.14 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Five bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO₄ (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 62.73 ft.

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	+/- 3 %	+/- 0.3	+/- 10	+/- 10	+/- 0.3	
11/11/2020 2:29 PM	00:00	7.52 pH	24.60 °C	535.02 µS/cm	0.88 mg/L	17.20 NTU	-13.6 mV	11.51 ft	100.00 ml/min
11/11/2020 2:34 PM	05:00	7.45 pH	24.45 °C	544.52 µS/cm	0.49 mg/L	21.60 NTU	-35.8 mV	11.45 ft	100.00 ml/min
11/11/2020 2:39 PM	10:00	7.45 pH	26.38 °C	557.49 µS/cm	0.46 mg/L	18.80 NTU	-55.7 mV	11.45 ft	100.00 ml/min
11/11/2020 2:44 PM	15:00	7.43 pH	22.53 °C	546.36 µS/cm	0.31 mg/L	14.30 NTU	-72.2 mV	11.55 ft	100.00 ml/min
11/11/2020 2:49 PM	20:00	7.44 pH	23.48 °C	545.68 µS/cm	0.33 mg/L	14.20 NTU	-83.9 mV	11.50 ft	100.00 ml/min
11/11/2020 2:54 PM	25:00	7.45 pH	23.93 °C	542.24 µS/cm	0.39 mg/L	13.10 NTU	-94.2 mV	11.50 ft	100.00 ml/min
11/11/2020 2:59 PM	30:00	7.42 pH	21.87 °C	548.13 µS/cm	0.21 mg/L	11.90 NTU	-100.0 mV	11.50 ft	100.00 ml/min
11/11/2020 3:04 PM	35:00	7.42 pH	22.40 °C	543.19 µS/cm	0.24 mg/L	12.10 NTU	-106.2 mV	11.55 ft	100.00 ml/min
11/11/2020 3:07 PM	38:28	7.43 pH	21.96 °C	546.82 µS/cm	0.23 mg/L	11.80 NTU	-110.7 mV	11.55 ft	100.00 ml/min
11/11/2020 3:12 PM	43:28	7.42 pH	21.44 °C	544.16 µS/cm	0.19 mg/L	11.30 NTU	-119.4 mV	11.61 ft	100.00 ml/min
11/11/2020 3:17 PM	48:28	7.44 pH	21.33 °C	544.80 µS/cm	0.13 mg/L	12.86 NTU	-125.2 mV	11.60 ft	100.00 ml/min
11/11/2020 3:22 PM	53:28	7.42 pH	21.41 °C	537.50 µS/cm	0.19 mg/L	9.99 NTU	-126.7 mV	11.60 ft	100.00 ml/min

11/11/2020 3:27 PM	58:28	7.42 pH	21.39 °C	533.71 µS/cm	0.18 mg/L	9.82 NTU	-124.2 mV	11.60 ft	100.00 ml/min
11/11/2020 3:32 PM	01:03:28	7.41 pH	21.55 °C	529.45 µS/cm	0.17 mg/L	8.05 NTU	-125.5 mV	11.61 ft	100.00 ml/min
11/11/2020 3:37 PM	01:08:28	7.41 pH	21.69 °C	525.15 µS/cm	0.16 mg/L	6.41 NTU	-125.2 mV	11.61 ft	100.00 ml/min
11/11/2020 3:42 PM	01:13:28	7.40 pH	21.29 °C	520.46 µS/cm	0.15 mg/L	5.38 NTU	-125.4 mV	11.61 ft	100.00 ml/min
11/11/2020 3:47 PM	01:18:28	7.40 pH	21.39 °C	515.21 µS/cm	0.14 mg/L	4.57 NTU	-124.7 mV	11.61 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-45D	Grab Sample

Low-Flow Test Report:

Test Date / Time: 11/12/2020 8:45:24 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWC-125 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 53.19 ft Initial Depth to Water: 44.16 ft	Pump Type: Bladder Tubing Type: Polyethylene Estimated Total Volume Pumped: 7000 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Five bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO₄ (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 63.90 ft.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 0.3	+/- 10	+/- 10	+/- 0.3	
11/12/2020 8:45 AM	00:00	6.08 pH	18.50 °C	950.30 µS/cm	0.54 mg/L	29.60 NTU	25.1 mV	44.16 ft	200.00 ml/min
11/12/2020 8:50 AM	05:00	6.07 pH	18.48 °C	961.41 µS/cm	0.29 mg/L	23.80 NTU	33.0 mV	44.16 ft	200.00 ml/min
11/12/2020 8:55 AM	10:00	6.08 pH	18.45 °C	968.39 µS/cm	0.23 mg/L	19.40 NTU	37.3 mV	44.17 ft	200.00 ml/min
11/12/2020 9:00 AM	15:00	6.10 pH	18.44 °C	974.07 µS/cm	0.19 mg/L	13.30 NTU	40.7 mV	44.17 ft	200.00 ml/min
11/12/2020 9:05 AM	20:00	6.11 pH	18.44 °C	978.37 µS/cm	0.16 mg/L	11.02 NTU	42.4 mV	44.17 ft	200.00 ml/min
11/12/2020 9:10 AM	25:00	6.11 pH	18.42 °C	980.56 µS/cm	0.15 mg/L	6.43 NTU	46.4 mV	44.17 ft	200.00 ml/min
11/12/2020 9:15 AM	30:00	6.12 pH	18.43 °C	981.33 µS/cm	0.14 mg/L	5.38 NTU	47.9 mV	44.17 ft	200.00 ml/min
11/12/2020 9:20 AM	35:00	6.13 pH	18.41 °C	985.07 µS/cm	0.13 mg/L	4.57 NTU	46.7 mV	44.17 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-125	Grab Sample

Low-Flow Test Report:

Test Date / Time: 11/11/2020 10:17:07 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWC-126 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 58.52 ft Initial Depth to Water: 41.13 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 63.52 ft Estimated Total Volume Pumped: 6365 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.87 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Bladder controller failure at 1045, controller fixed at 1055.

Five bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO₄ (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 69.51 ft.

Weather Conditions:

Overcast, 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	+/- 3 %	+/- 0.3	+/- 10	+/- 10	+/- 0.3	
11/11/2020 10:17 AM	00:00	6.93 pH	23.28 °C	805.11 µS/cm	1.84 mg/L	27.70 NTU	-49.2 mV	41.13 ft	100.00 ml/min
11/11/2020 10:22 AM	05:00	6.77 pH	21.28 °C	863.28 µS/cm	0.73 mg/L	26.30 NTU	-42.4 mV	41.40 ft	100.00 ml/min
11/11/2020 10:25 AM	08:06	6.78 pH	20.75 °C	869.95 µS/cm	0.49 mg/L	20.90 NTU	-42.6 mV	41.50 ft	100.00 ml/min
11/11/2020 10:30 AM	13:06	6.80 pH	20.52 °C	872.89 µS/cm	0.39 mg/L	17.90 NTU	-43.9 mV	41.55 ft	100.00 ml/min
11/11/2020 10:35 AM	18:06	6.81 pH	20.49 °C	873.42 µS/cm	0.36 mg/L	14.30 NTU	-45.6 mV	41.62 ft	100.00 ml/min
11/11/2020 10:40 AM	23:06	6.82 pH	20.22 °C	870.89 µS/cm	0.29 mg/L	12.60 NTU	-48.2 mV	41.70 ft	100.00 ml/min
11/11/2020 10:45 AM	28:06	6.86 pH	20.43 °C	872.46 µS/cm	0.25 mg/L	12.50 NTU	-49.6 mV	41.70 ft	100.00 ml/min
11/11/2020 10:50 AM	33:06	6.87 pH	21.34 °C	873.68 µS/cm	0.25 mg/L	12.80 NTU	-52.9 mV	51.70 ft	100.00 ml/min
11/11/2020 10:55 AM	38:06	6.83 pH	21.20 °C	861.97 µS/cm	0.58 mg/L	13.90 NTU	-52.6 mV	41.70 ft	100.00 ml/min
11/11/2020 11:00 AM	43:06	6.84 pH	19.42 °C	869.13 µS/cm	0.17 mg/L	10.52 NTU	-54.1 mV	42.00 ft	100.00 ml/min
11/11/2020 11:05 AM	48:06	6.85 pH	19.81 °C	874.58 µS/cm	0.18 mg/L	7.73 NTU	-55.5 mV	42.00 ft	100.00 ml/min
11/11/2020 11:05 AM	48:39	6.84 pH	19.86 °C	874.47 µS/cm	0.19 mg/L	6.90 NTU	-55.1 mV	42.00 ft	100.00 ml/min

11/11/2020 11:10 AM	53:39	6.85 pH	20.08 °C	872.96 µS/cm	0.19 mg/L	6.07 NTU	-57.0 mV	42.00 ft	100.00 ml/min
11/11/2020 11:15 AM	58:39	6.86 pH	20.04 °C	872.55 µS/cm	0.19 mg/L	5.35 NTU	-59.3 mV	42.00 ft	100.00 ml/min
11/11/2020 11:20 AM	01:03:39	6.86 pH	20.00 °C	872.65 µS/cm	0.19 mg/L	4.54 NTU	-60.2 mV	42.00 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWC-126	Grab Sample

Low-Flow Test Report:

Test Date / Time: 11/11/2020 12:21:29 PM

Project: GP-Plant Hammond

Operator Name: Shawn Lin

Location Name: MW-46D Well Diameter: 2 cm Screen Length: 10 ft Top of Screen: 92.5 ft Total Depth: 102.5 ft Initial Depth to Water: 41.00 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 97.5 m Estimated Total Volume Pumped: 6.5 liter Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min Final Draw Down: 0.91 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Five bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO₄ (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. III and IV metals (EPA 6010D/6020B/7470A). Measured Total depth = 104.66 ft.

Weather Conditions:

Overcast, 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 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
11/11/2020 12:21 PM	00:00	7.48 pH	19.49 °C	843.51 µS/cm	0.29 mg/L	1.90 NTU	-140.6 mV	41.86 ft	160.00 ml/min
11/11/2020 12:26 PM	05:00	7.49 pH	19.42 °C	847.82 µS/cm	0.26 mg/L	1.44 NTU	-207.2 mV	41.91 ft	160.00 ml/min
11/11/2020 12:31 PM	10:00	7.50 pH	19.40 °C	847.45 µS/cm	0.24 mg/L	1.57 NTU	-143.5 mV	41.91 ft	160.00 ml/min
11/11/2020 12:31 PM	10:10	7.51 pH	19.40 °C	847.31 µS/cm	0.24 mg/L	--	-188.3 mV	41.91 ft	160.00 ml/min
11/11/2020 12:31 PM	10:19	7.50 pH	19.40 °C	847.29 µS/cm	0.24 mg/L	--	-197.7 mV	41.91 ft	160.00 ml/min
11/11/2020 12:36 PM	15:19	7.51 pH	19.40 °C	847.90 µS/cm	0.22 mg/L	2.53 NTU	-146.6 mV	41.91 ft	160.00 ml/min
11/11/2020 12:41 PM	20:19	7.52 pH	19.33 °C	847.90 µS/cm	0.21 mg/L	0.92 NTU	-218.8 mV	41.91 ft	160.00 ml/min
11/11/2020 12:46 PM	25:19	7.52 pH	19.46 °C	849.51 µS/cm	0.19 mg/L	2.54 NTU	-220.8 mV	41.91 ft	160.00 ml/min

Samples

Sample ID:	Description:
MW-46D	Grab Sample

December 2020

Low-Flow Test Report:

Test Date / Time: 12/15/2020 9:50:43 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<p>Location Name: HGWA-43D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 52.55 ft Initial Depth to Water: 14.51 ft</p>	<p>Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 57.55 ft Estimated Total Volume Pumped: 9 liters Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 1.6 ft</p>	<p>Instrument Used: Aqua TROLL 400 Serial Number: 728634</p>
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Test Notes:

Five bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO₄ (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 61.80 ft.

Weather Conditions:

Sunny, cold

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
12/15/2020 9:50 AM	00:00	7.34 pH	14.21 °C	526.82 µS/cm	1.46 mg/L	29.90 NTU	-59.7 mV	14.51 ft	100.00 ml/min
12/15/2020 9:55 AM	05:00	7.30 pH	15.61 °C	517.14 µS/cm	0.70 mg/L	37.61 NTU	-60.6 mV	15.00 ft	100.00 ml/min
12/15/2020 10:00 AM	10:00	7.31 pH	16.28 °C	515.08 µS/cm	0.96 mg/L	33.61 NTU	-108.1 mV	15.34 ft	100.00 ml/min
12/15/2020 10:05 AM	15:00	7.32 pH	16.55 °C	508.92 µS/cm	0.89 mg/L	24.82 NTU	-115.1 mV	15.61 ft	100.00 ml/min
12/15/2020 10:10 AM	20:00	7.34 pH	16.75 °C	498.96 µS/cm	0.60 mg/L	21.50 NTU	-69.4 mV	15.75 ft	100.00 ml/min
12/15/2020 10:15 AM	25:00	7.35 pH	16.80 °C	484.29 µS/cm	0.48 mg/L	19.06 NTU	-67.3 mV	15.85 ft	100.00 ml/min
12/15/2020 10:20 AM	30:00	7.35 pH	16.93 °C	475.04 µS/cm	0.57 mg/L	15.28 NTU	-65.8 mV	15.92 ft	100.00 ml/min
12/15/2020 10:25 AM	35:00	7.36 pH	17.09 °C	465.50 µS/cm	0.45 mg/L	14.47 NTU	-110.0 mV	15.97 ft	100.00 ml/min
12/15/2020 10:30 AM	40:00	7.36 pH	17.08 °C	459.56 µS/cm	0.35 mg/L	14.03 NTU	-108.6 mV	16.02 ft	100.00 ml/min
12/15/2020 10:35 AM	45:00	7.37 pH	17.28 °C	453.06 µS/cm	0.42 mg/L	12.14 NTU	-110.5 mV	16.05 ft	100.00 ml/min
12/15/2020 10:40 AM	50:00	7.37 pH	17.31 °C	447.42 µS/cm	0.32 mg/L	11.04 NTU	-61.9 mV	16.08 ft	100.00 ml/min

12/15/2020 10:45 AM	55:00	7.37 pH	17.26 °C	447.49 µS/cm	0.82 mg/L	10.63 NTU	-60.8 mV	16.10 ft	100.00 ml/min
12/15/2020 10:50 AM	01:00:00	7.38 pH	17.18 °C	447.76 µS/cm	0.74 mg/L	9.65 NTU	-58.5 mV	16.11 ft	100.00 ml/min
12/15/2020 10:55 AM	01:05:00	7.38 pH	16.87 °C	454.65 µS/cm	0.71 mg/L	8.89 NTU	-104.5 mV	16.11 ft	100.00 ml/min
12/15/2020 11:00 AM	01:10:00	7.39 pH	16.77 °C	455.20 µS/cm	0.44 mg/L	7.34 NTU	-101.8 mV	16.11 ft	100.00 ml/min
12/15/2020 11:05 AM	01:15:00	7.39 pH	17.04 °C	451.13 µS/cm	0.31 mg/L	6.63 NTU	-58.6 mV	16.11 ft	100.00 ml/min
12/15/2020 11:10 AM	01:20:00	7.40 pH	17.26 °C	448.17 µS/cm	0.31 mg/L	6.43 NTU	-56.8 mV	16.11 ft	100.00 ml/min
12/15/2020 11:15 AM	01:25:00	7.40 pH	17.20 °C	452.85 µS/cm	0.27 mg/L	5.33 NTU	-56.6 mV	16.11 ft	100.00 ml/min
12/15/2020 11:20 AM	01:30:00	7.39 pH	17.11 °C	453.03 µS/cm	0.22 mg/L	4.88 NTU	-55.8 mV	16.11 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-43D	Grab Sample

Low-Flow Test Report:

Test Date / Time: 12/15/2020 1:09:32 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWA-44D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 103.25 ft Initial Depth to Water: 14.4 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 108 ft Estimated Total Volume Pumped: 18.5 liters Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 2.33 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Five bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO₄ (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 111.3 ft.

Weather Conditions:

Sunny, cold

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
12/15/2020 1:09 PM	00:00	7.90 pH	15.77 °C	484.96 µS/cm	1.80 mg/L	63.27 NTU	-106.7 mV	14.40 ft	100.00 ml/min
12/15/2020 1:14 PM	05:00	7.90 pH	16.46 °C	498.20 µS/cm	1.07 mg/L	98.00 NTU	-105.8 mV	14.55 ft	100.00 ml/min
12/15/2020 1:19 PM	10:00	7.90 pH	16.38 °C	499.17 µS/cm	0.74 mg/L	114.00 NTU	-182.1 mV	14.70 ft	100.00 ml/min
12/15/2020 1:24 PM	15:00	7.90 pH	16.30 °C	497.96 µS/cm	0.64 mg/L	112.00 NTU	-186.3 mV	14.93 ft	100.00 ml/min
12/15/2020 1:29 PM	20:00	7.90 pH	16.37 °C	496.40 µS/cm	0.57 mg/L	139.00 NTU	-114.7 mV	15.13 ft	100.00 ml/min
12/15/2020 1:34 PM	25:00	7.90 pH	16.26 °C	494.15 µS/cm	0.52 mg/L	128.00 NTU	-191.2 mV	15.28 ft	100.00 ml/min
12/15/2020 1:39 PM	30:00	7.90 pH	16.24 °C	491.16 µS/cm	0.48 mg/L	92.00 NTU	-194.6 mV	15.45 ft	100.00 ml/min
12/15/2020 1:44 PM	35:00	7.90 pH	16.52 °C	488.12 µS/cm	0.43 mg/L	50.00 NTU	-119.5 mV	15.60 ft	100.00 ml/min
12/15/2020 1:49 PM	40:00	7.90 pH	16.59 °C	483.68 µS/cm	0.40 mg/L	61.95 NTU	-200.0 mV	15.65 ft	100.00 ml/min
12/15/2020 1:54 PM	45:00	7.90 pH	16.81 °C	479.85 µS/cm	0.37 mg/L	49.82 NTU	-123.8 mV	15.77 ft	100.00 ml/min
12/15/2020 1:59 PM	50:00	7.90 pH	16.55 °C	493.05 µS/cm	0.35 mg/L	58.41 NTU	-124.2 mV	15.82 ft	100.00 ml/min
12/15/2020 2:04 PM	55:00	7.90 pH	16.64 °C	494.17 µS/cm	0.35 mg/L	38.92 NTU	-126.4 mV	15.90 ft	100.00 ml/min

12/15/2020 2:09 PM	01:00:00	7.90 pH	16.69 °C	492.65 µS/cm	0.32 mg/L	28.72 NTU	-207.7 mV	15.90 ft	100.00 ml/min
12/15/2020 2:14 PM	01:05:00	7.89 pH	16.55 °C	490.67 µS/cm	0.30 mg/L	23.69 NTU	-126.3 mV	15.91 ft	100.00 ml/min
12/15/2020 2:19 PM	01:10:00	7.88 pH	16.37 °C	492.49 µS/cm	0.29 mg/L	21.04 NTU	-124.5 mV	15.95 ft	100.00 ml/min
12/15/2020 2:24 PM	01:15:00	7.89 pH	16.26 °C	489.74 µS/cm	0.28 mg/L	18.27 NTU	-124.8 mV	15.95 ft	100.00 ml/min
12/15/2020 2:29 PM	01:20:00	7.88 pH	16.10 °C	488.48 µS/cm	0.28 mg/L	17.32 NTU	-207.2 mV	16.00 ft	100.00 ml/min
12/15/2020 2:34 PM	01:25:00	7.88 pH	15.93 °C	489.52 µS/cm	0.27 mg/L	15.96 NTU	-126.3 mV	16.05 ft	100.00 ml/min
12/15/2020 2:39 PM	01:30:00	7.88 pH	15.96 °C	489.65 µS/cm	0.26 mg/L	18.00 NTU	-126.0 mV	16.00 ft	100.00 ml/min
12/15/2020 2:44 PM	01:35:00	7.88 pH	15.96 °C	486.86 µS/cm	0.26 mg/L	16.95 NTU	-206.9 mV	16.00 ft	100.00 ml/min
12/15/2020 2:49 PM	01:40:00	7.88 pH	16.15 °C	485.86 µS/cm	0.25 mg/L	16.43 NTU	-207.8 mV	16.05 ft	100.00 ml/min
12/15/2020 2:54 PM	01:45:00	7.88 pH	16.01 °C	489.56 µS/cm	0.24 mg/L	16.22 NTU	-125.5 mV	16.05 ft	100.00 ml/min
12/15/2020 2:59 PM	01:50:00	7.88 pH	15.89 °C	489.90 µS/cm	0.24 mg/L	16.47 NTU	-124.1 mV	16.05 ft	100.00 ml/min
12/15/2020 3:04 PM	01:55:00	7.88 pH	15.74 °C	490.53 µS/cm	0.25 mg/L	13.59 NTU	-204.7 mV	16.05 ft	100.00 ml/min
12/15/2020 3:09 PM	02:00:00	7.87 pH	15.83 °C	489.04 µS/cm	0.25 mg/L	14.49 NTU	-206.8 mV	16.05 ft	100.00 ml/min
12/15/2020 3:14 PM	02:05:00	7.87 pH	16.38 °C	488.60 µS/cm	0.22 mg/L	14.19 NTU	-126.3 mV	16.20 ft	100.00 ml/min
12/15/2020 3:19 PM	02:10:00	7.87 pH	16.44 °C	486.41 µS/cm	0.19 mg/L	13.34 NTU	-209.6 mV	16.30 ft	100.00 ml/min
12/15/2020 3:24 PM	02:15:00	7.86 pH	16.46 °C	487.69 µS/cm	0.17 mg/L	13.09 NTU	-127.4 mV	16.35 ft	100.00 ml/min
12/15/2020 3:29 PM	02:20:00	7.88 pH	16.38 °C	491.48 µS/cm	0.16 mg/L	13.05 NTU	-126.5 mV	16.43 ft	100.00 ml/min
12/15/2020 3:34 PM	02:25:00	7.88 pH	16.35 °C	491.38 µS/cm	0.15 mg/L	12.11 NTU	-125.1 mV	16.50 ft	100.00 ml/min
12/15/2020 3:39 PM	02:30:00	7.88 pH	16.30 °C	489.46 µS/cm	0.15 mg/L	12.06 NTU	-207.6 mV	16.50 ft	100.00 ml/min
12/15/2020 3:44 PM	02:35:00	7.88 pH	16.30 °C	488.61 µS/cm	0.14 mg/L	11.87 NTU	-208.3 mV	16.60 ft	100.00 ml/min
12/15/2020 3:49 PM	02:40:00	7.87 pH	16.28 °C	488.02 µS/cm	0.13 mg/L	11.04 NTU	-124.4 mV	16.62 ft	100.00 ml/min
12/15/2020 3:54 PM	02:45:00	7.88 pH	16.30 °C	487.19 µS/cm	0.13 mg/L	11.03 NTU	-206.7 mV	16.65 ft	100.00 ml/min
12/15/2020 3:59 PM	02:50:00	7.88 pH	16.30 °C	487.66 µS/cm	0.13 mg/L	10.78 NTU	-122.7 mV	16.67 ft	100.00 ml/min
12/15/2020 4:04 PM	02:55:00	7.88 pH	16.28 °C	486.45 µS/cm	0.12 mg/L	8.75 NTU	-204.0 mV	16.70 ft	100.00 ml/min
12/15/2020 4:09 PM	03:00:00	7.86 pH	16.28 °C	486.14 µS/cm	0.12 mg/L	9.69 NTU	-203.7 mV	16.69 ft	100.00 ml/min
12/15/2020 4:14 PM	03:05:00	7.87 pH	16.32 °C	488.28 µS/cm	0.12 mg/L	9.00 NTU	-203.5 mV	16.73 ft	100.00 ml/min

Samples

Sample ID:	Description:
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HGWA-44D	Grab Sample
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Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 12/16/2020 9:01:29 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWA-45D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 52.87 ft Initial Depth to Water: 7.1 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 57.87 ft Estimated Total Volume Pumped: 7 liters Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.57 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Five bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO₄ (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 62.70 ft.

Weather Conditions:

Rainy, Cold

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
12/16/2020 9:01 AM	00:00	7.33 pH	17.09 °C	522.40 µS/cm	0.39 mg/L	13.22 NTU	-84.5 mV	7.10 ft	200.00 ml/min
12/16/2020 9:06 AM	05:00	7.34 pH	17.26 °C	511.79 µS/cm	0.28 mg/L	8.70 NTU	-131.3 mV	7.66 ft	200.00 ml/min
12/16/2020 9:11 AM	10:00	7.36 pH	17.30 °C	508.69 µS/cm	0.23 mg/L	7.28 NTU	-74.4 mV	7.66 ft	200.00 ml/min
12/16/2020 9:16 AM	15:00	7.37 pH	17.35 °C	506.28 µS/cm	0.21 mg/L	5.75 NTU	-128.9 mV	7.66 ft	200.00 ml/min
12/16/2020 9:21 AM	20:00	7.38 pH	17.36 °C	504.70 µS/cm	0.19 mg/L	4.50 NTU	-75.9 mV	7.66 ft	200.00 ml/min
12/16/2020 9:26 AM	25:00	7.39 pH	17.38 °C	503.96 µS/cm	0.17 mg/L	3.88 NTU	-80.3 mV	7.66 ft	200.00 ml/min
12/16/2020 9:31 AM	30:00	7.39 pH	17.43 °C	502.72 µS/cm	0.16 mg/L	3.59 NTU	-83.9 mV	7.67 ft	200.00 ml/min
12/16/2020 9:36 AM	35:00	7.39 pH	17.46 °C	501.40 µS/cm	0.14 mg/L	3.11 NTU	-87.3 mV	7.67 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-45D	Grab Sample

Low-Flow Test Report:

Test Date / Time: 12/16/2020 11:07:11 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<p>Location Name: HGWC-125 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 53.19 ft Initial Depth to Water: 42.42 ft</p>	<p>Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 57.87 ft Estimated Total Volume Pumped: 10 liters Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.01 ft</p>	<p>Instrument Used: Aqua TROLL 400 Serial Number: 728634</p>
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Test Notes:

Five bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO₄ (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth =63.90 ft.

Weather Conditions:

Rainy, cold

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
12/16/2020 11:07 AM	00:00	6.60 pH	16.05 °C	1,078.2 µS/cm	0.45 mg/L	5.31 NTU	-46.1 mV	42.42 ft	200.00 ml/min
12/16/2020 11:12 AM	05:00	6.61 pH	16.48 °C	1,081.7 µS/cm	0.30 mg/L	1.84 NTU	-27.6 mV	42.43 ft	200.00 ml/min
12/16/2020 11:17 AM	10:00	6.60 pH	16.62 °C	1,077.7 µS/cm	0.25 mg/L	2.64 NTU	-55.1 mV	42.43 ft	200.00 ml/min
12/16/2020 11:22 AM	15:00	6.57 pH	16.68 °C	1,070.9 µS/cm	0.23 mg/L	2.54 NTU	-33.4 mV	42.43 ft	200.00 ml/min
12/16/2020 11:27 AM	20:00	6.60 pH	16.86 °C	1,078.3 µS/cm	0.20 mg/L	1.47 NTU	-24.9 mV	42.43 ft	200.00 ml/min
12/16/2020 11:32 AM	25:00	6.61 pH	16.81 °C	1,075.0 µS/cm	0.24 mg/L	1.75 NTU	-24.2 mV	42.43 ft	200.00 ml/min
12/16/2020 11:37 AM	30:00	6.61 pH	16.65 °C	1,085.2 µS/cm	0.43 mg/L	1.04 NTU	-24.1 mV	42.43 ft	200.00 ml/min
12/16/2020 11:42 AM	35:00	6.62 pH	16.80 °C	1,020.8 µS/cm	0.55 mg/L	0.75 NTU	-51.1 mV	42.43 ft	200.00 ml/min
12/16/2020 11:47 AM	40:00	6.62 pH	16.86 °C	1,090.3 µS/cm	0.42 mg/L	0.94 NTU	-25.0 mV	42.43 ft	200.00 ml/min
12/16/2020 11:52 AM	45:00	6.61 pH	16.76 °C	1,090.2 µS/cm	0.47 mg/L	0.43 NTU	-25.4 mV	42.43 ft	200.00 ml/min
12/16/2020 11:57 AM	50:00	6.61 pH	16.72 °C	1,086.4 µS/cm	0.42 mg/L	0.28 NTU	-53.8 mV	42.43 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-125	Grab Sample

Low-Flow Test Report:

Test Date / Time: 12/16/2020 1:42:49 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWC-126 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 58.52 ft Initial Depth to Water: 40.65 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 63.52 ft Estimated Total Volume Pumped: 7 liters Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 1.35 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Five bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO₄ (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 68.51 ft.

Weather Conditions:

Cloudy, cold

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
12/16/2020 1:42 PM	00:00	6.90 pH	16.96 °C	866.58 µS/cm	0.53 mg/L	7.28 NTU	-99.9 mV	40.65 ft	200.00 ml/min
12/16/2020 1:47 PM	05:00	6.91 pH	17.58 °C	863.26 µS/cm	0.33 mg/L	4.66 NTU	-71.6 mV	41.23 ft	200.00 ml/min
12/16/2020 1:52 PM	10:00	6.92 pH	17.69 °C	863.95 µS/cm	0.27 mg/L	3.45 NTU	-66.9 mV	41.44 ft	200.00 ml/min
12/16/2020 1:57 PM	15:00	6.93 pH	17.71 °C	865.67 µS/cm	0.24 mg/L	2.82 NTU	-116.2 mV	41.62 ft	200.00 ml/min
12/16/2020 2:02 PM	20:00	6.93 pH	17.74 °C	864.75 µS/cm	0.21 mg/L	2.31 NTU	-63.6 mV	41.74 ft	200.00 ml/min
12/16/2020 2:07 PM	25:00	6.92 pH	17.75 °C	865.66 µS/cm	0.19 mg/L	1.75 NTU	-62.6 mV	41.82 ft	200.00 ml/min
12/16/2020 2:12 PM	30:00	6.92 pH	17.75 °C	864.32 µS/cm	0.17 mg/L	1.70 NTU	-62.4 mV	41.98 ft	200.00 ml/min
12/16/2020 2:17 PM	35:00	6.93 pH	17.75 °C	863.25 µS/cm	0.16 mg/L	1.65 NTU	-114.1 mV	42.00 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-126	Grab Sample

January 2021

Low-Flow Test Report:

Test Date / Time: 1/19/2021 2:58:28 PM

Project: GP-Plant Hammond

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
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/19/2021 2:58 PM	00:00	7.49 pH	15.85 °C	0.53 µS/cm	7.61 mg/L	38.60 NTU	-69.0 mV	18.84 ft	200.00 ml/min
1/19/2021 3:03 PM	05:00	7.44 pH	15.96 °C	0.53 µS/cm	5.84 mg/L	30.20 NTU	-66.7 mV	19.43 ft	200.00 ml/min
1/19/2021 3:08 PM	10:00	7.42 pH	15.97 °C	0.53 µS/cm	4.66 mg/L	25.00 NTU	-122.3 mV	19.86 ft	200.00 ml/min
1/19/2021 3:13 PM	15:00	7.40 pH	15.98 °C	0.53 µS/cm	3.85 mg/L	14.00 NTU	-62.8 mV	20.32 ft	200.00 ml/min
1/19/2021 3:18 PM	20:00	7.40 pH	15.87 °C	0.52 µS/cm	2.77 mg/L	11.60 NTU	-116.6 mV	20.44 ft	200.00 ml/min
1/19/2021 3:23 PM	25:00	7.39 pH	15.84 °C	0.52 µS/cm	2.30 mg/L	10.68 NTU	-56.1 mV	20.49 ft	200.00 ml/min
1/19/2021 3:28 PM	30:00	7.39 pH	15.74 °C	0.51 µS/cm	2.20 mg/L	8.80 NTU	-106.6 mV	20.66 ft	200.00 ml/min
1/19/2021 3:33 PM	35:00	7.39 pH	15.75 °C	0.51 µS/cm	2.01 mg/L	8.22 NTU	-49.7 mV	20.74 ft	200.00 ml/min
1/19/2021 3:38 PM	40:00	7.39 pH	15.60 °C	0.51 µS/cm	1.54 mg/L	6.60 NTU	-99.3 mV	20.76 ft	200.00 ml/min
1/19/2021 3:43 PM	45:00	7.39 pH	15.83 °C	0.50 µS/cm	1.76 mg/L	6.79 NTU	-96.2 mV	20.78 ft	100.00 ml/min
1/19/2021 3:48 PM	50:00	7.40 pH	15.43 °C	0.50 µS/cm	1.81 mg/L	7.01 NTU	-90.9 mV	20.79 ft	100.00 ml/min
1/19/2021 3:53 PM	55:00	7.38 pH	15.16 °C	0.50 µS/cm	0.90 mg/L	4.52 NTU	-91.3 mV	20.72 ft	100.00 ml/min
1/19/2021 3:58 PM	01:00:00	7.39 pH	15.14 °C	0.49 µS/cm	1.30 mg/L	4.32 NTU	-87.6 mV	20.69 ft	100.00 ml/min
1/19/2021 4:03 PM	01:05:00	7.37 pH	15.65 °C	0.50 µS/cm	1.15 mg/L	4.04 NTU	-87.6 mV	20.68 ft	100.00 ml/min
1/19/2021 4:08 PM	01:10:00	7.39 pH	15.74 °C	0.49 µS/cm	1.59 mg/L	6.02 NTU	-82.9 mV	20.68 ft	100.00 ml/min

1/19/2021 4:13 PM	01:15:00	7.39 pH	15.88 °C	0.49 µS/cm	1.41 mg/L	4.49 NTU	-37.4 mV	20.71 ft	100.00 ml/min
1/19/2021 4:18 PM	01:20:00	7.39 pH	15.46 °C	0.49 µS/cm	1.11 mg/L	4.23 NTU	-80.1 mV	20.70 ft	100.00 ml/min
1/19/2021 4:23 PM	01:25:00	7.38 pH	15.21 °C	0.49 µS/cm	1.02 mg/L	3.20 NTU	-36.1 mV	20.74 ft	100.00 ml/min
1/19/2021 4:28 PM	01:30:00	7.39 pH	14.79 °C	0.49 µS/cm	0.98 mg/L	3.88 NTU	-78.1 mV	20.70 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-43D	Grab sample

Low-Flow Test Report:

Test Date / Time: 1/19/2021 2:36:54 PM

Project: GP-Plant Hammond

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: Alexis 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
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
1/19/2021 2:36 PM	00:00	7.83 pH	15.29 °C	506.34 µS/cm	1.46 mg/L	--	-91.3 mV	16.28 ft	200.00 ml/min
1/19/2021 2:41 PM	05:00	7.84 pH	16.03 °C	500.24 µS/cm	0.44 mg/L	82.00 NTU	-97.3 mV	17.19 ft	200.00 ml/min
1/19/2021 2:46 PM	10:00	7.85 pH	16.14 °C	495.76 µS/cm	0.31 mg/L	98.00 NTU	-98.2 mV	17.51 ft	200.00 ml/min
1/19/2021 2:51 PM	15:00	7.86 pH	16.16 °C	491.34 µS/cm	0.26 mg/L	77.00 NTU	-99.1 mV	18.04 ft	200.00 ml/min
1/19/2021 2:56 PM	20:00	7.85 pH	16.14 °C	489.93 µS/cm	0.22 mg/L	22.00 NTU	-100.6 mV	18.40 ft	200.00 ml/min
1/19/2021 3:01 PM	25:00	7.84 pH	15.74 °C	485.07 µS/cm	0.22 mg/L	44.40 NTU	-98.0 mV	18.35 ft	100.00 ml/min
1/19/2021 3:06 PM	30:00	7.84 pH	15.57 °C	484.09 µS/cm	0.24 mg/L	34.10 NTU	-98.8 mV	18.35 ft	100.00 ml/min
1/19/2021 3:11 PM	35:00	7.84 pH	15.58 °C	481.64 µS/cm	0.25 mg/L	33.00 NTU	-99.5 mV	18.45 ft	100.00 ml/min
1/19/2021 3:16 PM	40:00	7.84 pH	15.59 °C	479.88 µS/cm	0.24 mg/L	25.90 NTU	-99.5 mV	18.50 ft	100.00 ml/min
1/19/2021 3:21 PM	45:00	7.83 pH	15.59 °C	483.16 µS/cm	0.22 mg/L	18.50 NTU	-96.8 mV	18.55 ft	100.00 ml/min
1/19/2021 3:26 PM	50:00	7.83 pH	15.56 °C	482.00 µS/cm	0.20 mg/L	19.20 NTU	-96.5 mV	18.60 ft	100.00 ml/min
1/19/2021 3:31 PM	55:00	7.82 pH	15.40 °C	479.95 µS/cm	0.20 mg/L	16.50 NTU	-95.5 mV	18.60 ft	100.00 ml/min
1/19/2021 3:36 PM	01:00:00	7.83 pH	15.25 °C	482.48 µS/cm	0.20 mg/L	14.60 NTU	-95.8 mV	18.55 ft	100.00 ml/min
1/19/2021 3:41 PM	01:05:00	7.83 pH	15.24 °C	482.12 µS/cm	0.20 mg/L	14.60 NTU	-94.8 mV	18.55 ft	100.00 ml/min
1/19/2021 3:46 PM	01:10:00	7.83 pH	15.29 °C	481.12 µS/cm	0.19 mg/L	14.50 NTU	-95.1 mV	18.50 ft	100.00 ml/min

1/19/2021 3:51 PM	01:15:00	7.83 pH	15.29 °C	480.83 µS/cm	0.19 mg/L	12.90 NTU	-94.8 mV	18.55 ft	100.00 ml/min
1/19/2021 3:56 PM	01:20:00	7.83 pH	15.29 °C	479.33 µS/cm	0.18 mg/L	12.80 NTU	-94.6 mV	18.55 ft	100.00 ml/min
1/19/2021 4:01 PM	01:25:00	7.84 pH	15.29 °C	481.00 µS/cm	0.18 mg/L	11.40 NTU	-94.2 mV	18.55 ft	100.00 ml/min
1/19/2021 4:06 PM	01:30:00	7.84 pH	15.16 °C	479.47 µS/cm	0.18 mg/L	10.15 NTU	-93.1 mV	18.40 ft	100.00 ml/min
1/19/2021 4:11 PM	01:35:00	7.84 pH	15.03 °C	481.23 µS/cm	0.18 mg/L	13.40 NTU	-92.7 mV	18.50 ft	100.00 ml/min
1/19/2021 4:16 PM	01:40:00	7.84 pH	15.25 °C	478.27 µS/cm	0.18 mg/L	22.80 NTU	-93.1 mV	18.50 ft	100.00 ml/min
1/19/2021 4:21 PM	01:45:00	7.84 pH	15.14 °C	477.80 µS/cm	0.18 mg/L	20.30 NTU	-91.5 mV	18.50 ft	100.00 ml/min
1/19/2021 4:26 PM	01:50:00	7.84 pH	15.02 °C	475.66 µS/cm	0.18 mg/L	16.10 NTU	-90.8 mV	18.50 ft	100.00 ml/min
1/19/2021 4:31 PM	01:55:00	7.85 pH	14.91 °C	478.31 µS/cm	0.16 mg/L	12.39 NTU	-90.1 mV	18.60 ft	100.00 ml/min
1/19/2021 4:36 PM	02:00:00	7.84 pH	14.59 °C	482.53 µS/cm	0.15 mg/L	11.95 NTU	-88.5 mV	18.60 ft	100.00 ml/min
1/19/2021 4:41 PM	02:05:00	7.85 pH	14.52 °C	486.75 µS/cm	0.15 mg/L	12.84 NTU	-88.6 mV	18.60 ft	100.00 ml/min
1/19/2021 4:46 PM	02:10:00	7.86 pH	14.42 °C	483.95 µS/cm	0.15 mg/L	11.56 NTU	-87.4 mV	18.60 ft	100.00 ml/min
1/19/2021 4:51 PM	02:15:00	7.85 pH	14.41 °C	484.00 µS/cm	0.14 mg/L	11.67 NTU	-87.0 mV	18.60 ft	100.00 ml/min
1/19/2021 4:56 PM	02:20:00	7.86 pH	14.30 °C	483.23 µS/cm	0.15 mg/L	12.43 NTU	-158.9 mV	18.60 ft	100.00 ml/min
1/19/2021 5:01 PM	02:25:00	7.85 pH	14.34 °C	485.05 µS/cm	0.15 mg/L	12.12 NTU	-87.2 mV	18.60 ft	100.00 ml/min
1/19/2021 5:06 PM	02:30:00	7.87 pH	14.39 °C	484.74 µS/cm	0.14 mg/L	10.12 NTU	-159.9 mV	18.60 ft	100.00 ml/min
1/19/2021 5:11 PM	02:35:00	7.87 pH	14.34 °C	484.08 µS/cm	0.15 mg/L	10.94 NTU	-86.3 mV	18.60 ft	100.00 ml/min
1/19/2021 5:16 PM	02:40:00	7.87 pH	14.24 °C	489.94 µS/cm	0.15 mg/L	11.81 NTU	-158.9 mV	18.60 ft	100.00 ml/min
1/19/2021 5:21 PM	02:45:00	7.86 pH	14.25 °C	491.19 µS/cm	0.15 mg/L	11.14 NTU	-87.4 mV	18.60 ft	100.00 ml/min
1/19/2021 5:26 PM	02:50:00	7.85 pH	14.21 °C	497.24 µS/cm	0.16 mg/L	10.54 NTU	-84.7 mV	18.60 ft	100.00 ml/min
1/19/2021 5:31 PM	02:55:00	7.85 pH	14.41 °C	494.66 µS/cm	0.16 mg/L	10.42 NTU	-157.5 mV	18.60 ft	100.00 ml/min
1/19/2021 5:36 PM	03:00:00	7.86 pH	14.48 °C	493.23 µS/cm	0.16 mg/L	9.73 NTU	-158.4 mV	18.60 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-44D	Grab

Low-Flow Test Report:

Test Date / Time: 1/20/2021 10:36:32 AM

Project: GP-Plant Hammond (4)

Operator Name: Chad Russo

Location Name: HGWA-45D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 53 ft Initial Depth to Water: 10.75 ft	Pump Type: QED MP50 Tubing Type: polyethylene Tubing Inner Diameter: 0.17 in Pump Intake From TOC: 58 ft Estimated Total Volume Pumped: 6000 ml 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
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
1/20/2021 10:36 AM	00:00	7.51 pH	16.19 °C	512.01 µS/cm	2.55 mg/L	--	-81.1 mV	10.75 ft	200.00 ml/min
1/20/2021 10:41 AM	05:00	7.43 pH	17.31 °C	523.33 µS/cm	0.68 mg/L	18.80 NTU	-154.9 mV	11.19 ft	200.00 ml/min
1/20/2021 10:46 AM	10:00	7.46 pH	17.57 °C	526.86 µS/cm	0.46 mg/L	20.70 NTU	-105.2 mV	11.25 ft	200.00 ml/min
1/20/2021 10:51 AM	15:00	7.49 pH	17.57 °C	522.85 µS/cm	0.36 mg/L	15.50 NTU	-109.2 mV	11.28 ft	200.00 ml/min
1/20/2021 10:56 AM	20:00	7.51 pH	17.59 °C	521.31 µS/cm	0.32 mg/L	12.70 NTU	-110.7 mV	11.30 ft	200.00 ml/min
1/20/2021 11:01 AM	25:00	7.48 pH	17.66 °C	514.78 µS/cm	0.26 mg/L	7.07 NTU	-105.1 mV	11.31 ft	200.00 ml/min
1/20/2021 11:06 AM	30:00	7.47 pH	17.84 °C	508.55 µS/cm	0.23 mg/L	3.82 NTU	-97.7 mV	11.31 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-45D	Grab

Low-Flow Test Report:

Test Date / Time: 1/20/2021 12:31:24 PM

Project: GP-Plant Hammond

Operator Name: Connor Cain

Location Name: HGWC-125 Well Diameter: 2 in Casing Type: PVC Initial Depth to Water: 43.15 ft	Pump Type: QED Tubing Type: polyethylene Tubing Inner Diameter: 0.17 in Estimated Total Volume Pumped: 7716.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728638
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/20/2021 12:31 PM	00:00	6.10 pH	18.38 °C	946.94 µS/cm	0.26 mg/L	39.30 NTU	-32.1 mV	44.20 ft	200.00 ml/min
1/20/2021 12:32 PM	01:23	6.10 pH	18.23 °C	953.28 µS/cm	0.25 mg/L	37.10 NTU	-17.9 mV	44.29 ft	200.00 ml/min
1/20/2021 12:37 PM	06:23	6.13 pH	18.02 °C	961.60 µS/cm	0.21 mg/L	30.20 NTU	-11.3 mV	44.22 ft	200.00 ml/min
1/20/2021 12:39 PM	08:28	6.14 pH	18.04 °C	974.17 µS/cm	0.20 mg/L	27.20 NTU	-5.6 mV	44.22 ft	200.00 ml/min
1/20/2021 12:44 PM	13:28	6.16 pH	18.07 °C	978.83 µS/cm	0.18 mg/L	18.90 NTU	-4.0 mV	44.20 ft	200.00 ml/min
1/20/2021 12:49 PM	18:28	6.18 pH	18.07 °C	985.46 µS/cm	0.16 mg/L	14.80 NTU	-0.9 mV	44.21 ft	200.00 ml/min
1/20/2021 12:54 PM	23:31	6.19 pH	18.13 °C	990.82 µS/cm	0.15 mg/L	14.19 NTU	2.0 mV	44.21 ft	200.00 ml/min
1/20/2021 12:59 PM	27:40	6.20 pH	18.21 °C	984.86 µS/cm	0.14 mg/L	13.87 NTU	-1.3 mV	44.21 ft	200.00 ml/min
1/20/2021 12:59 PM	28:35	6.20 pH	18.18 °C	995.66 µS/cm	0.14 mg/L	6.05 NTU	5.2 mV	44.21 ft	200.00 ml/min
1/20/2021 1:04 PM	33:35	6.21 pH	18.34 °C	995.80 µS/cm	0.13 mg/L	6.39 NTU	4.9 mV	44.21 ft	200.00 ml/min
1/20/2021 1:09 PM	38:35	6.23 pH	18.15 °C	998.90 µS/cm	0.12 mg/L	4.10 NTU	1.6 mV	44.21 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-125	Grab

Low-Flow Test Report:

Test Date / Time: 1/20/2021 12:41:43 PM

Project: GP-Plant Hammond

Operator Name: Chad Russo

Location Name: HGWC-126 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 58 ft Initial Depth to Water: 41.46 ft	Pump Type: QED MP50 Tubing Type: polyethylene Tubing Inner Diameter: 0.17 in Pump Intake From TOC: 64 ft Estimated Total Volume Pumped: 6000 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 1.09 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
1/20/2021 12:41 PM	00:00	6.97 pH	18.33 °C	847.33 µS/cm	1.56 mg/L	--	-117.4 mV	41.46 ft	200.00 ml/min
1/20/2021 12:46 PM	05:00	6.98 pH	18.25 °C	849.26 µS/cm	0.68 mg/L	14.10 NTU	-123.8 mV	42.15 ft	200.00 ml/min
1/20/2021 12:51 PM	10:00	6.98 pH	18.29 °C	848.84 µS/cm	0.36 mg/L	11.60 NTU	-109.3 mV	42.40 ft	200.00 ml/min
1/20/2021 12:56 PM	15:00	6.98 pH	18.23 °C	849.18 µS/cm	0.27 mg/L	9.16 NTU	-59.2 mV	42.40 ft	200.00 ml/min
1/20/2021 1:01 PM	20:00	6.99 pH	18.37 °C	849.44 µS/cm	0.24 mg/L	7.90 NTU	-56.0 mV	42.45 ft	200.00 ml/min
1/20/2021 1:06 PM	25:00	6.98 pH	18.37 °C	847.78 µS/cm	0.23 mg/L	7.08 NTU	-56.9 mV	42.50 ft	200.00 ml/min
1/20/2021 1:11 PM	30:00	6.99 pH	18.24 °C	846.28 µS/cm	0.21 mg/L	4.77 NTU	-59.1 mV	42.55 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-126	Grab

March 2021

PLANT HAMMOND SURFACE WATER SAMPLES 3/8/2021

Sample ID	Time	Temp(F)	pH	OPR (mV)	DO (mg/L)	Turbidity (NTU)	Conductance – (mS/cm)	Coordinates
AP2 UP	17:35	59.4	7.33	187.2	7.16	3.56	0.151	34.252514, -85.353819
AP2 MID	17:10	60.9	7.45	195.2	8.63	3.83	0.181	34.251308, -85.354964
AP2 DOWN	14:10	60.2	7.44	92.3	11.39	5.22	0.152	34.249366, -85.354189
H+0.75	14:00	52.1	6.99	200.1	11.52	10.6	0.124	34.248444, -85.356433
H+0.25	14:25	52.6	7.26	216.1	11.30	9.87	0.151	34.249017, -85.350336
H+0.35	14:20	52.5	7.16	198.1	11.49	11.0	0.138	34.249103, -85.351854
H-SCC NBR	17:50	55.7	7.48	181.5	10.11	10.3	0.112	34.261192, -85.336247
H-SCC E41	16:30	52.8	7.11	100.7	11.33	9.64	0.113	34.258522, -85.335786
H-SCC	15:30	53.4	7.24	231.6	11.45	11.8	0.124	34.251869, -85.338019
H-0.5	15:25	52.4	7.45	271.8	11.34	10.4	0.122	34.250369, -85.338825
H-2	16:00	52.4	7.45	271.8	11.34	10.4	0.122	34.237122, -85.335089
DOWN	14:35	52.3	7.33	230.2	11.23	11.8	0.123	34.249394, -85.346839
UP	15:00	52.4	7.41	240	11.35	10.4	0.124	34.250319, -85.3403

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 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
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium

Weather Conditions:

Sunny

Low wind

50 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/10/2021 3:42 PM	00:00	6.98 pH	17.27 °C	604.28 µS/cm	0.27 mg/L	2.98 NTU	14.4 mV	11.82 ft	200.00 ml/min
3/10/2021 3:47 PM	05:00	6.97 pH	17.21 °C	600.58 µS/cm	0.24 mg/L	2.44 NTU	0.8 mV	11.84 ft	200.00 ml/min
3/10/2021 3:52 PM	10:00	6.96 pH	17.19 °C	600.84 µS/cm	0.24 mg/L	1.52 NTU	-3.3 mV	11.86 ft	200.00 ml/min
3/10/2021 3:57 PM	15:00	6.96 pH	17.23 °C	599.63 µS/cm	0.22 mg/L	1.49 NTU	-7.0 mV	11.86 ft	200.00 ml/min
3/10/2021 4:02 PM	20:00	6.95 pH	17.31 °C	598.41 µS/cm	0.21 mg/L	1.40 NTU	3.4 mV	11.86 ft	200.00 ml/min
3/10/2021 4:07 PM	25:00	6.95 pH	17.29 °C	598.87 µS/cm	0.20 mg/L	1.35 NTU	-9.3 mV	11.86 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-1	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/11/2021 9:07:23 AM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: HGWA-2 Well Diameter: 2 in 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: 0.10 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium

Weather Conditions:

Sunny

55 deg F

No wind

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/11/2021 9:07 AM	00:00	5.93 pH	16.04 °C	330.25 µS/cm	1.23 mg/L	11.40 NTU	83.5 mV	7.21 ft	200.00 ml/min
3/11/2021 9:12 AM	05:00	5.89 pH	16.20 °C	317.44 µS/cm	1.09 mg/L	11.00 NTU	108.3 mV	7.25 ft	200.00 ml/min
3/11/2021 9:17 AM	10:00	5.87 pH	16.23 °C	310.57 µS/cm	1.08 mg/L	7.97 NTU	87.1 mV	7.25 ft	200.00 ml/min
3/11/2021 9:22 AM	15:00	5.85 pH	16.32 °C	306.71 µS/cm	1.09 mg/L	6.85 NTU	89.0 mV	7.23 ft	200.00 ml/min
3/11/2021 9:27 AM	20:00	5.85 pH	16.32 °C	305.68 µS/cm	1.08 mg/L	6.18 NTU	115.2 mV	7.25 ft	200.00 ml/min
3/11/2021 9:32 AM	25:00	5.84 pH	16.33 °C	301.10 µS/cm	1.05 mg/L	5.43 NTU	89.7 mV	7.21 ft	200.00 ml/min
3/11/2021 9:37 AM	30:00	5.80 pH	16.35 °C	288.98 µS/cm	1.03 mg/L	5.09 NTU	91.2 mV	7.25 ft	200.00 ml/min
3/11/2021 9:42 AM	35:00	5.81 pH	16.43 °C	291.38 µS/cm	0.97 mg/L	4.69 NTU	90.1 mV	7.25 ft	200.00 ml/min
3/11/2021 9:47 AM	40:00	5.81 pH	16.47 °C	294.20 µS/cm	0.93 mg/L	4.21 NTU	117.5 mV	7.21 ft	200.00 ml/min
3/11/2021 9:52 AM	45:00	5.79 pH	16.48 °C	288.27 µS/cm	0.98 mg/L	4.15 NTU	120.2 mV	7.21 ft	200.00 ml/min
3/11/2021 9:57 AM	50:00	5.80 pH	16.47 °C	288.45 µS/cm	0.98 mg/L	4.00 NTU	88.6 mV	7.21 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-2	Grab Sample.

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
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Test Notes:

Prepurged 15 min at 200 ml/min

Five bottles: Metals, TDS, Inorganics, Radium

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: 3/11/2021 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 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
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Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium, total depth = 61.85

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	13.75 ft	200.00 ml/min
3/11/2021 9:42 AM	40:00	7.46 pH	16.22 °C	485.88 µS/cm	0.10 mg/L	4.38 NTU	-85.0 mV	13.13 ft	200.00 ml/min
3/11/2021 9:47 AM	45:00	7.46 pH	16.21 °C	479.85 µS/cm	0.10 mg/L	2.45 NTU	-81.0 mV	13.07 ft	200.00 ml/min
3/11/2021 9:52 AM	50:00	7.46 pH	16.22 °C	475.91 µS/cm	0.10 mg/L	4.58 NTU	-77.8 mV	12.92 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-43D	Grab Sample.

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 3/10/2021 1:57:00 PM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: HGWA-44D Well Diameter: 2 in 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
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium

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: 3/12/2021 11:39:53 AM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: HGWA-45D Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 52.87 ft Total Depth: 62.87 ft Initial Depth to Water: 7.15 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 58 ft Estimated Total Volume Pumped: 7 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.87 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium

Weather Conditions:

Cloudy

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 11:39 AM	00:00	7.60 pH	17.56 °C	542.36 µS/cm	0.39 mg/L	0.98 NTU	-150.1 mV	7.92 ft	200.00 ml/min
3/12/2021 11:44 AM	05:00	7.60 pH	17.72 °C	540.43 µS/cm	0.33 mg/L	7.28 NTU	-172.2 mV	7.96 ft	200.00 ml/min
3/12/2021 11:49 AM	10:00	7.60 pH	17.81 °C	529.77 µS/cm	0.37 mg/L	5.00 NTU	-167.7 mV	7.97 ft	200.00 ml/min
3/12/2021 11:54 AM	15:00	7.55 pH	18.26 °C	518.93 µS/cm	0.35 mg/L	3.78 NTU	-158.7 mV	8.02 ft	200.00 ml/min
3/12/2021 11:59 AM	20:00	7.54 pH	18.31 °C	516.14 µS/cm	0.33 mg/L	3.46 NTU	-136.3 mV	8.02 ft	200.00 ml/min
3/12/2021 12:04 PM	25:00	7.52 pH	17.99 °C	511.94 µS/cm	0.34 mg/L	2.56 NTU	-133.5 mV	8.02 ft	200.00 ml/min

Samples

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

Low-Flow Test Report:

Test Date / Time: 3/12/2021 3:55:19 PM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: HGWC-120 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 57.55 ft Total Depth: 67.55 ft Initial Depth to Water: 40.4 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 63 ft Estimated Total Volume Pumped: 6 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
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium

Weather Conditions:

Sunny

75 deg F

Slight 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 3:55 PM	00:00	7.08 pH	19.22 °C	984.39 µS/cm	0.63 mg/L	0.82 NTU	-137.1 mV	40.41 ft	200.00 ml/min
3/12/2021 4:00 PM	05:00	7.01 pH	19.05 °C	987.50 µS/cm	0.51 mg/L	0.78 NTU	-115.8 mV	40.41 ft	200.00 ml/min
3/12/2021 4:05 PM	10:00	6.98 pH	18.95 °C	987.25 µS/cm	0.54 mg/L	0.58 NTU	-104.1 mV	40.41 ft	200.00 ml/min
3/12/2021 4:10 PM	15:00	6.97 pH	18.85 °C	987.12 µS/cm	0.52 mg/L	0.67 NTU	-94.8 mV	40.41 ft	200.00 ml/min
3/12/2021 4:15 PM	20:00	6.98 pH	18.92 °C	976.60 µS/cm	0.50 mg/L	0.55 NTU	-121.7 mV	40.41 ft	200.00 ml/min
3/12/2021 4:20 PM	25:00	6.95 pH	18.84 °C	987.96 µS/cm	0.51 mg/L	0.59 NTU	-116.7 mV	40.41 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-120	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/15/2021 2:09:53 PM

Project: GP-Plant Hammond

Operator Name: Chad Russo

Location Name: HGWC-121A Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 28.16 ft Total Depth: 38.16 ft Initial Depth to Water: 17.87 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 33 ft Estimated Total Volume Pumped: 6.16 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/15/2021 2:09 PM	00:00	7.06 pH	17.95 °C	858.10 µS/cm	4.28 mg/L	--	100.5 mV	17.87 ft	200.00 ml/min
3/15/2021 2:14 PM	05:00	6.88 pH	18.17 °C	967.68 µS/cm	1.19 mg/L	5.85 NTU	68.9 mV	17.90 ft	200.00 ml/min
3/15/2021 2:19 PM	10:00	6.87 pH	18.19 °C	976.04 µS/cm	0.91 mg/L	4.65 NTU	74.2 mV	17.90 ft	200.00 ml/min
3/15/2021 2:24 PM	15:00	6.86 pH	18.19 °C	981.75 µS/cm	0.77 mg/L	2.97 NTU	68.8 mV	17.90 ft	200.00 ml/min
3/15/2021 2:29 PM	20:00	6.87 pH	18.17 °C	986.84 µS/cm	0.62 mg/L	2.40 NTU	62.6 mV	17.90 ft	200.00 ml/min
3/15/2021 2:30 PM	20:48	6.87 pH	18.18 °C	998.81 µS/cm	0.60 mg/L	--	55.3 mV	17.90 ft	200.00 ml/min
3/15/2021 2:35 PM	25:48	6.87 pH	18.21 °C	989.75 µS/cm	0.52 mg/L	1.32 NTU	52.2 mV	17.90 ft	200.00 ml/min
3/15/2021 2:40 PM	30:48	6.87 pH	18.26 °C	992.75 µS/cm	0.46 mg/L	1.32 NTU	46.2 mV	17.90 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-121A	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/11/2021 11:58:47 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWA-122 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 18.52 ft Total Depth: 27.8 ft Initial Depth to Water: 8.1 ft	Pump Type: Bladder Tubing Type: polyethylene Pump Intake From TOC: 23.52 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: 728566
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Cloudy, 50 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/11/2021 11:58 AM	00:00	6.81 pH	18.43 °C	365.71 µS/cm	4.81 mg/L	1.21 NTU	36.4 mV	8.10 ft	200.00 ml/min
3/11/2021 12:03 PM	05:00	6.70 pH	16.74 °C	335.50 µS/cm	3.61 mg/L	4.55 NTU	46.8 mV	8.10 ft	200.00 ml/min
3/11/2021 12:08 PM	10:00	6.67 pH	17.01 °C	337.59 µS/cm	3.37 mg/L	5.15 NTU	56.3 mV	8.10 ft	200.00 ml/min
3/11/2021 12:13 PM	15:00	6.66 pH	17.07 °C	335.44 µS/cm	3.30 mg/L	3.62 NTU	50.3 mV	8.10 ft	200.00 ml/min
3/11/2021 12:18 PM	20:00	6.66 pH	17.09 °C	335.16 µS/cm	3.17 mg/L	2.91 NTU	51.1 mV	8.10 ft	200.00 ml/min
3/11/2021 12:23 PM	25:00	6.65 pH	17.29 °C	333.11 µS/cm	3.16 mg/L	2.65 NTU	52.1 mV	8.10 ft	200.00 ml/min
3/11/2021 12:28 PM	30:00	6.65 pH	17.28 °C	334.96 µS/cm	3.11 mg/L	2.38 NTU	52.6 mV	8.10 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-122	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/15/2021 9:45:36 AM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: HGWC-124 Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 25.52 ft Total Depth: 35.52 ft Initial Depth to Water: 14.85 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 25 ft Estimated Total Volume Pumped: 2.5 Liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.35 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium

Weather Conditions:

Cloudy

60 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	
3/15/2021 9:45 AM	00:00	7.23 pH	16.93 °C	558.60 µS/cm	1.08 mg/L	6.48 NTU	22.9 mV	15.20 ft	100.00 ml/min
3/15/2021 9:50 AM	05:00	7.23 pH	16.99 °C	555.80 µS/cm	0.93 mg/L	5.36 NTU	16.6 mV	15.20 ft	100.00 ml/min
3/15/2021 9:55 AM	10:00	7.23 pH	17.09 °C	555.67 µS/cm	0.88 mg/L	4.67 NTU	23.1 mV	15.20 ft	100.00 ml/min
3/15/2021 10:00 AM	15:00	7.22 pH	17.10 °C	555.99 µS/cm	0.82 mg/L	2.92 NTU	21.7 mV	15.20 ft	100.00 ml/min
3/15/2021 10:05 AM	20:00	7.22 pH	17.12 °C	555.59 µS/cm	0.77 mg/L	2.60 NTU	19.2 mV	15.20 ft	100.00 ml/min
3/15/2021 10:10 AM	25:00	7.22 pH	17.11 °C	556.41 µS/cm	0.78 mg/L	2.14 NTU	21.3 mV	15.20 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWC-124	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/12/2021 2:23:27 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWC-125 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 58.19 ft Total Depth: 64.70 ft Initial Depth to Water: 43.92 ft	Pump Type: Bladder Tubing Type: polyethylene Pump Intake From TOC: 58.19 ft Estimated Total Volume Pumped: 9 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Sunny, 75 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/12/2021 2:23 PM	00:00	6.13 pH	23.88 °C	887.98 µS/cm	3.78 mg/L	48.60 NTU	-17.7 mV	43.92 ft	200.00 ml/min
3/12/2021 2:28 PM	05:00	6.16 pH	19.41 °C	936.63 µS/cm	2.12 mg/L	25.40 NTU	10.2 mV	43.92 ft	200.00 ml/min
3/12/2021 2:33 PM	10:00	6.18 pH	19.24 °C	957.87 µS/cm	1.70 mg/L	13.60 NTU	15.3 mV	43.92 ft	200.00 ml/min
3/12/2021 2:38 PM	15:00	6.17 pH	18.99 °C	960.26 µS/cm	1.51 mg/L	8.37 NTU	21.4 mV	43.92 ft	200.00 ml/min
3/12/2021 2:43 PM	20:00	6.18 pH	18.96 °C	961.67 µS/cm	1.36 mg/L	7.19 NTU	22.7 mV	43.92 ft	200.00 ml/min
3/12/2021 2:48 PM	25:00	6.18 pH	18.92 °C	963.58 µS/cm	1.23 mg/L	5.95 NTU	26.8 mV	43.92 ft	200.00 ml/min
3/12/2021 2:53 PM	30:00	6.17 pH	18.88 °C	962.87 µS/cm	1.10 mg/L	5.23 NTU	27.2 mV	43.92 ft	200.00 ml/min
3/12/2021 2:58 PM	35:00	6.17 pH	18.88 °C	963.53 µS/cm	0.96 mg/L	4.53 NTU	25.9 mV	43.92 ft	200.00 ml/min
3/12/2021 3:03 PM	40:00	6.18 pH	18.86 °C	966.04 µS/cm	0.84 mg/L	2.90 NTU	33.3 mV	43.92 ft	200.00 ml/min
3/12/2021 3:08 PM	45:00	6.18 pH	18.80 °C	967.94 µS/cm	0.77 mg/L	2.81 NTU	35.0 mV	43.92 ft	200.00 ml/min

Samples

Sample ID:	Description:
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HGWC-125

Grab Sample.

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 3/12/2021 4:06:18 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWC-126 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 58.52 ft Total Depth: 68.52 ft Initial Depth to Water: 40.59 ft	Pump Type: Bladder Tubing Type: polyethylene Pump Intake From TOC: 53.58 ft Estimated Total Volume Pumped: 6 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 1.61 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium

Weather Conditions:

Sunny, 75 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/12/2021 4:06 PM	00:00	--	23.20 °C	794.54 µS/cm	2.14 mg/L	22.70 NTU	--	40.59 ft	200.00 ml/min
3/12/2021 4:10 PM	03:55	--	19.49 °C	854.27 µS/cm	0.73 mg/L	--	--	40.59 ft	200.00 ml/min
3/12/2021 4:10 PM	04:36	--	19.25 °C	858.99 µS/cm	0.76 mg/L	--	--	40.59 ft	200.00 ml/min
3/12/2021 4:16 PM	09:54	7.22 pH	19.87 °C	874.87 µS/cm	2.85 mg/L	27.10 NTU	-99.8 mV	40.59 ft	200.00 ml/min
3/12/2021 4:21 PM	14:54	7.04 pH	18.88 °C	866.03 µS/cm	0.19 mg/L	24.40 NTU	-87.8 mV	41.47 ft	200.00 ml/min
3/12/2021 4:26 PM	19:54	7.05 pH	18.79 °C	864.06 µS/cm	0.13 mg/L	16.60 NTU	-107.5 mV	41.70 ft	200.00 ml/min
3/12/2021 4:31 PM	24:54	7.04 pH	18.71 °C	864.51 µS/cm	0.11 mg/L	11.99 NTU	-89.7 mV	41.85 ft	200.00 ml/min
3/12/2021 4:36 PM	29:54	7.05 pH	18.70 °C	864.78 µS/cm	0.09 mg/L	6.79 NTU	-90.2 mV	42.00 ft	200.00 ml/min
3/12/2021 4:41 PM	34:54	7.05 pH	18.70 °C	864.97 µS/cm	0.08 mg/L	6.76 NTU	-89.8 mV	42.10 ft	200.00 ml/min
3/12/2021 4:46 PM	39:54	7.05 pH	18.70 °C	864.36 µS/cm	0.08 mg/L	4.92 NTU	-90.1 mV	42.20 ft	200.00 ml/min

Samples

Sample ID:	Description:
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HGWC-126

Grab Sample.

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 3/15/2021 9:29:01 AM

Project: GP-Plant Hammond

Operator Name: Chad Russo

Location Name: MW-32 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 26.55 ft Total Depth: 36.55 ft Initial Depth to Water: 20.31 ft	Pump Type: Peri Tubing Type: Polyethylene Pump Intake From TOC: 31 ft Estimated Total Volume Pumped: 3 Liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/15/2021 9:29 AM	00:00	6.89 pH	17.55 °C	935.44 µS/cm	0.38 mg/L	--	64.4 mV	20.31 ft	100.00 ml/min
3/15/2021 9:34 AM	05:00	6.93 pH	17.56 °C	931.95 µS/cm	0.30 mg/L	0.69 NTU	66.4 mV	20.33 ft	100.00 ml/min
3/15/2021 9:39 AM	10:00	6.94 pH	17.59 °C	929.20 µS/cm	0.27 mg/L	0.73 NTU	55.7 mV	20.33 ft	100.00 ml/min
3/15/2021 9:44 AM	15:00	6.95 pH	17.64 °C	928.08 µS/cm	0.24 mg/L	0.84 NTU	61.1 mV	20.33 ft	100.00 ml/min
3/15/2021 9:49 AM	20:00	6.95 pH	17.72 °C	929.18 µS/cm	0.23 mg/L	0.91 NTU	52.8 mV	20.33 ft	100.00 ml/min
3/15/2021 9:54 AM	25:00	6.95 pH	17.80 °C	923.85 µS/cm	0.23 mg/L	0.73 NTU	51.5 mV	20.33 ft	100.00 ml/min
3/15/2021 9:59 AM	30:00	6.95 pH	17.85 °C	925.04 µS/cm	0.22 mg/L	0.40 NTU	57.2 mV	20.33 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW-32	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/15/2021 11:20:14 AM

Project: GP-Plant Hammond

Operator Name: Chad Russo

Location Name: MW-39 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 13 ft Total Depth: 23 ft Initial Depth to Water: 15.31 ft	Pump Type: Peri Tubing Type: Polyethylene Pump Intake From TOC: 20 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: 728550
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Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/15/2021 11:20 AM	00:00	7.05 pH	17.95 °C	938.14 µS/cm	0.31 mg/L	--	59.0 mV	15.31 ft	200.00 ml/min
3/15/2021 11:25 AM	05:00	7.05 pH	17.51 °C	939.90 µS/cm	0.20 mg/L	1.83 NTU	47.6 mV	15.36 ft	200.00 ml/min
3/15/2021 11:30 AM	10:00	7.04 pH	17.57 °C	937.59 µS/cm	0.16 mg/L	2.01 NTU	45.8 mV	15.36 ft	200.00 ml/min
3/15/2021 11:35 AM	15:00	7.03 pH	17.90 °C	934.71 µS/cm	0.14 mg/L	1.99 NTU	47.1 mV	15.36 ft	200.00 ml/min
3/15/2021 11:40 AM	20:00	7.04 pH	18.08 °C	931.62 µS/cm	0.13 mg/L	2.76 NTU	44.8 mV	15.36 ft	200.00 ml/min
3/15/2021 11:45 AM	25:00	7.04 pH	18.11 °C	932.00 µS/cm	0.12 mg/L	1.34 NTU	45.7 mV	15.36 ft	200.00 ml/min
3/15/2021 11:50 AM	30:00	7.04 pH	18.04 °C	932.02 µS/cm	0.12 mg/L	1.11 NTU	44.6 mV	15.36 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-39	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/15/2021 12:38:58 PM

Project: GP-Plant Hammond

Operator Name: Chad Russo

Location Name: MW-41 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 14.38 ft Total Depth: 24.38 ft Initial Depth to Water: 12.34 ft	Pump Type: Peri Tubing Type: Polyethylene Pump Intake From TOC: 19 ft Estimated Total Volume Pumped: 6 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.04 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/15/2021 12:38 PM	00:00	7.29 pH	20.84 °C	868.94 µS/cm	5.69 mg/L	--	68.8 mV	12.34 ft	200.00 ml/min
3/15/2021 12:43 PM	05:00	7.09 pH	17.23 °C	907.51 µS/cm	0.30 mg/L	4.23 NTU	57.3 mV	12.38 ft	200.00 ml/min
3/15/2021 12:48 PM	10:00	7.07 pH	16.99 °C	909.62 µS/cm	0.20 mg/L	2.29 NTU	58.4 mV	12.38 ft	200.00 ml/min
3/15/2021 12:53 PM	15:00	7.07 pH	16.97 °C	910.58 µS/cm	0.17 mg/L	2.08 NTU	49.8 mV	12.38 ft	200.00 ml/min
3/15/2021 12:58 PM	20:00	7.07 pH	17.06 °C	912.56 µS/cm	0.14 mg/L	2.36 NTU	52.3 mV	12.38 ft	200.00 ml/min
3/15/2021 1:03 PM	25:00	7.06 pH	17.19 °C	912.52 µS/cm	0.13 mg/L	3.27 NTU	51.8 mV	12.38 ft	200.00 ml/min
3/15/2021 1:08 PM	30:00	7.06 pH	17.21 °C	909.36 µS/cm	0.13 mg/L	1.59 NTU	51.8 mV	12.38 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-41	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/12/2021 2:21:22 PM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: MW-46D Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 92.05 ft Total Depth: 102.05 ft Initial Depth to Water: 39.9 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 97 ft Estimated Total Volume Pumped: 7 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 2.55 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium

Weather Conditions:

Sunny

75 deg F

Slightly windy

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 2:21 PM	00:00	7.79 pH	19.38 °C	924.46 µS/cm	0.58 mg/L	1.03 NTU	-275.6 mV	41.75 ft	200.00 ml/min
3/12/2021 2:26 PM	05:00	7.74 pH	19.33 °C	948.07 µS/cm	0.41 mg/L	1.04 NTU	-286.2 mV	41.99 ft	200.00 ml/min
3/12/2021 2:31 PM	10:00	7.76 pH	19.19 °C	925.48 µS/cm	0.40 mg/L	0.75 NTU	-294.3 mV	42.35 ft	200.00 ml/min
3/12/2021 2:36 PM	15:00	7.76 pH	19.18 °C	932.69 µS/cm	0.41 mg/L	0.95 NTU	-301.6 mV	42.40 ft	200.00 ml/min
3/12/2021 2:41 PM	20:00	7.74 pH	19.24 °C	939.00 µS/cm	0.38 mg/L	0.78 NTU	-301.6 mV	42.40 ft	200.00 ml/min
3/12/2021 2:46 PM	25:00	7.70 pH	19.15 °C	927.29 µS/cm	0.27 mg/L	0.83 NTU	-305.5 mV	42.45 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-46D	Grab Sample.
DUP-3	Grab Sample.

CALIBRATION REPORTS

August 2020

EQUIPMENT CALIBRATION LOG

Field Location: A. Reeder Date: 08/24/2020 Time (start): 1437 Time (finish): 1520
 smartTroll SN: 597519 Turbidity Meter Type: Lemotte 2020V2 SM: 2279
 Weather Conditions: Partly cloudy 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)	20010025	29.3	4490	4383	4490	± 5%	Yes No	
pH (4)	08/2021		4.00	4.42	4.00	± 0.1 SU	Yes No	
pH (7)	08/2021 19340057	29.0	7.00	7.50	7.00	± 0.1 SU	Yes No	
pH (10)	08/2021 19320102	28.2	10.00	10.35	10.00	± 0.1 SU	Yes No	
ORP (mV)	08/2021 19460167	28.3	+228	193	+228	± 20mV	Yes No	
DO (%) (1pt, 100% water saturated air sat)			100%	93.6	100	± 0% saturation	Yes No	
Turbidity 0 NTU			0	0.03	0.00	± 0.5 NTU	Yes No	
Turbidity 1 NTU			1	0.94	1.00	± 0.5 NTU	Yes No	
Turbidity 10 NTU			10	7.39	10.00	± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: A. Reeder

Date: 08/25/2020

Time (Start): 0715

Time (Finish): 0745

Smartroll No.: 597519

Turbidity Meter Type: Lamotte 2020v2

SN: 2279

Weather Conditions: Cloudy

Facility and Line: 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)	20010025 08/2021	25.7	4490	4451	4490	± 5%	Yes No	
pH (4)		25.6	4.00	4.53	4.00	± 0.1 M	Yes No	
pH (7)	08/2021 19340057	25.8	7.00	7.54	7.00	± 0.1 M	Yes No	
pH (10)	08/2021 19320102	26.0	10.00	10.42	10.00	± 0.1 M	Yes No	
ORP (mV)	08/2021 19460167	26.1	+ 228	190.8	228.0	± 20mV	Yes No	
DO (%) (11 pt, 100% water saturated air cal)			100 %	95.4	100%	± 0.5% saturation	Yes No	
Turbidity 0 NTU			0	0	0	± 0.5 NTU	Yes No	
Turbidity 1 NTU			1	1.65	1.00	± 0.5 NTU	Yes No	
Turbidity 10 NTU			10	9.64	10.00	± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician Thomas Kessler Date: 8/25/20 Time (start) 7:30 Time (finish) 0815
 SmartTag# SN 643819 Turbidity Meter Type LaMotte 2020a SN: 2009-1916
 Weather Conditions 75°F, overcast Facility and Use 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)	20018025 6/22/21	24.4	4.49 4490 µS/cm	4444	4444	-1.5%	Yes No	
pH (4)			4.00	4.35	4.0	±0.1 SU	Yes No	
pH (7)	192410057 8/20/21	24.8	7.00	7.29	7.0	±0.1 SU	Yes No	
pH (10)	14320102 8/21	24.7	10.00	10.14	10.21	±0.1 SU	Yes No	
ORP (mV)	19464967 8/21	24.9	+228mV	209.6	209.4	±20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100%	96.2	96.8	±0.5% saturation	Yes No	
Turbidity 0 NTU			0	-.03/0	0	±0.5 NTU	Yes No	
Turbidity 1 NTU			1	.67	1	±0.5 NTU	Yes No	
Turbidity 10 NTU			10	10.00	10	±0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician Aaron Rieder

Date: 8-26-2020

Instrument 0810

Time (finish) 0900

Serial/Troll/SN 597519

Turbidity Meter Type: Lamotte 2020v2
2279

SN: 2279

Weather Conditions Cloudy

Facility and Location 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)	20010025 08/21	24.2	4490	4398	4490	± 5%	Yes No	
pH (4)			4.0	4.56	4.0	± 0.1 SD	Yes No	
pH (7)	08/2021 19340057	24.3	7.0	7.53	7.0	± 0.1 SD	Yes No	
pH (10)	08/2021 19320102	24.4	10.0	10.37	10.0	± 0.1 SD	Yes No	
ORP (mV)	08/2021 19460167	24.6	+228	215	228	± 20mV	Yes No	
DO (%) (1 pt. 100% water saturated air cal)			100%	94.6%	100%	± 5% saturation	Yes No	
Turbidity 0 NTU			0	0	0	± 0.5 NTU	Yes No	
Turbidity 1 NTU			1	1.25	1.0	± 0.5 NTU	Yes No	
Turbidity 10 NTU			10	9.58	10.00	± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler Date: 8/26/20 Time (start): 11:15 Time (finish): 11:50
 Smart Trail SN: 643819 Turbidity Meter Type: La Motte SN: 2009-1916
 Weather Conditions: overcast, 80°F Facility and Unit: Hammond Project No.: GW0581

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)	200210025	25.2	4490	440	4490	±0.5%	<input checked="" type="radio"/> No	
pH (4)	08/2021		4.00	4.40	4.40 4.39	±0.1 NG	<input checked="" type="radio"/> No	
pH (7)	19340097 19340057 8/21	25.8	7.0	7.29	7.30	±0.1 NG	<input checked="" type="radio"/> No	
pH (10)	19320102 8/21	26.0	10.00	10.19	10.26	±0.1 NG	<input checked="" type="radio"/> No	
ORP (mV)	19460167	26.1	+228	201.2	203.7	±20mV	<input checked="" type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	97.5	98.2	±0.6% saturation	<input checked="" type="radio"/> No	
Turbidity 0 NTU			0	0.47	0.33	±0.5 NTU	<input checked="" type="radio"/> No	
Turbidity 1 NTU			1	3.33	0.78	±0.5 NTU	<input checked="" type="radio"/> No	
Turbidity 10 NTU			10	9.39	10.25	±0.5 NTU	<input checked="" type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician Thomas Kessler

Date: 8/27/2020

Time (start): 8:12

Time (finish): 0900

Serial/Trill SN 597519

Turbidity Meter Type LaMotte 2020we

SN 2279

Weather Conditions clear, 80°F

Facility and Unit Hammond

Project No.: GWGS81

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 8/21	24.1	4490	4447	4418	± 5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	8/21		4.0	4.60	4.60 4.0	± 0.1 SD	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	14340057 8/21	24.8	7.0	7.52	7.52 7.0	± 0.1 SD	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	14320102 8/21	25.1	10.0	10.35	10.44 10.0	± 0.1 SD	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	14460167 8/21	25.1	228	148.8	189.2	± 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	83.4	100.1	± 6% standard	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0	0	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1	1.81	1.31	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			0	7.78	10	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 8/27/2020

Time (Start): 0830

Time (Finish): 0845

Standard Lot SN: 43819

Turbidity Meter Type: LAMotte 2020uc

SN: 2009-1416

Weather Conditions: 75° Sunny

Facility and Unit: Hammond

Project No.: GW6581

Calibration log

	Standard Lot #/ Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	26070025 8/2020	25.8	4440	4413	4404	± 5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4	4.34	4	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	19340057 8/2021	25.9	7	7.27	7	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	11320102 8/2021	26.1	10	10.2	10	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 8/2021	26.1	228	201.6	228	± 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	93.1	95.6	± 6% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.5	0.5	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1	1.41	1.41	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10	10.43	10.43	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

September 2020

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler Date: 9/14/20 Time (start): 1106 Location: 1244
 smarTroll SN: 646773 Tablets Make/Type: Le Motte 2020we SN: 7009
 Weather Conditions: Sunny Facility and Use: Hammond GW Project No.: 6206581

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	26°	4490	4369	4351 4460	- ± 5%	Yes No	
pH (4)			4.00	4.61	4.51 4.40	- ± 0.1 SE	Yes No	
pH (7)	14340057 08/21	27.5	7.00	7.59	7.00	- ± 0.1 SE	Yes No	
pH (10)	14320162 08/21	26.9	10.00	10.42	10.00	- ± 0.1 SE	Yes No	
ORP (mV)	19460167 8/20/21	27.1	228	142.8	228	- ± 5mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100% 47.8%	97.8%	100%	- ± 6% saturation	Yes No	
Turbidity 0 NTU			0	0	0	- ± 1.5 NTU	Yes No	
Turbidity 1 NTU			1	1.49	1.49	- ± 0.5 NTU	Yes No	
Turbidity 10 NTU			10	10.33	10.33	- ± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician Thomas Hessler Date: 9/15/20 Tool ID: 0855 Worksheet: C930
 Instrument ID: 646973 Turbidity Meter Type: Lammette 202002 SN: 7009
 Weather Conditions: Overcast 78° Field Location: Hammond Project: 610688

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)	26615025 08/21	23.6°	4490	4371	4490	-- ±1%	Yes No	
pH (4)			4.00	4.83	4.00	-- ±0.15U	Yes No	
pH (7)	143410057 08/21	24.5°	7.00	7.71	7.00	-- ±0.25U	Yes No	
pH (10)	143701002 08/21	24.7°	10.00	10.52	10.00	-- ±0.15U	Yes No	
ORP (mV)	1440167 08/21	24.5	222	228 190.8	228	-- ±2mV	Yes No	
DO (%) (1 pt. 30% water saturated air sat)			100%	100.5	100%	-- ±0.5% saturated	Yes No	
Turbidity @NTU			0	0	0	-- ±0.5NTU	Yes No	
Turbidity 1NTU			1	0.0	1	-- ±0.15NTU	Yes No	
Turbidity 10NTU			10	9.63	9.68	-- ±0.5NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technicians Thomas Kessler

Date 9/16/20

Time (start) 0700

Time (end) 0800

SmartTroll SV 646773

Turbidity Meter Type Lemna H 2020

SV 9009

Weather Conditions cloudy, cool

Facility and Use Hammond

Project No: 6206881

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)	200010025 08/21	20.9	4490	4434	4400	-±.5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.0	4.84	4.00	-±.15%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	14340057 08/21	21.3	7.0	7.66	7.00	-±.15%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	14320102 08/21	21.5	10.0	10.44	10.00	-±.15%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	14160167 08/20 08/21	21.4	+228	196	+228	-±.25mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (2 pt. 100% water saturated air cal)			100%	94.9	100%	-±.5% 98.7-100.0	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity @ NTU			0	.07	.07	-±.65 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1	1.66	.62	-±.65 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10	9.07	10	-±.65 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician T. Williams

Date: 9/18/20

Time on: 0719

Time off: 0800

SmartTroll SN: 646775

Turbidity Meter Type: Limetech 2020

SN: 7000

Weather/Conditions: Sunny 70°

Facility and Use: Hummer

Project No.: 110638

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)	2000025	22.0	4490	4386	4490	± 5%	Yes No	
pH (4)	08/21		4.0	4.80	4.0	± 0.15	Yes No	
pH (7)	14340057	22.3	7.00	7.63	7.00	± 0.15	Yes No	
pH (9)	19370002	22.4	10.00	10.44	10.00	± 0.15	Yes No	
ORP (mV)	144667	22.5	228	193.4	228	± 2%	Yes No	
DO (%) (µL 100% water saturated air cal)			100	96.1	100	± 0.5 ± 0.2%	Yes No	
Turbidity 1 NTU			0	0	0	± 0.5 NTU	Yes No	
Turbidity 5 NTU			1	0.56	0.98	± 0.5 NTU	Yes No	
Turbidity 10 NTU			10	15.00	10	± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 9-21-20

Time: 0800

Time (Clock): 0825

SmartTroll SN: 646773

Calibration Year Type: Annual 2020

SN: 7009

Weather Conditions: Sunny, 55°

Factory and Lot: 17022000000000000000

Project No.: 6106509

Calibration log

	Standard Lot # / Batch # / Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	13.8	4440	4491	4490	-0.5%	Yes	
µB (H)	08/21		4.0	4.9	4.0	-0.1SL	Yes	No
pH (1)	1932053	15.4	7.0	7.01	7.0	-0.1SL	Yes	No
µB (H)	08/21		10.00	10.35	10.0	-0.1SL	Yes	No
ORP (mV)	194100167	15.0	228	205.7	228	-0.0%	Yes	No
µB (H)	08/21		100%	92.8	100%	-0.5% saturation	Yes	No
Turbidity: NTU			0	1.42	0.00	-0.5NTU	Yes	No
Turbidity: INTU			1	.61	0.85	-0.5NTU	Yes	No
Turbidity: 15NTU			10	10.25	10.00	-0.5NTU	Yes	No

EQUIPMENT CALIBRATION LOG

Field Technician Thomas Kessler

Date 9/25/20

Time Start 0900

Time Finish 0930

SmartTroll SN 646775

Conductivity Meter Type Leutette 2020

SN 7009

Weather Conditions Partly, 68°

Factory and Lot hammond

Project No. 646581

Calibration log

	Standard Cat # / 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	16.9	4440	4304	4492 4490	-±5%	Yes No	
pH (H)			7.0	4.92	4.0	-±0.150	Yes No	
pH (I)	19340291 05/21	19.2	7.0	7.59	7.0	-±0.150	Yes No	
pH (E)	19320102 08/21	19.4	10.00	10.39	10.00	-±0.150	Yes No	
ORP (mV)	194160187 03/21	19.7	228	147.0	228 228	-±2.00	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	93.1	100	-±5% saturation	Yes No	
Turbidity (NTU)			0	0.42	0	-±0.5 NTU	Yes No	
Turbidity (NTU)			1	0.42	1.04	-±0.5 NTU	Yes No	
Turbidity (NTU)			10	4.82	10.37	-±0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: James Kessler Date: 4/28/20 Time: 08:30 Time of Day: 08:30
 Station: 6416775 Station Name: Station 2030a ID: 7009
 Weather: Sunny 68° Facility: hammer Project No: 60658

Calibration log

	Standard Code / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	22.1	4490	4498	4490	±0.5%	Yes	
pH (4)	08121		7.00	4.87	4.90	±0.15%	Yes	
pH (7)	19340054 08121	22.3	7.00	7.35	7.00	±0.15%	Yes	
pH (10)	19320027 08121	22.1	10.00	10.42	10.00	±0.15%	Yes	
ORP (mV)	19420069 08121	22.3	228	199.2	228	±0.5%	Yes	
DO (%) (1pt, 100% water saturated air cal)			100	95.9	99.8	±0.5% accuracy	Yes	
Turbidity @NTU			0	0.01	0.01	±0.5 NTU	Yes	
Turbidity 1NTU			1	1.29	1.28	±0.5 NTU	Yes	
Turbidity 10NTU			10	6.73	9.85	±0.5 NTU	Yes	

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 9/14/2020 Trace #/Lot: 1105 Tax #/Lot: 1140
 Meter ID: 597519 Tubing Meter Type: Lamotte 2020mc SN: 1510-4111
 Weather Conditions: 85°F Sunny Facility/Client: Hammond Project No.: GW 6531

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	25.1	4490	4364	4490	-1.5%	Yes No	
pH (4)	8/2021		4	4.12	5	-1.5 SL	Yes No	
pH (7)	19340057 8/2021	27	7	7.07	7	-1.5 SL	Yes No	
pH (14)	19320102 8/2021	26.6	9.95 10.95	9.95	10	-1.5 SL	Yes No	
ORP (mV)	19460067 8/2021	26.7	228	214.5	228.9	-2.5V	Yes No	
DO (%) (1pt, 100% water saturated air sat)			100	94.6	100.8	-5% saturated	Yes No	
Turbidity (NTU)			0	0.01	0.01	-1.5 NTU	Yes No	
Turbidity (NTU)			1	1.47	1.47	-1.5 NTU	Yes No	
Turbidity (NTU)			10	10.46	10.46	-1.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 9/15/2020 Time: 0855 Time: 0935
 Instrument ID: 597519 Transducer Model: LaMotte SN: 1510-7111
 Weather Conditions: 75°F overcast Facility and City: Hennepin 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	25.1	4490	4327	4490	±0.5%	Yes	No
pH(4)	19340057 8/2021	25.5	4	4.23	4	±0.15%	Yes	No
pH(7)	19340057 8/2021	25.5	7	7.14	7	±0.15%	Yes	No
pH(10)	19320102 8/2021	25.6	10	9.93	10	±0.15%	Yes	No
ORP (mV)	14460167 8/2021	25.4	228	2124	229	±0.5mV	Yes	No
DO (%) (1 pt. 100% in water saturated air cal)			100	90.6	99.9	±0.5% accuracy	Yes	No
Turbidity 1 NTU			0	0.01	0.01	±0.5 NTU	Yes	No
Turbidity 1 NTU			1	1.54	1.49	±0.5 NTU	Yes	No
Turbidity 10 NTU			10	10.29	10.29	±0.5 NTU	Yes	No

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 9/16/2020 Time (start): 0830 Time (end): 0903
 SmartTroll SN: 547514 Turbidity Meter Type: LA Motte 2020cc SN: 1510-4114
 Weather Conditions: 70°F overcast Facility and Use: Hammond Project No.: 6W65BI

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	21.9	4490	4410	4490	-±5%	<input checked="" type="checkbox"/> No	
pH 11	B/2021		4	4.25	4	-±0.15U	<input checked="" type="checkbox"/> No	
pH 7	19340057 8/10/21	22.2	7	7.09	7	-±0.15U	<input checked="" type="checkbox"/> No	
pH 10	14320102 8/10/21	22.4	10	9.92	10	-±0.15U	<input checked="" type="checkbox"/> No	
ORP (mV)	19400167 8/10/21	22.3	228	217.4	229.2	-±5mV	<input checked="" type="checkbox"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	90.3	100.4	-±1% saturation	<input checked="" type="checkbox"/> No	
Turbidity 1 NTU			0	0	0	-±0.5 NTU	<input checked="" type="checkbox"/> No	
Turbidity 1 NTU			1	1.58	1.46	-±0.5 NTU	<input checked="" type="checkbox"/> No	
Turbidity 10 NTU			10	9.82	9.82	-±0.5 NTU	<input checked="" type="checkbox"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: CHAD RUSSO Date: 9/18/2020 Meter ID: 0755 Identifier: 6820
 Meter ID: 547514 Tablett Meter Type: LaMotte Z200mc SN: 1510-14111
 Weather Conditions: 70°F Cloudy Facility and Loc: 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)	20016025 8/2021	22.9	4490	4413	4490	-±5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (1)			4	4.30	4	-±0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (2)	193410057 8/2021	23.1	7	7.11	7	-±0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (H)	19320162 8/2020	23.3	10	9.88	10	-±0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	1916067 8/2021	23.3	228	205	230.3	-±20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (% of 100% water saturated air sat)			100	90.9	100	-±2% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity @ NTU			0	0	0	-±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1	1.4	1.4	-±0.2 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10	12.52	10.11	-±0.2 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician Chris Russo

Date: 9/21/2020

Transmit: 6040

Time/Date: 09:10

smarTroll SN: 517519

Turbidity Meter Type: Liptette 2020mc

SN: 1510-4111

Weather Conditions: 60°F Sunny

Factory and Lot: Hammond

Project No: CH6581

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)	201005 Grodz	17.9	4490	4441	4490	- ± 5%	Yes No	
pH (4)			4	4.41	4	- ± 0.5%	Yes No	
pH (7)	1934 B057 Braz	18.6	7	7.12	7	- ± 0.5%	Yes No	
pH (10)	19320102 8/10/20	19	10	9.86	10	- ± 0.5%	Yes No	
ORP (mV)	19460107 Braz	19.1	228	196	231.3	- ± 2mV	Yes No	
DO (%) (1pc, 100% water saturated air sat)			100	95.2	100	- ± 0% saturation	Yes No	
Turbidity I NTU			0	0	0	- ± 0.5 NTU	Yes No	
Turbidity I NTU			1	0.38	1.1	- ± 0.5 NTU	Yes No	
Turbidity I NTU			10	9.5	9.5	- ± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Chris Russo Date: 9/25/2020 Time (start): 0910 Time (finish): 0945
 smarTroll SS: 597519 Transducer Model Type: Lafayette SN: 1510-4111
 Weather Conditions: 65°F overcast Facility and Use: Hammond Project No.: 14166981

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	21.0	4490	4364	4490	--5%	Yes	No
pH (4)	8/30/21		4	4.51	4	--0.150	Yes	No
pH (7)	19340057 8/1/20	21.0	7	6.96	7	--0.150	Yes	No
pH (10)	14320162 8/1/20	21.2	10	8.55	10	--0.150	Yes	No
ORP (mV)	19400167 8/20/21	21.3	228	243.5	235.3	--2mV	Yes	No
DO (%) (typ. 100% water saturated air sat)			100	90.3	100.3	--6% accuracy	Yes	No
Turbidity (NTU)			0	0	0	--0.25 NTU	Yes	No
Turbidity (NTU)			1	1.08	1.08	--0.25 NTU	Yes	No
Turbidity (NTU)			10	7.62	10.06	--0.25 NTU	Yes	No

EQUIPMENT CALIBRATION LOG

Field Location: Watershed T. A. H. Ave Date: 8-15-2020 Test No.: 08 55 Test Point: 15.35
 SmartTroll SN: 512733 Probe Model Type: LaMotte 2000#12 No.: 2349-0413
 Weather Conditions: 77° Clear Facility and City: Wilmington Project No.: 601658

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)	30010025	26.7	4490	4478	4491	±0.5%	No	
pH (4)	08/2021		4.0	4.17	4.0	±0.05	Yes	
pH (7)	19340057 08/2021	24.9	7.0	7.06	7.0	±0.05	Yes	
pH (10)	19320102 08/2021	24.8	10	10.32	10	±0.15	Yes	
ORP (mV)	19463167 08/2021	24.6	228	224.3	228	±0.5%	Yes	
DO (%) (1pt, 100% water saturated air sat)			100%	89	100%	±0.5% saturation	Yes	
Turbidity @ NTU			0	0.62	0	±0.5 NTU	Yes	
Turbidity 1 NTU			1	0.99	1	±0.5 NTU	Yes	
Turbidity 10 NTU			10	11.32	10	±0.5 NTU	Yes	

EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH TAVKORZ Date: 9-16-2020 Time: 07:50 Time of Day: C750
 smartTroll SN: 512733 Probe Model Type: LANOTTE 2020WE SN: 2949-0413
 Weather Conditions: 69°F, OVERCAST, WINDY Facility and Lot: KATHARONID Project No.: GW 0581

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)	10010025 08/21	21.5	4490	4379	4490	±5%	Yes	No
pH (4)			4	4.24	4.0	±0.1SU	Yes	No
pH (7)	19340957 08/21	21.8	7	7.07	7.0	±0.1SU	Yes	No
pH (10)	19320102 08/21	21.8	10	9.98	10.0	±0.1SU	Yes	No
ORP (mV)	19460167 08/21	21.3	228	227.6	228	±20mV	Yes	No
DO (%) (1pt, 100% water saturated air sat)			100	90.5	100	±5% saturation	Yes	No
Turbidity 1 NTU			0	0.06	0	±0.5NTU	Yes	No
Turbidity 1 NTU			1	1.04	0.87	±0.5NTU	Yes	No
Turbidity 10 NTU			10	10.22	10.06	±0.5NTU	Yes	No

EQUIPMENT CALIBRATION LOG

Field Location ASHISH TANK

Date 3-18-20

Time Start 07:25

Time End 07:42

SmartTroll SN 512733

Trode Model Type LANOTTE 2020WE

SN 2949-0413

Weather Conditions 70°F, OVERCAST

Facility and Unit HAMMOND

Project No. FW0381

Calibration log

	Standard Lot # / Date of Calibration	Temp at Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010625 08/2021	21.1	4490	4392	4480	-1.5%	Yes No	
pH 4			4	4.26	4.00	-1.5%	Yes No	
pH 7	10340057 08/2021	21.9	7	7.08	7.00	-1.1%	Yes No	
pH 10	13322102 08/2021	22.2	10	10.22	10.00	-2.2%	Yes No	
ORP (mV)	19460767 08/21	22.3	228	223	228	-2.2%	Yes No	
DO (%) (typ. 100% water saturated air sat)			100	91.3	100	-10% 100.000	Yes No	
Turbidity 1 NTU			0	0.00	0	-1.5% NTU	Yes No	
Turbidity 1 NTU			1	1.00	1.00	-1.5% NTU	Yes No	
Turbidity 10 NTU			10	10.09	10.00	-1.5% NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: VASHISHA THAKUR Date: 9-21-20 Time start: 08:28 Time End: 08:42
 Station: 712 733 Model & Make Type: LANOTTE 2020WWE SN: 2943-0413
 Weather Conditions: 55°F, SUNNY Facility and Loc: HA 000001 Project No.: 6410581

Calibration log

	Standard Lot # + Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Pre-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	200910035	15.0	4490	4315	4490	±5%	Yes	
pH (4)	08/21		4	4.37	4.00	±0.50	Yes	
pH (7)	13340057 8/21	16.5	7	7.12	7.00	±0.50	Yes	
pH (10)	13320002 8/21	16.8	10	7.76	10.00	±0.50	Yes	
ORP (mV)	19460107 8/21	17.1	228	226.7	228	±2.0%	Yes	
DO, % (1 pc, 20% water saturated air sat)			100%	90.3	100	±0.5% ±0.1000	Yes	
Turbidity @ NTU			0	0.10	0	±0.5 NTU	Yes	
Turbidity @ NTU			1	1.65	1	±0.5 NTU	Yes	
Turbidity @ NTU			10	9.76	10	±0.5 NTU	Yes	

EQUIPMENT CALIBRATION LOG

Field Technician: WASHISH TANKOR Date: 9-25-20 Time (start): 09:00 Time (end): 09:20
 SmartTroll SN: 512733 Technology/Meter Type: LAMOTTE 1200WE SN: 2940-6413
 Weather Code/Code: 60°F, RAINY Facility and Loc: LAKEVIEW 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)	2001 0025 8/21	19.3	4490	4321	4490	- ± 5%	Yes No	
pH(4)			4	4.36	4.00	- ± 0.5L	Yes No	
pH(7)	1034057 8/21	19.3	7	7.10	7.00	- ± 0.5L	Yes No	
pH(10)	19520102 8/21	19.4	10	9.97	10.00	- ± 0.5L	Yes No	
ORP (mV)	9460167 8/20		228	207.6	228	- ± 20%	Yes No	
DO (%) (1pt, 100% water saturated air sat)			100	99.1	100	- ± 5% saturation	Yes No	
Turbidity 1 NTU			0	0.00	0.00	- ± 0.5 NTU	Yes No	
Turbidity 1 NTU			1	1.26	1.00	- ± 0.5 NTU	Yes No	
Turbidity 10 NTU			10	9.77	10.00	- ± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Becker Date: 9-28-2020 Time (start): 1330 Time (stop): 1405
 SmartTroll SN: 512733 Capacity Meter Type: Lemotte SN: 2949
 Weather Conditions: Sunny 4:82/LO71 Facility and City: Hammond Project No.: GV6581

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	27.5	4490	4391	4490	-- 5%	Yes No	
pH (4)		27.6	4.00	4.25	4.00	-- 0.150	Yes No	
pH (7)	08/2021 19340057	26.7	7.00	7.11	7.00	-- 0.150	Yes No	
pH (10)	08/2021 19320102	26.2	10.00	10.08	10.00	-- 0.150	Yes No	
ORP (mV)	19460167	26.6	228.0	197.4	228.0	-- 200%	Yes No	
DO (%) (20°C, 100% water saturated air sat)			100%	97.7	100%	-- 5% standard	Yes No	
Turbidity @ NTU			0	0	0	-- 0.3 NTU	Yes No	
Turbidity 1 NTU			1.00	0.99	1.00	-- 0.5 NTU	Yes No	
Turbidity 10 NTU			10	10	10	-- 0.5 NTU	Yes No	

November 2020

Field Technician: Shawn LTY Date: 11/10/2020 Time out: 11:55 Time back: 12:15
 SmartTroll SSN: 728634 Tubing Meter Type: La Motte 2020 Weir 2953
 Weather Conditions: cloudy Facility used: 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	22.29	4490	4568.3	4322.9 4487.2	±5%	Yes	
pH (4)	08/2021		4.00	4.03	4.00	±0.02	Yes	
pH (7)	19340057 08/2021	22.04	7.00	7.5	7.00	±0.02	Yes	
pH (10)	19329102 08/2021	22.04	10.00	9.97	10.00	±0.02	Yes	
ORP (mV)	19460167 06/2021	22.14	228	240.7	227.6	±2mV	Yes	
DO (%) (1pt. 100% in-line saturated air cal)			100	101.31	99.83	±5% saturation	Yes	
Turbidity (NTU)			0	0	0	±0.02 NTU	Yes	
Turbidity (NTU)			1	0.92	0.97	±0.02 NTU	Yes	
Turbidity (NTU)			10	11.18	7.85	±0.02 NTU	Yes	

EQUIPMENT CALIBRATION LOG

Field Technician Shawna Utin Date: 11/11/2020 Time out: 7:30 Time back: 7:45
 Instrument ID: 728634 Conductivity Meter Type: LaMotte 2020w SN: 2953
 Weather Conditions: cloudy Facility and Location: Hammond Project No.: GW658

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	22.84	44490	4574.0	4568.1	±2%	Yes No	
pH 4.0	08/2021		4.00	4.51	4.00	±0.15U	No	
pH 7.0	19340057 08/2021	22.61	7.00	6.99	7.00	±0.15U	Yes No	
pH 10.0	19320102 08/2021	22.52	10.00	10.01	10.00	±0.15U	Yes No	
ORP (mV)	19460167 08/2021	22.36	228	226.9	228.0	±0.5%	Yes No	
DO (%) (1% DO in 100% water saturated air sat)			100	98.59	99.95	±0.5% specification	Yes No	
Turbidity: 1 NTU			0	0	0	±0.5 NTU	No	
Turbidity: 5 NTU			1	0.98	0.99	±0.5 NTU	No	
Turbidity: 10 NTU			10	10.99	10.03	±0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 11/10/2020

Tool No: 0738

Tool Check: 0808

Serial No: 728550

Tablet Make/Type: LaMotte 2020we No: 1859-0712

Weather Conditions: Overcast, 70°

Facility and Unit: Plant Hammond

Project: GL06581

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)	20040025 / 08/21	25°	4490 4.00	5042 3.80	4490	±2%	Yes	Aquatrol 400
pH ₂₅	19340057 / 08/21	20.61°	4.00	3.81	4.00	±0.15%	Yes	
pH ₂₅	19320102 / 08/21	20.66°	7.00	7.12	7.02 7.00	±0.15%	Yes	
pH ₁₀	19320102 / 08/21	20.66°	10	10.15	10.04 10.00	±0.15%	Yes	
ORP (mV)	19460167 / 08/21	20.79	822	826.8	822	±2.0%	Yes	
DO, % (1.0% 100% water saturated air sat)			100%	99.93%	100%	±0.5% saturation	Yes	
Turbidity @ NTU			0	0.54	0.38	±0.5 NTU	Yes	
Turbidity 1 NTU			1.00	1.00	1.00	±0.5 NTU	Yes	
Turbidity 10 NTU			10.00	7.67	9.93	±0.5 NTU	Yes	

EQUIPMENT CALIBRATION LOG

Field Technician Thomas Kessler

Date: 11/11/20

Job No. 745

Technician CSLS

Part No. 728550

Calibration Meter Type Lanette 2020we

S/N 1859-0412

Location/Conditions overcast, 70°

Facility and Unit: Plant Hammond

Project No.: GW6584

Calibration log

	Standard Gas P. # Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	20.67	4440	4495.4	4490	-±5%	Yes	
pH (4)	08/21		4.0	2.15	4.00	-±0.50	Yes	
pH (7)	14340057 08/21	20.90	7.0	7.07	7.02	-±0.50	Yes	
pH (10)	14320002 08/21	21.08	10.0	10.08	10.07	-±0.50	Yes	
ORP (mV)	14460167	21.14	228	229.9	228	-±2%	Yes	
DO (%) (1ppm, 100% water saturated air sat)			100%	98.15%	100%	-±5% saturation	Yes	
Turbidity (NTU)			0	0.79	0.01	-±0.5NTU	Yes	
Turbidity (NTU)			1.00	0.52	0.78	-±0.5NTU	Yes	
Turbidity (NTU)			10.00	10.91	10.08	-±0.5NTU	Yes	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 11/12/2020

Tool no.: 0730

Tool no. 2: 0758

smarTroll SN: 728550

Transfer Method: Levante 2020

SN: 1859-0412

Weather Conditions: 60°F, 70%

Facility Address: Plant Hill, NC

Project No.: 600581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Test-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 05/21	19.43	4490	4598.3	4490	±0.5%	Yes No	
pH/c			4.00	4.03	4.00	±0.50	Yes No	
pH/c	19340057 08/21	20.06	7.00	6.99	7.02	±0.50	Yes No	
pH/c	19320162 08/21	20.22	10.00	10.00	10.04	±0.50	Yes No	
ORP (mV)	19400167 08/21	20.32	228	226.6	228	±0.25%	Yes No	
DO (%) (1% 100% water saturated air sat)			100%	97.43%	100%	±0.5% ±0.002	Yes No	
Turbidity @ NTU			0	0.67	0.01	±0.5 NTU	Yes No	
Turbidity 1 NTU			1	0.60	0.86	±0.5 NTU	Yes No	
Turbidity 10 NTU			10	10.76	10.02	±0.5 NTU	Yes No	

December 2020

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Vessler Date: 12/15/20 ID No: 826 Time: 0850
 smarTroll SS: 728634 Trench Meter Type: Leine & Linde 202000 SN: 14179-4011
 Weather Conditions: Sunny, cold Facility and Use: Plumje Hk mound Project No: 6166581

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)	20 010005	11.26	4490	4784	4490	±0.5%	Yes	
pH (4)	058121		4.0	4.00	4.00	±0.1%	Yes	
pH (7)	19340057 05121	16.0	7.00	7.13	7.00	±0.1%	Yes	
pH (10)	1932 0100 05121	11.62	10.00	10.22	10.00	±0.1%	Yes	
ORP (mV)	19460167 05121	8.14	225	246	228	±0.5%	Yes	
DO (%) (Typ. 200% water saturated air sat)			100%	101.75%	100%	±0.5% at 20°C	Yes	
Turbidity 1 NTU			0	0.03	0.03	±0.5 NTU	Yes	
Turbidity 1 NTU			1	1.08	1.03	±0.5 NTU	Yes	
Turbidity 10 NTU			10	10.16	9.71	±0.5 NTU	Yes	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Messler Date: 12/16/20 Tool ID: 6742 Tool No: 0869
 Instrument ID: ~~72633~~ 728634 Instrument Make/Type: Lamotte 2020 SN: 1471-401
 Weather Conditions: Rainy, cold Facility Address: Piedmont, Maryland Project No.: 6000351

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	7.37	4490	4526	4490	±5%	Yes No	
pH (±)	08121		4.0	4.11	4.0	±0.50	Yes No	
pH (±)	17340857 08121	7.61	7.0	7.10	7.0	±0.50	Yes No	
pH (±)	19220102 08121	7.84	10.0	10.12	10	±0.50	Yes No	
ORP (mV)	19460107 08121	8.36	222	226.1	228	±2.5V	Yes No	
DO (%) (Use 100% water saturated air sat)			100%	101.9%	100%	±5% ±0.5%	Yes No	
Turbidity @ NTU			0	0.11	0	±0.5 NTU	Yes No	
Turbidity 1 NTU			1	0.94	1.03	±0.5 NTU	Yes No	
Turbidity 10 NTU			10	8.37	9.43	±0.5 NTU	Yes No	

January 2021

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 1/19/2021

Time (Start): 1030

Time (End): 1105

Sample ID: 728LP4

Turbidity Meter Type: Lanrite 2020w

S/N: 2289-2612

Weather Conditions: ~~40F~~ 40F cloudy

Facility and Unit: Hammond

Project No.: (13658)

Calibration Log

	Standard Lot # - Date of Expiration	Temp. of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2001005 8/2021	9.22	4490	4683	4490	±5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (5)			4	3.94	4	±0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	17340057 8/2021	9.28	7	7.07	7	±0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)		10.72	4	4.05	4.05	±0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check		10.49	7	7.65	7.05	±0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	1920102 8/2021	9.22	10	10.12	10	±0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check		10.39	10	10.04	10.04	±0.15	<input type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	17460167 8/2021	8.94	228	247	228	±2mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (mg/L) (E.g., 100% water saturated air cell)			100	102.04	100	±5% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity # NTU			0	0.45	0.45	±0.25 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1	0.76	0.76	±0.25 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10	10.13	10.13	±0.25 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	



Calibration Report

Instrument Aqua TROLL 400
Serial Number 728638
Created 1/19/2021

Sensor	RDO
Serial Number	728789
Last Calibrated	1/19/2021

Calibration Details

Slope 1.095512
Offset 0.00 mg/L

Calibration point 100%

Concentration 10.42 mg/L
Temperature 9.32 °C
Barometric Pressure 1,008.6 mbar

Sensor	Conductivity
Serial Number	728638
Last Calibrated	1/19/2021

Calibration Details

Cell Constant 0.001
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	726660
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20790
Last Calibrated	1/19/2021

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 143.4 mV
Temperature 11.47 °C

Calibration Point 2

pH of Buffer 7.06 pH
pH mV -25.3 mV
Temperature 11.11 °C

Calibration Point 3

pH of Buffer 10.12 pH
pH mV -191.0 mV
Temperature 10.82 °C

Slope and Offset 1

Slope -55.13 mV/pH
Offset -22.0 mV

Slope and Offset 2

Slope -54.14 mV/pH
Offset -22.1 mV

ORP

ORP Solution ORP Standard
Offset -6.1 mV
Temperature 8.70 °C

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728638
Created 1/19/2021

Sensor RDO
Serial Number 728789
Last Calibrated 1/19/2021

Calibration Details

Slope 1.095512
Offset 0.00 mg/L

Calibration point 100%

Concentration 10.42 mg/L
Temperature 9.32 °C
Barometric Pressure 1,008.6 mbar

Sensor Conductivity
Serial Number 728638
Last Calibrated 1/19/2021

Calibration Details

Cell Constant 0.001
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor Level
Serial Number 726660
Last Calibrated Factory Defaults

Sensor pH/ORP
Serial Number 20790
Last Calibrated 1/19/2021

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 147.4 mV
Temperature 10.00 °C

Calibration Point 2

pH of Buffer 7.06 pH
pH mV -22.7 mV
Temperature 9.51 °C

Calibration Point 3

pH of Buffer	10.12 pH
pH mV	-190.3 mV
Temperature	9.06 °C

Slope and Offset 1

Slope	-55.59 mV/pH
Offset	-19.4 mV

Slope and Offset 2

Slope	-54.75 mV/pH
Offset	-19.4 mV

ORP

ORP Solution	ORP Standard
Offset	-6.1 mV
Temperature	8.70 °C

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 1/20/21

Time Start: 0845

Time/Pass: 0910

SmartTag ID: 728474

Today Meter Type: LaMotte 2020we

SN: 2289-2612

Weather Conditions: 70°F sunny

Facility and Use: Hammond

Project No.: GW6554

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)	22051 & 025 8/21	12.87	4496	4514.5	4496	- ± 5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4	4.05	4	- ± 0.15U	<input type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check		19.28	4	4.09	4.09	- ± 0.15U	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	19346057 8/21	12.52	7	7.02	7	- ± 0.15U	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check		15.69	7	7.06	7.06	- ± 0.15U	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	1732102 8/21	12.25	10	10.08	10	- ± 0.15U	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check		13.85	13.85 10	10.07	10.07	- ± 0.15U	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19760167 8/21	12.2	228	243.7	226	- ± 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (Type, 100% water saturated air cell)			100	99.18	100	- ± 5% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity (NTU)			0	0.46	0.46	- ± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity (NTU)			1	0.77	0.77	- ± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity (NTU)			10	9.83	9.83	- ± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

Calibration Report

Instrument Aqua TROLL 400
Serial Number 728638
Created 1/20/2021

Sensor	RDO
Serial Number	728789
Last Calibrated	1/20/2021

Calibration Details

Slope 1.083464
Offset 0.00 mg/L

Calibration point 100%

Concentration 9.25 mg/L
Temperature 15.06 °C
Barometric Pressure 1,008.3 mbar

Sensor	Conductivity
--------	--------------

Serial Number	728638
Last Calibrated	1/20/2021

Calibration Details

Cell Constant 0.973
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor	Level
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Serial Number	726660
Last Calibrated	Factory Defaults

Sensor	pH/ORP
--------	--------

Serial Number	20790
Last Calibrated	1/20/2021

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
pH mV 134.8 mV
Temperature 8.70 °C

Calibration Point 2

pH of Buffer 7.06 pH
pH mV -21.7 mV
Temperature 8.78 °C

Calibration Point 3

pH of Buffer 10.12 pH
pH mV -189.4 mV
Temperature 8.94 °C

Slope and Offset 1

Slope -51.14 mV/pH
Offset -18.6 mV

Slope and Offset 2

Slope -54.81 mV/pH
Offset -18.4 mV

ORP

ORP Solution ORP Standard
Offset -5.6 mV
Temperature 8.74 °C

Calibration Report

Instrument Aqua TROLL 400
 Serial Number 728638
 Created 1/20/2021

Sensor	RDO
Serial Number	728789
Last Calibrated	1/20/2021

Calibration Details

Slope 1.083464
 Offset 0.00 mg/L

Calibration point 100%

Concentration 9.25 mg/L
 Temperature 15.06 °C
 Barometric Pressure 1,008.3 mbar

Sensor	Conductivity
Serial Number	728638
Last Calibrated	1/20/2021

Calibration Details

Cell Constant 0.973
 Reference Temperature 25.00 °C
 TDS Conversion Factor (ppm) 0.65

Sensor	Level
Serial Number	726660
Last Calibrated	Factory Defaults

Sensor	pH/ORP
Serial Number	20790
Last Calibrated	1/20/2021

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH
 pH mV 140.3 mV
 Temperature 15.76 °C

Calibration Point 2

pH of Buffer 7.06 pH
 pH mV -22.0 mV
 Temperature 14.82 °C

Calibration Point 3

pH of Buffer 10.08 pH
pH mV -190.3 mV
Temperature 14.08 °C

Slope and Offset 1

Slope -53.03 mV/pH
Offset -18.8 mV

Slope and Offset 2

Slope -55.73 mV/pH
Offset -18.6 mV

ORP

ORP Solution ORP Standard
Offset -5.6 mV
Temperature 8.74 °C

March 2021

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 3/10/2021

Time (start): 12:15

Time (finish): 1:40

Sample ID: 728550

Turbidity Meter Type: LaMotte 2000w

SN: 0411-1416

Weather Conditions: 70°F Sunny

Facility and Unit: Plant - Farmore LAFCO

Project No.: 14W081

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	± 0.5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	3.9	4	± 0.1 SD	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	20010025 8/2021	21.23	4.00	4.02	4.02	± 0.1 SD	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	19350057 8/2021	19.11	7.00	6.92	7	± 0.1 SD	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	19346057 8/2021	22.04	7.00	7.05	7.05	± 0.1 SD	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	19320102 8/2021	18.50	10.00	9.98	10	± 0.1 SD	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	19320102 8/2021	21.87	10.00	10.01	10.01	± 0.1 SD	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 8/2021	18.15	228	221.9	228	± 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	96.77	100	± 0.6% at 20°C	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	6.39	0.39	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.52	0.52	± 0.25 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	9.94	9.94	± 0.25 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 3/11/2021 Time (start): 0730 Time (finish): 0755
 Instrument ID: 728550 Instrument Model/Type: LAQUA 2020w SN: 644-1416
 Weather/Conditions: 45°F clear Facility and Unit: Plant Operational AP-12 Project No.: GWSS1

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	14.95	4490	4582.2	4490	± 5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (8)			4.00	4.03	4	± 0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Water pH (7) check	19340057 8/2021	15.67	4.00	7.03	7	± 0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	20010025 8/2021	25.97	7.00	4.05	4.05	± 0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	19340057 8/2021	26.07	7.00	6.95	6.95	± 0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	19320102 8/2021	15.96	10.00	10.04	10	± 0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	19320102 8/2021	25.6	10.00	9.95	9.95	± 0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 8/2021	16.07	228	231.4	220	± 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1 pt. 100% water saturated air cal)			100	92.09	100	± 6% ± 0.600	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity (NTU)			0	0	0	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity (NTU)			1.00 ¹	0.58	0.58	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity (NTU)			10.00	10.68	9.75	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Tech/Technician: Chad Russo Date: 3/12/21 Time (start): 0835 Time (end): 0855
 Instrument No: 728550 Conductivity Meter Type: 1: Mole 2023ve SN: 6411-1116
 Weather Conditions: 50°F partly cloudy Facility and Unit: Plant - Johnson - AP 1.1 Project No.: 1306581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	19.51	4490	4520	4490	± 5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	4.02	4	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	20010025 8/2021	25.4	4.00	3.96	3.96	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	19340057 8/2021	19.55	7.00	6.95	7	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	19340057 8/2021	24.87	7.00	7.02	7.02	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	19320102 8/2021	19.49	10.00	9.98	10	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	19320102 8/2021	25.18	10.00	10.04	10.04	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 8/2021	19.29	228	222.3	228	± 2% V	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1 pt. 100% water saturated air cal)			100	99.82	100	± 0.6% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0	0	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	1.03	1.03	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	9.62	9.62	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Chris Russo Date: 3/15/2021 Time (start): 0740 Time (finish): 0800
 SmartTroll SN: 728550 Turbidity Meter Type: LA-MOQU 2070 SN: 6411-1416
 Weather Conditions: 60°F Cloudy Facility and Unit: Plant: Deer Creek / AP-1 Project No.: GW-181

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20016625 8/2021	19.11	4490	4576	4490	± 5%	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	24.37	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)	19461167 8/2021	19.77	228	225.2	228	± 2mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	85.39	100	± 6% ± 1.0% at 20°C	Yes No	
Turbidity 0 NTU			0	0.03	0.03	± 0.05 NTU	Yes No	
Turbidity 1 NTU			1.00	0.69	0.69	± 0.05 NTU	Yes No	
Turbidity 10 NTU			10.00	7.89	10.14	± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: YASHISH TAUKOOR

Date: 3-10-2021

Time (start): 11:20

Time (finish): 11:30

Serial #/ID #: 728 563

Turbidity Meter Type: LaMotte 200mc

SN: 710-0711

Weather Conditions: SUNNY, 55°F

Facility and Unit: Plant Hill, Inland NW

Project No.: GW0581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	18.38	4490	4665	4490	±0.5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	08/21		4.00	3.96	4.00	±0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
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	<input checked="" type="radio"/> Yes <input type="radio"/> 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	<input checked="" type="radio"/> Yes <input type="radio"/> 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	±0.5V	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	105.21	100	±0.6% saturated	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	-0.06	0	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.92	1.00	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	10.40	1.00	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH TAJKOR Date: 3-11-2021 Time (start): 08:04 Time (finish): 08:19
 Serial No.: 728563 Frequency Meter Type: 1. Meter 2019 w SN: 710-0711
 Weather Conditions: SUNNY, 49°F Location and Use: Flow Blank and W-112 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 (uS/cm)	20610025	14.88	4490	4437	4490	± 5 %	Yes No	
pH (4)	08/2021		4.00	4.01	4.00	± 0.05	Yes No	
Mid-Day pH (4) check	"	24.19	4.00	4.05	4.00	± 0.05	Yes No	
pH (7)	19340057 08/2021	15.50	7.00	6.88	7.00	± 0.15	Yes No	
Mid-Day pH (7) check	"	23.10	7.00	7.03	7.00	± 0.15	Yes No	
pH (10)	19320102 08/2021	15.31	10.00	10.06	10.00	± 0.15	Yes No	
Mid-Day pH (10) check	"	21.96	10.00	9.98	10.00	± 0.15	Yes No	
ORP (mV)	19460167 08/2021	14.94	228	240.8	228	± 20mV	Yes No	
DO (%) (1pt, 100% water saturation air cal)			100	91.19	100	± 1% saturation	Yes No	
Turbidity 0 NTU			0	0.00	0	± 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.17	1.00	± 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.45	10.00	± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH TAVKOR

Date: 3-12-2021

Time (start): 0823

Time (finish): 0837

Contract No.: 728 563

Calibration Meter Type: 1-Wire 2025w

SS: 710-0711

Weather Conditions: SONNY, 50°F

Facility and Unit: Plant Entrance at AP 1.2

Project No.: GW0581

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	4492.6 4392.6 (ST)	4490	±0.5%	Yes No	
pH (4)	"	"	4.00	3.97	4.00	±0.05M	Yes No	
Mid-Day pH (4) check	"	23.92	4.00	4.04	4.00	±0.05M	Yes No	
pH (7)	19340057 08/2024	19.53	7.00	7.01	7.00	±0.05M	Yes No	
Mid-Day pH (7) check	"	22.74	7.00	7.06	7.00	±0.05M	Yes No	
pH (10)	19320102 08/2024	18.78	10.00	10.05	10.00	±0.1%	Yes No	
Mid Day pH (10) check	"	21.91	10.00	9.98	10.00	±0.1%	Yes No	
ORP (mV)	19460167 08/2024	18.26	228	238.2	228	±0.5%	Yes No	
DO (%) (2pt. 100% water saturated air cal)			100	96.86	100	±0.5% saturation	Yes No	
Turbidity 0 NTU			0	-0.01	0	±0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.11	1.00	±0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.45	10.00	±0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH THAKUR Date: 3-15-2024 Time (start): 08:13 Time (finish): 08:24
 Equipment ID: 728 563 Facility Meter by: LaMotte 2024w SN: 710-0711
 Weather Conditions: CLOUDY, 60°F Facility and Unit: FL - Environmental AP 1.2 Project No.: 33W681

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/24	15.74	4490	4662.8	4490	± 3%	Yes No	
pH (4)	"	"	4.00	3.96	4.00	± 0.10	Yes No	
Mid-Day pH (4) check	"	18.52	4.00	4.05	4.00	± 0.05	Yes No	
pH (7)	19390057 08/2024	16.72	7.00	6.99	7.00	± 0.10	Yes No	
Mid-Day pH (7) check	"	18.26	7.00	7.07	7.00	± 0.10	Yes No	
pH (10)	19320102 08/2024	16.87	10.00	10.08	10.00	± 0.10	Yes No	
Mid-Day pH (10) check	"	17.86	10.00	10.02	10.00	± 0.10	Yes No	
ORP (mV)	1946267 08/2024	16.87	228	238.8	228	± 2mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	93.38	100	± 0.5% saturation	Yes No	
Turbidity (NTU)			0	0.02	0.02	± 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.24	1.00	± 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	9.54	10.00	± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician Thomas Kessler

Date: 3/10/21

Time started 1130

Time finished 1240

Smart Tool SN 728566

Transfer Meter Type LA-Log 20/30cc

SW 12289-2617

Weather Conditions Sunny ☀

Locality and Unit 25031 (Pond) V512

Project No. GW558

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	15.96	4490	4368.3	4490	±5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	08/21		4.00	4.08	4.0	±0.05	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check			4.00			±0.05	Yes No	
pH (7)	14310057	15.43	7.00	7.04	7.0	±0.05	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	8/21		7.00			±0.05	Yes No	
pH (10)	1432902	14.89	10.00	9.94	10.00	±0.05	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	08/21		10.00			±0.05	Yes No	
ORP (mV)	14460167	14.39	228	214	228	±5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (Typ. 100% water saturated air cal)	08/21		100	101.73	100	±0.5% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity @ 8 NTU			0	1.07	0.00	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	1.03	1.03	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	8.23	10.03	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kesch Date: 3/11/21 Time (start): 0740 Time (finish): 0810
 SmartTroll SN: 728566 Facility Meter Type: 1-Mile 2015ce SN: 2289-2612
 Weather / Conditions: Sunny, 70° Facility and Unit: PL 4 - Linn, Inc. AP-2 Project No: 4W0581

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	15	4490	4332.5	4440	± 2%	Yes No	
pH (4)	08121		4.00	3.98	4.00	± 0.10	Yes No	
Mid-Day pH (4) check			4.00	3.98 ^{4.10} 4.09	/	± 0.10	Yes No	within range
pH (7)	19340057	15	7.00	7.04	7.04	± 0.10	Yes No	
Mid-Day pH (7) check			7.00	6.98	/	± 0.10	Yes No	within Range
pH (10)	1932402 08121	15	10.00	10.17	10.00	± 0.10	Yes No	
Mid-Day pH (10) check			10.00	9.92	/	± 0.10	Yes No	within Range
ORP (mV)	1446067 08121	15	228	237.6	228	± 3mV	Yes No	
DO (%) (Typ. 88% water saturated air cal)			100	93.07	100	± 1% 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	± 1.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler Date: 3/12/21 Time (Start) 0715 Time (End) 0900
 Serial # SN: 708566 Calibration Water Type: 1.5MΩ 3030cc SN: 12889-264
 Weather Conditions: Sunny, 70° Facility and Unit: Plant Eastwood AP-1-2 Project No.: 41W058

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	13.18	4490	4471.9	4490	±0.5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	08/21		4.00	4.05	4.00	±0.05 pH	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	/	/	4.00	4.07	/	±0.05 pH	Yes No	within Range
pH (7)	08/21 100340057	13.10	7.00	6.99	7.00	±0.05 pH	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	/	/	7.00	7.02	/	±0.05 pH	Yes No	within Range
pH (10)	1432902 08/21	13.09	10.00	9.98	10.00	±0.05 pH	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	/	/	10.00	10.9	/	±0.05 pH	Yes No	within Range
ORP (mV)	102460167 08/21	13.33	228	243.5	228	±20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	96.39		±0.5% saturation	Yes No	
Turbidity (0 NTU)			0	0.89	0.00	±0.05 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	1.31	1.05	±0.05 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	7.99	10.00	±0.05 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Tech: Thomas Keady Date: 3/15/21 Duration: 7:15 Time of Day: 7:45
 Serial Test SN: 728502 Turbidity Meter Type: LaMotte 2200w SN: 122892612
 Weather Conditions: Sunny, Clear Facility and Unit: Plant Hazardous W- 2 Project No.: GW6581

Calibration log

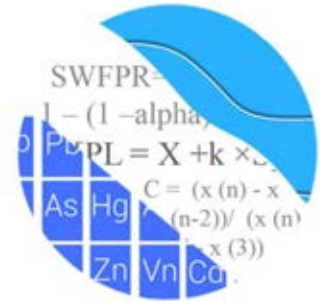
	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	15.35	4490	4530.3	4490	± 5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	08/21		4.00	3.99	4.00	± 0.05	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	/	/	4.00	4.02	/	± 0.1	Yes No	within range
pH (7)	14340057	15.71	7.00	7.04	7.00	± 0.05	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	/	/	7.00	6.99	/	± 0.1	Yes No	within range
pH (10)	14350002	15.84	10.00	10.01	10.00	± 0.05	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	/	/	10.00	10.00	/	± 0.1	Yes No	within range
ORP (mV)	14460067	15.80	228	227.22	228	± 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1 pt, 200% water saturated air cell)			100	99.71	100	± 6% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.00	0.00	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.17	1.05	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	10.34	10.00	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

APPENDIX E

Statistical Analysis Reports

September 2020

GROUNDWATER STATS CONSULTING



February 16, 2021

Southern Company Services
Attn: Ms. Kristen Jurinko
241 Ralph McGill Blvd. NE, Bin 10160
Atlanta, Georgia 30308

Re: Plant Hammond Ash Pond 3 (AP-3)
1st Semi-Annual Statistical Analysis – Fall 2020 Sample Event

Dear Ms. Jurinko,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the statistical analysis of groundwater data for the 1st Semi-Annual Fall 2020 sample event for Georgia Power Company's Plant Hammond AP-3. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015), the Georgia Environmental Protection Division Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the USEPA Unified Guidance (2009).

Sampling began for the CCR program in 2016, and at least 8 background samples have been collected at each of the groundwater monitoring wells, except for those discussed below. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient well:** HGWA-1, HGWA-2, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, and HGWA-122
- **Downgradient wells:** HGWC-120, HGWC-121A, HGWC-124, HGWC-125, and HGWC-126
- **Piezometer:** MW-39

New upgradient wells HGWA-43D, HGWA-44D, and HGWA-45D were first sampled in September 2020 and have had 3 sample events through December 2020. As requested by Southern Company Services, upgradient wells with 2 or more samples will be

incorporated into statistical analyses. Sampling began at new downgradient wells HGWC-125 and HGWC-126 in May 2020 and there have been six rounds of background sampling through December 2020. Additionally, sampling began at piezometer MW-39 in March 2020 and there have been two rounds of background sampling, except for molybdenum which has had 4 rounds of sampling. Therefore, piezometer MW-39 is included in the Appendix IV analyses for molybdenum.

Sampling at the following delineation wells listed below started during 2020:

- **Delineation wells:** MW-32, MW-41, and MW-46D

When a minimum of 4 samples is available, these wells are evaluated using confidence intervals for the Appendix IV constituents. Note that wells MW-32 and MW-41 were last sampled during the September 2020 sampling event, while MW-46D was last sampled during the November 2020 sampling event for a non-routine event. These wells currently do not have sufficient samples for analysis of Appendix IV constituents except for well MW-32 for fluoride and molybdenum. Therefore no confidence intervals are provided for these well/constituent pairs except for fluoride and molybdenum at well MW-32.

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

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

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

When no detections are present in downgradient wells for a given constituent, statistical analyses are not required. A summary of well/constituent pairs with 100% nondetects follows this letter. Additionally, when Appendix IV constituents are not detected during a scheduled Scan event, no statistical analyses are required during the semi-annual sample event. During the annual Scan event conducted in August 2020, arsenic, cadmium, mercury, selenium, and thallium were not detected, and therefore, were not required to be sampled during the Fall 2020 event. These constituents were included in the time series and box plots, but no formal statistics were required.

For all constituents, a substitution of the most recent reporting limit is used for nondetect data. For calculating prediction limits, the substitution is performed for individual wells and may differ across wells. This generally gives the most conservative limit in each case. In the time series plots, a single reporting limit substitution is used across all wells for a given parameter since the wells are plotted as a group. In the case of lithium, the reporting limit of 0.03 mg/L was substituted across all wells which is the most recent reporting limit provided by the laboratory.

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

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

Statistical Methods – Appendix III Parameters:

Appendix III parameters are evaluated using interwell prediction limits combined with a 1-of-2 resample plan for the following 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 nondetects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality.

After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits.

- No statistical analyses are required on wells and analytes containing 100% nondetects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% nondetects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for nondetects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% nondetects, the Kaplan-Meier nondetect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% nondetects.

Note that values shown on data pages reflect raw data and any non-detects that have been substituted with one-half of the reporting limit (for data sets containing <15% nondetects as described above) are shown as the original reporting limit.

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

Summary of Background Screening Conducted in March 2019

Outlier and Trend Testing

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

Using the Tukey box plot method, two outliers were identified. Those findings were submitted with that report. While this was not present in any of the data screened in this report, when the most recent value is identified as an outlier, values are not flagged in the database at this time as they may represent a possible trend. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values exist in the data sets and appear on the graphs as possible low outliers relative to the laboratory's Practical Quantitation Limit. However, these values are observed trace values (i.e. measurements reported by the laboratory between the Method Detection Limit and the Practical Quantitation Limit) and, therefore, were not flagged as outliers.

Of the outliers identified by Tukey's method, only one outlier was flagged for TDS in upgradient well HGWA-122. All other values are similar to remaining measurements within a given well or neighboring wells or were reported nondetects. The outlier summary follows this report (Figure C).

Additionally, when any values are flagged in the database as outliers, they are plotted in a disconnected and lighter symbol on the time series graph. The accompanying data pages display the flagged value in a lighter font as well. A substitution of the most recent reporting limit was applied when varying detection limits existed in data.

No obvious seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

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

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

Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) is typically used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. However, interwell methods are currently implemented in accordance with the Georgia EPD regulations and are used to evaluate compliance samples in downgradient wells.

Statistical Evaluation of Appendix III Parameters – September 2020

All Appendix III parameters were analyzed using interwell prediction limits. Background (upgradient) well data were re-assessed for potential outliers during this analysis. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. No new values were flagged and a summary of previously flagged outliers follows this report (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 September 2020 except for upgradient wells HGWA-43D, HGWA-44D, and HGWA-45D, which have samples through December 2020 (Figure D). Downgradient measurements from the most recent sample event were compared to these interwell background limits. For wells HGWC-120, HGWC-121A, and HGWC-124 this included the September 2020 sample. For wells HGWC-125 and HGWC-126 this included the December 2020 sample. 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 and, therefore, no further action is necessary. If no resample is collected,

the initial exceedance is automatically confirmed. For Appendix III parameters, several prediction limit exceedances were identified. A summary table of the interwell prediction limits follows this letter and includes a list of exceedances.

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. When trends are present in upgradient wells it is an indication of natural variability in groundwater quality unrelated to practices at the site. Trend tests require a minimum of 5 samples; therefore, the new upgradient wells HGWA-43D, HGWA-44D, and HGWA-45D did not yet have sufficient samples and the entries on the summary table show "NaN". 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)
- Sulfate: HGWA-3 (upgradient)

Decreasing trends:

- Boron: HGWC-121A
- Sulfate: HGWA-122 (upgradient), HGWC-120, and HGWC-121A

Statistical Methods – Appendix IV Parameters

Appendix IV parameters are evaluated by statistically comparing the mean or median of each downgradient well/constituent pair against corresponding Groundwater Protection Standards (GWPS). The GWPS may be either regulatory (MCL or CCR rule-specified limits) or site-specific limits that are based on upgradient background groundwater quality. Site-specific background limits are determined using tolerance limits, and the comparison of downgradient means or medians to GWPS is performed using confidence intervals. The methods are described below.

Statistical Evaluation of Appendix IV Parameters – September 2020

For Appendix IV parameters, confidence intervals for each downgradient well/constituent pair were compared against corresponding Groundwater Protection Standards (GWPS). GWPS were developed as described below. Well/constituent pairs that have 100% nondetects do not require analysis. Data from all wells for Appendix IV parameters are

reassessed for outliers during each analysis. No new values were flagged and a summary of previously flagged outliers follows this report (Figure C).

First, interwell upper tolerance limits were used to calculate site-specific background limits from all available pooled upgradient well data through September 2020 except for upgradient wells HGWA-43D, HGWA-44D, and HGWA-45D, which have samples through December 2020 for Appendix IV constituents (Figure F). As mentioned above, a reporting limit of 0.03 mg/L was substituted across all wells for lithium. Parametric tolerance limits are used when data follow a normal or transformed-normal distribution. When data contained greater than 50% nondetects or did not follow a normal or transformed-normal distribution, non-parametric tolerance limits were used. The background limits were then used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia EPD Rule 391-3-4-.10(6)(a).

As described in 40 CFR §257.95(h) (1-3), the GWPS is:

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

On July 30, 2018, USEPA revised the Federal CCR Rule updating GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR §257.95(h)(2). Georgia EPD has not incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a); therefore, for sites regulated under Georgia EPD Rules, the GWPS is:

- The MCL or
- The background concentration when an MCL is not established or when the background concentration is higher than the MCL.

Following Georgia EPD Rule requirements and the Federal CCR requirements, Federal and State GWPS were established for statistical comparison of Appendix IV constituents for all available samples in downgradient wells (Figures G and H, respectively). Delineation wells and piezometers are included in the confidence intervals when a minimum of 4 samples are available. At this time, only well MW-32 has sufficient samples for fluoride and molybdenum while piezometer MW-39 has sufficient samples for molybdenum.

Therefore, confidence intervals are included for these parameters at these wells. Note that GWPS are established for arsenic, cadmium, mercury, selenium, and thallium. However, since there were no recent detections of these parameters above the reporting limit, no statistical comparison with confidence intervals was required. Additionally, there are 100% nondetects for beryllium and no confidence intervals were required for this constituent.

To complete the statistical comparison of downgradient well data to GWPS, confidence intervals were constructed for the Appendix IV constituents in each downgradient well. The Sanitas software was used to calculate both the tolerance limits and the confidence intervals. For Federal requirements, confidence intervals were compared to the GWPS prepared according to the CCR Rule (Figure I). For the State requirements, confidence intervals were compared to the GWPS established using the Georgia EPD Rules 391-3-4-.10(6)(a) (Figure J). Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. Summaries of both the Federal and State confidence intervals follow this letter and exceedances were identified for the following well/constituent pairs:

The following confidence interval exceedances were identified:

Federal

- No exceedances

State

- Molybdenum: HGWC-120, MW-32, and MW-39

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Hammond AP-3. If you have any questions or comments, please feel free to contact me.

For Groundwater Stats Consulting,



Abdul Diane
Groundwater Analyst



Andrew Collins
Project Manager

100% Non-Detects

Analysis Run 2/12/2021 3:28 PM View: 100% NDs

Plant Hammond Client: Southern Company Data: Hammond Ash Pond 3

Antimony (mg/L)

HGWA-2, HGWC-120, HGWC-121A, HGWC-124, MW-39, MW-41, MW-46D

Arsenic (mg/L)

HGWA-122, HGWA-44D, MW-32, MW-39, MW-41

Beryllium (mg/L)

HGWA-1, HGWA-122, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, HGWC-120, HGWC-121A, HGWC-124, HGWC-125, HGWC-126, MW-32, MW-39, MW-41, MW-46D

Cadmium (mg/L)

HGWA-1, HGWA-122, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, HGWC-120, HGWC-121A, HGWC-124, HGWC-125, HGWC-126, MW-32, MW-39, MW-41

Chromium (mg/L)

HGWA-43D, HGWA-45D, MW-39, MW-41

Cobalt (mg/L)

HGWA-122, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, HGWC-124, HGWC-126

Lead (mg/L)

MW-32, MW-39, MW-41

Lithium (mg/L)

HGWA-122

Mercury (mg/L)

HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, HGWC-121A, HGWC-125, HGWC-126, MW-32, MW-39, MW-41

Molybdenum (mg/L)

HGWA-1, HGWA-2, HGWA-3, HGWC-121A, HGWC-126

Selenium (mg/L)

HGWA-1, HGWA-2, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, HGWC-125, HGWC-126, MW-32, MW-39, MW-41

Thallium (mg/L)

HGWA-1, HGWA-122, HGWA-3, HGWA-43D, HGWA-44D, HGWA-45D, HGWC-120, HGWC-121A, HGWC-124, HGWC-125, HGWC-126, MW-32, MW-39, MW-41

Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 12:39 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-120	0.336	9/21/2020	0.93	Yes	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-121A	0.336	9/28/2020	2.3	Yes	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-124	0.336	9/28/2020	0.43	Yes	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-125	0.336	12/16/2020	1.5	Yes	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-120	138	9/21/2020	152	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-121A	138	9/28/2020	167	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-125	138	12/16/2020	194	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-120	88.2	9/21/2020	225	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-121A	88.2	9/28/2020	182	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-125	88.2	12/16/2020	306	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-125	632	12/16/2020	816	Yes	68	n/a	n/a	0	n/a	n/a	0.0004151	NP Inter (normality) 1 of 2

Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 12:39 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-120	0.336	9/21/2020	0.93	Yes	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-121A	0.336	9/28/2020	2.3	Yes	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-124	0.336	9/28/2020	0.43	Yes	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-125	0.336	12/16/2020	1.5	Yes	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-126	0.336	12/16/2020	0.011J	No	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-120	138	9/21/2020	152	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-121A	138	9/28/2020	167	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-124	138	9/28/2020	107	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-125	138	12/16/2020	194	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-126	138	12/16/2020	132	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-120	41.1	9/21/2020	2.4	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-121A	41.1	9/28/2020	23.2	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-124	41.1	9/28/2020	2.5	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-125	41.1	12/16/2020	5.3	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-126	41.1	12/16/2020	8.9	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-120	0.67	9/21/2020	0.33	No	83	n/a	n/a	27.71	n/a	n/a	0.0002807	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-121A	0.67	9/28/2020	0.15	No	83	n/a	n/a	27.71	n/a	n/a	0.0002807	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-124	0.67	9/28/2020	0.1ND	No	83	n/a	n/a	27.71	n/a	n/a	0.0002807	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-125	0.67	12/16/2020	0.2	No	83	n/a	n/a	27.71	n/a	n/a	0.0002807	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-126	0.67	12/16/2020	0.49	No	83	n/a	n/a	27.71	n/a	n/a	0.0002807	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-120	7.87	9/21/2020	6.98	No	82	n/a	n/a	0	n/a	n/a	0.0005738	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-121A	7.87	9/28/2020	6.93	No	82	n/a	n/a	0	n/a	n/a	0.0005738	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-124	7.87	9/28/2020	7.27	No	82	n/a	n/a	0	n/a	n/a	0.0005738	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-125	7.87	12/16/2020	6.61	No	82	n/a	n/a	0	n/a	n/a	0.0005738	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-126	7.87	12/16/2020	6.93	No	82	n/a	n/a	0	n/a	n/a	0.0005738	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-120	88.2	9/21/2020	225	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-121A	88.2	9/28/2020	182	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-124	88.2	9/28/2020	86.2	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-125	88.2	12/16/2020	306	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-126	88.2	12/16/2020	68.1	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-120	632	9/21/2020	272	No	68	n/a	n/a	0	n/a	n/a	0.0004151	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-121A	632	9/28/2020	5ND	No	68	n/a	n/a	0	n/a	n/a	0.0004151	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-124	632	9/28/2020	176	No	68	n/a	n/a	0	n/a	n/a	0.0004151	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-125	632	12/16/2020	816	Yes	68	n/a	n/a	0	n/a	n/a	0.0004151	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-126	632	12/16/2020	536	No	68	n/a	n/a	0	n/a	n/a	0.0004151	NP Inter (normality) 1 of 2

Trend Test Summary - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 12:46 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-2 (bg)	0.002014	57	53	Yes	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-121A	-0.2314	-49	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-122 (bg)	-1.81	-46	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-3 (bg)	1.639	64	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-120	-17.58	-50	-48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-121A	-25.97	-50	-43	Yes	13	0	n/a	n/a	0.01	NP

Trend Test Summary - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 12:46 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-1 (bg)	0.0004675	7	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-122 (bg)	-0.02677	-41	-43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-2 (bg)	0.002014	57	53	Yes	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-3 (bg)	-0.0006127	-25	-58	No	16	12.5	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-43D (bg)	-0.0365	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Boron (mg/L)	HGWA-44D (bg)	0.3244	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Boron (mg/L)	HGWA-45D (bg)	0	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Boron (mg/L)	HGWC-120	-0.05419	-39	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-121A	-0.2314	-49	-43	Yes	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-124	-0.01814	-35	-43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-125	0	-3	-14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-1 (bg)	6.226	48	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-122 (bg)	0.6171	4	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-2 (bg)	0.02596	1	53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	2.935	46	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-43D (bg)	26.77	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Calcium (mg/L)	HGWA-44D (bg)	-5.272	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Calcium (mg/L)	HGWA-45D (bg)	-1.78	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Calcium (mg/L)	HGWC-120	2.933	18	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-121A	-5.808	-21	-43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-125	44.88	7	14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-1 (bg)	7.687	53	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-122 (bg)	-1.81	-46	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.235	49	53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-3 (bg)	1.639	64	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-43D (bg)	-17.03	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Sulfate (mg/L)	HGWA-44D (bg)	-147.2	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Sulfate (mg/L)	HGWA-45D (bg)	20.03	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Sulfate (mg/L)	HGWC-120	-17.58	-50	-48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-121A	-25.97	-50	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-125	-48.99	-5	-14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	18.73	26	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-122 (bg)	-1.249	-2	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-2 (bg)	-3.989	-24	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-3 (bg)	2.145	12	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-43D (bg)	68.94	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Total Dissolved Solids (mg/L)	HGWA-44D (bg)	101.4	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Total Dissolved Solids (mg/L)	HGWA-45D (bg)	138	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Total Dissolved Solids (mg/L)	HGWC-125	71.04	3	14	No	6	0	n/a	n/a	0.01	NP

Interwell Tolerance Limits Summary

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 12:55 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	n/a	0.003	68	n/a	n/a	86.76	n/a	n/a	0.03056	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	70	n/a	n/a	71.43	n/a	n/a	0.02758	NP Inter(normality)
Barium (mg/L)	n/a	0.52	76	n/a	n/a	0	n/a	n/a	0.02028	NP Inter(normality)
Beryllium (mg/L)	n/a	0.003	68	n/a	n/a	80.88	n/a	n/a	0.03056	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0025	70	n/a	n/a	90	n/a	n/a	0.02758	NP Inter(NDs)
Chromium (mg/L)	n/a	0.01	70	n/a	n/a	74.29	n/a	n/a	0.02758	NP Inter(normality)
Cobalt (mg/L)	n/a	0.038	76	n/a	n/a	75	n/a	n/a	0.02028	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	n/a	4.36	76	n/a	n/a	0	n/a	n/a	0.02028	NP Inter(normality)
Fluoride (mg/L)	n/a	0.67	83	n/a	n/a	27.71	n/a	n/a	0.01416	NP Inter(normality)
Lead (mg/L)	n/a	0.005	70	n/a	n/a	61.43	n/a	n/a	0.02758	NP Inter(normality)
Lithium (mg/L)	n/a	0.03	76	n/a	n/a	38.16	n/a	n/a	0.02028	NP Inter(normality)
Mercury (mg/L)	n/a	0.0005	55	n/a	n/a	90.91	n/a	n/a	0.05954	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	78	n/a	n/a	73.08	n/a	n/a	0.0183	NP Inter(normality)
Selenium (mg/L)	n/a	0.01	70	n/a	n/a	98.57	n/a	n/a	0.02758	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	70	n/a	n/a	98.57	n/a	n/a	0.02758	NP Inter(NDs)

PLANT HAMMOND AP-3 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		0.52	2
Beryllium, Total (mg/L)	0.004		0.003	0.004
Cadmium, Total (mg/L)	0.005		0.0025	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.67	4
Lead, Total (mg/L)	n/a	0.015	0.005	0.015
Lithium, Total (mg/L)	n/a	0.04	0.03	0.04
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.1
Selenium, Total (mg/L)	0.05		0.01	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

PLANT HAMMOND AP-3 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		0.52	2
Beryllium, Total (mg/L)	0.004		0.003	0.004
Cadmium, Total (mg/L)	0.005		0.0025	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.67	4
Lead, Total (mg/L)	n/a	0.015	0.005	0.005
Lithium, Total (mg/L)	n/a	0.04	0.03	0.03
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.01
Selenium, Total (mg/L)	0.05		0.01	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

Federal Confidence Interval Summary Table - All Results (No Significant)

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 1:04 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-125	0.003	0.00047	0.006	No 6	0.002578	0.001033	83.33	None	No	0.0155	NP (NDs)
Antimony (mg/L)	HGWC-126	0.003	0.0004	0.006	No 6	0.002567	0.001061	83.33	None	No	0.0155	NP (NDs)
Barium (mg/L)	HGWC-120	0.05206	0.04548	2	No 13	0.04877	0.004422	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-121A	0.08505	0.06703	2	No 13	0.07604	0.01211	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-124	0.07376	0.06659	2	No 13	0.07018	0.004822	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-125	0.04916	0.03984	2	No 6	0.0445	0.003391	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-126	0.24	0.21	2	No 6	0.2317	0.01169	0	None	No	0.0155	NP (normality)
Chromium (mg/L)	HGWC-120	0.01	0.00072	0.1	No 13	0.007913	0.00397	76.92	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-121A	0.01	0.0005	0.1	No 13	0.009269	0.002635	92.31	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-124	0.01	0.00051	0.1	No 13	0.008536	0.003573	84.62	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-125	0.01	0.00052	0.1	No 6	0.00685	0.00488	66.67	None	No	0.0155	NP (normality)
Chromium (mg/L)	HGWC-126	0.01	0.00096	0.1	No 6	0.008493	0.003691	83.33	None	No	0.0155	NP (NDs)
Cobalt (mg/L)	HGWC-120	0.003987	0.002859	0.038	No 13	0.003423	0.0007585	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-121A	0.005	0.0005	0.038	No 13	0.003931	0.002032	76.92	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-125	0.01296	0.006308	0.038	No 6	0.009633	0.00242	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-120	1.121	0.5734	5	No 13	0.8474	0.3685	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-121A	1.279	0.5176	5	No 13	0.8985	0.5123	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-124	0.9537	0.6046	5	No 13	0.7792	0.2348	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-125	1.774	0.6055	5	No 6	1.158	0.4637	16.67	Kaplan-Meier	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-126	1.82	0.837	5	No 6	1.4	0.4854	0	None	No	0.0155	NP (normality)
Fluoride (mg/L)	HGWC-120	0.8531	0.4277	4	No 16	0.6925	0.3863	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	HGWC-121A	0.23	0.14	4	No 14	0.2682	0.2942	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-124	0.15	0.05	4	No 14	0.1091	0.08582	28.57	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-125	0.1869	0.08305	4	No 6	0.135	0.03782	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-126	0.5116	0.4184	4	No 6	0.465	0.03391	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-32	0.3721	0.3079	4	No 4	0.34	0.01414	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-120	0.005	0.00009	0.015	No 13	0.003875	0.002139	76.92	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-121A	0.005	0.00036	0.015	No 13	0.004264	0.001798	84.62	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-124	0.005	0.000075	0.015	No 13	0.003104	0.002497	61.54	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-125	0.005	0.000047	0.015	No 6	0.002553	0.002681	50	None	No	0.0155	NP (normality)
Lead (mg/L)	HGWC-126	0.005	0.000042	0.015	No 6	0.003348	0.00256	66.67	None	No	0.0155	NP (normality)
Lithium (mg/L)	HGWC-120	0.03385	0.0279	0.04	No 13	0.03058	0.004517	0	None	x^3	0.01	Param.
Lithium (mg/L)	HGWC-121A	0.009335	0.007773	0.04	No 13	0.008554	0.00105	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-124	0.025	0.0011	0.04	No 13	0.0103	0.0121	38.46	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-125	0.0055	0.0037	0.04	No 6	0.00455	0.0008643	0	None	No	0.0155	NP (normality)
Lithium (mg/L)	HGWC-126	0.00468	0.002787	0.04	No 6	0.003733	0.000689	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-120	0.03897	0.02407	0.1	No 13	0.03152	0.01002	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-124	0.01	0.00091	0.1	No 13	0.004532	0.004503	38.46	None	No	0.01	NP (normality)
Molybdenum (mg/L)	HGWC-125	0.009948	-0.00304	0.1	No 6	0.007782	0.005226	50	Kaplan-Meier	No	0.01	Param.
Molybdenum (mg/L)	MW-32	0.06546	0.05774	0.1	No 5	0.0616	0.002302	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-39	0.064	0.012	0.1	No 4	0.05	0.02535	0	None	No	0.0625	NP (normality)

State Confidence Interval Summary Table - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 1:07 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	HGWC-120	0.03897	0.02407	0.01	Yes 13	0.03152	0.01002	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-32	0.06546	0.05774	0.01	Yes 5	0.0616	0.002302	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-39	0.064	0.012	0.01	Yes 4	0.05	0.02535	0	None	No	0.0625	NP (normality)

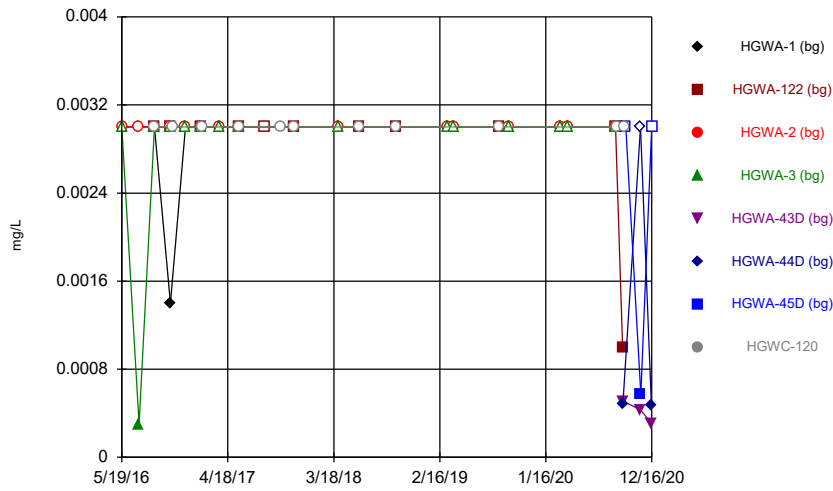
State Confidence Interval Summary Table - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 1:07 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-125	0.003	0.00047	0.006	No 6	0.002578	0.001033	83.33	None	No	0.0155	NP (NDs)
Antimony (mg/L)	HGWC-126	0.003	0.0004	0.006	No 6	0.002567	0.001061	83.33	None	No	0.0155	NP (NDs)
Barium (mg/L)	HGWC-120	0.05206	0.04548	2	No 13	0.04877	0.004422	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-121A	0.08505	0.06703	2	No 13	0.07604	0.01211	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-124	0.07376	0.06659	2	No 13	0.07018	0.004822	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-125	0.04916	0.03984	2	No 6	0.0445	0.003391	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-126	0.24	0.21	2	No 6	0.2317	0.01169	0	None	No	0.0155	NP (normality)
Chromium (mg/L)	HGWC-120	0.01	0.00072	0.1	No 13	0.007913	0.00397	76.92	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-121A	0.01	0.0005	0.1	No 13	0.009269	0.002635	92.31	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-124	0.01	0.00051	0.1	No 13	0.008536	0.003573	84.62	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-125	0.01	0.00052	0.1	No 6	0.00685	0.00488	66.67	None	No	0.0155	NP (normality)
Chromium (mg/L)	HGWC-126	0.01	0.00096	0.1	No 6	0.008493	0.003691	83.33	None	No	0.0155	NP (NDs)
Cobalt (mg/L)	HGWC-120	0.003987	0.002859	0.038	No 13	0.003423	0.0007585	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-121A	0.005	0.0005	0.038	No 13	0.003931	0.002032	76.92	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-125	0.01296	0.006308	0.038	No 6	0.009633	0.00242	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-120	1.121	0.5734	5	No 13	0.8474	0.3685	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-121A	1.279	0.5176	5	No 13	0.8985	0.5123	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-124	0.9537	0.6046	5	No 13	0.7792	0.2348	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-125	1.774	0.6055	5	No 6	1.158	0.4637	16.67	Kaplan-Meier	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-126	1.82	0.837	5	No 6	1.4	0.4854	0	None	No	0.0155	NP (normality)
Fluoride (mg/L)	HGWC-120	0.8531	0.4277	4	No 16	0.6925	0.3863	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	HGWC-121A	0.23	0.14	4	No 14	0.2682	0.2942	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-124	0.15	0.05	4	No 14	0.1091	0.08582	28.57	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-125	0.1869	0.08305	4	No 6	0.135	0.03782	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-126	0.5116	0.4184	4	No 6	0.465	0.03391	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-32	0.3721	0.3079	4	No 4	0.34	0.01414	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-120	0.005	0.00009	0.005	No 13	0.003875	0.002139	76.92	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-121A	0.005	0.00036	0.005	No 13	0.004264	0.001798	84.62	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-124	0.005	0.000075	0.005	No 13	0.003104	0.002497	61.54	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-125	0.005	0.000047	0.005	No 6	0.002553	0.002681	50	None	No	0.0155	NP (normality)
Lead (mg/L)	HGWC-126	0.005	0.000042	0.005	No 6	0.003348	0.00256	66.67	None	No	0.0155	NP (normality)
Lithium (mg/L)	HGWC-120	0.03385	0.0279	0.03	No 13	0.03058	0.004517	0	None	x^3	0.01	Param.
Lithium (mg/L)	HGWC-121A	0.009335	0.007773	0.03	No 13	0.008554	0.00105	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-124	0.025	0.0011	0.03	No 13	0.0103	0.0121	38.46	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-125	0.0055	0.0037	0.03	No 6	0.00455	0.0008643	0	None	No	0.0155	NP (normality)
Lithium (mg/L)	HGWC-126	0.00468	0.002787	0.03	No 6	0.003733	0.000689	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-120	0.03897	0.02407	0.01	Yes 13	0.03152	0.01002	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-124	0.01	0.00091	0.01	No 13	0.004532	0.004503	38.46	None	No	0.01	NP (normality)
Molybdenum (mg/L)	HGWC-125	0.009948	-0.00304	0.01	No 6	0.007782	0.005226	50	Kaplan-Meier	No	0.01	Param.
Molybdenum (mg/L)	MW-32	0.06546	0.05774	0.01	Yes 5	0.0616	0.002302	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-39	0.064	0.012	0.01	Yes 4	0.05	0.02535	0	None	No	0.0625	NP (normality)

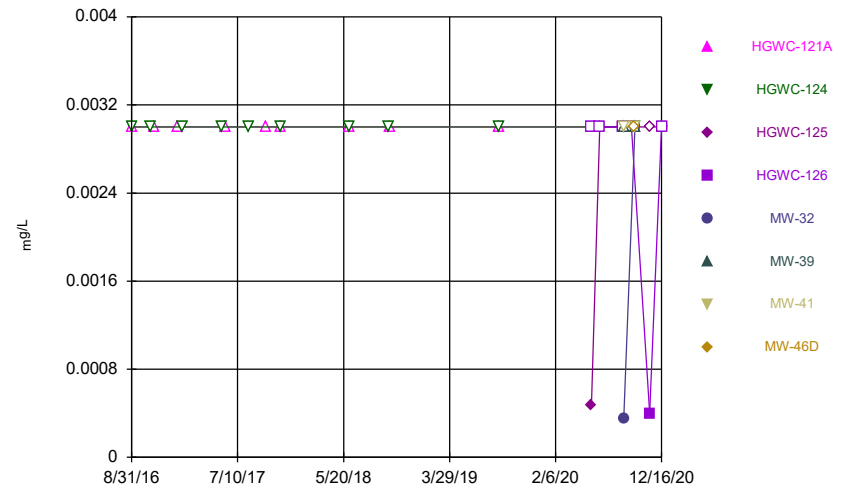
FIGURE A.

Time Series



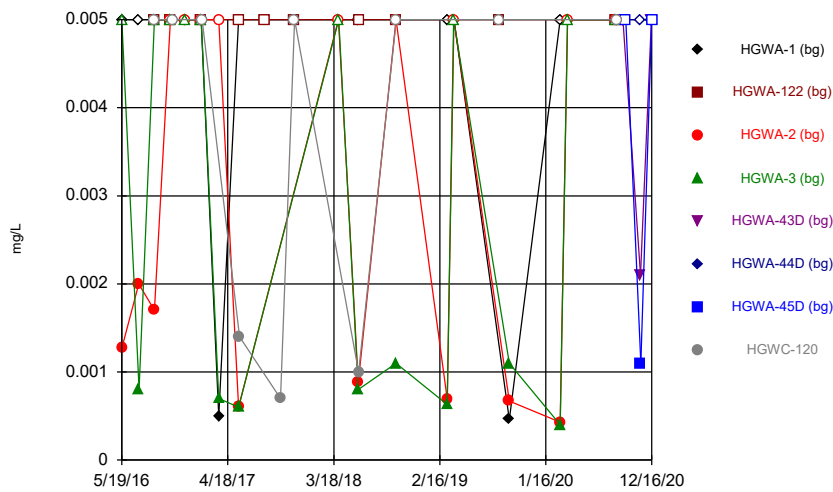
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 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



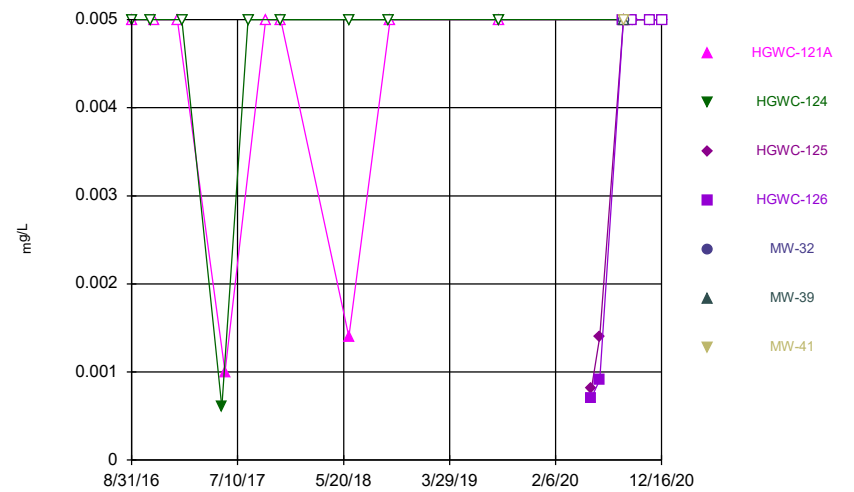
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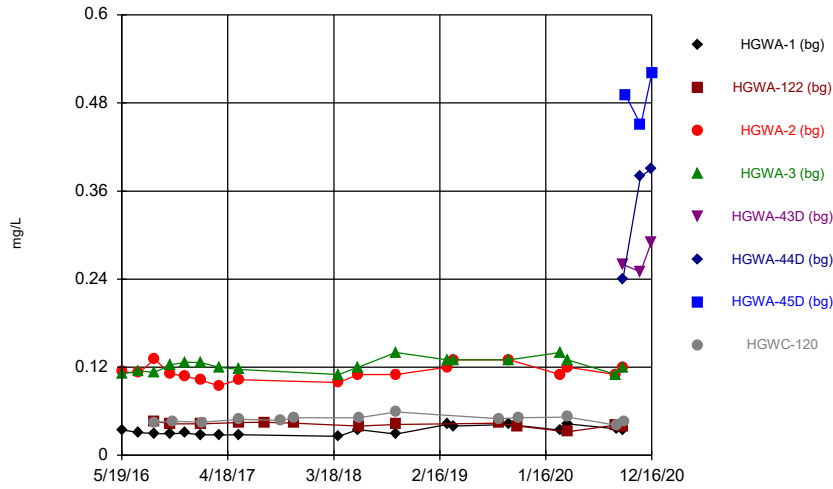
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Time Series



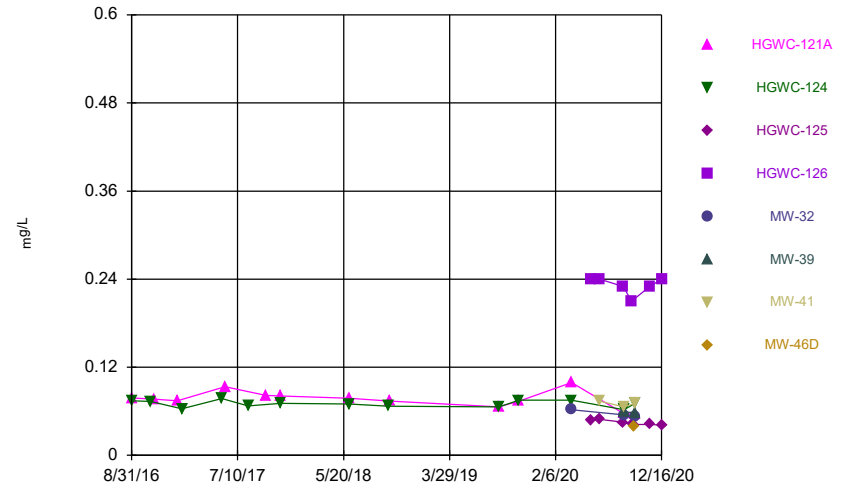
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 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



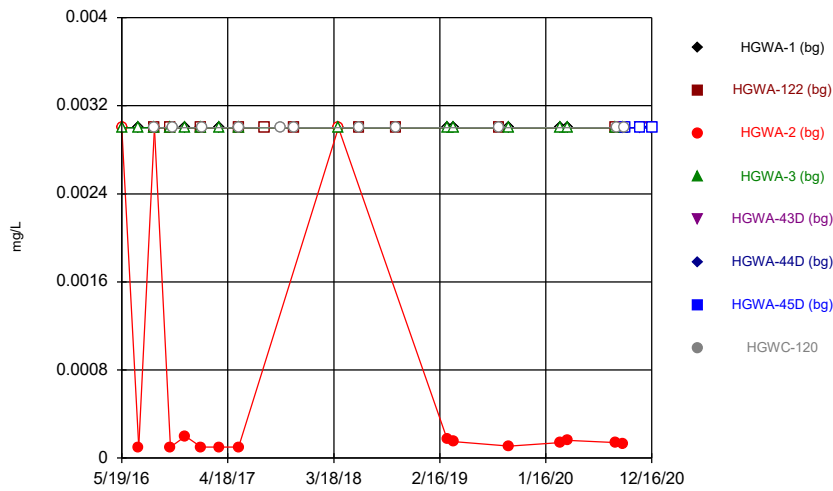
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 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



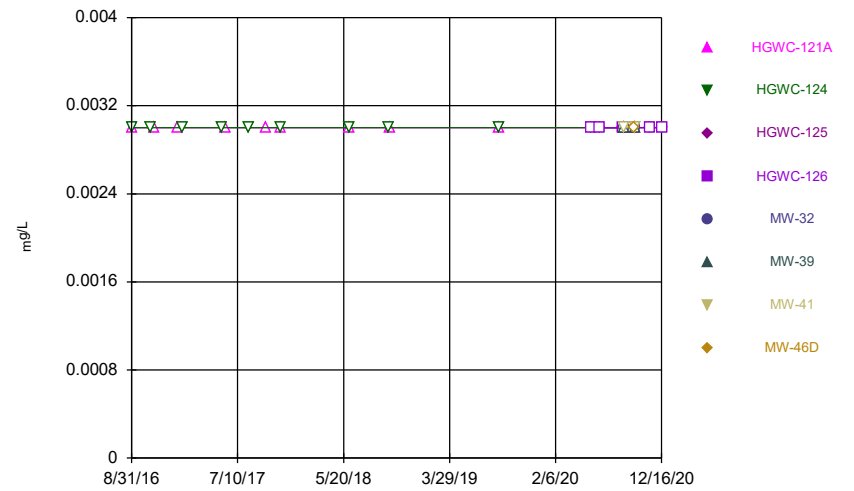
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 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



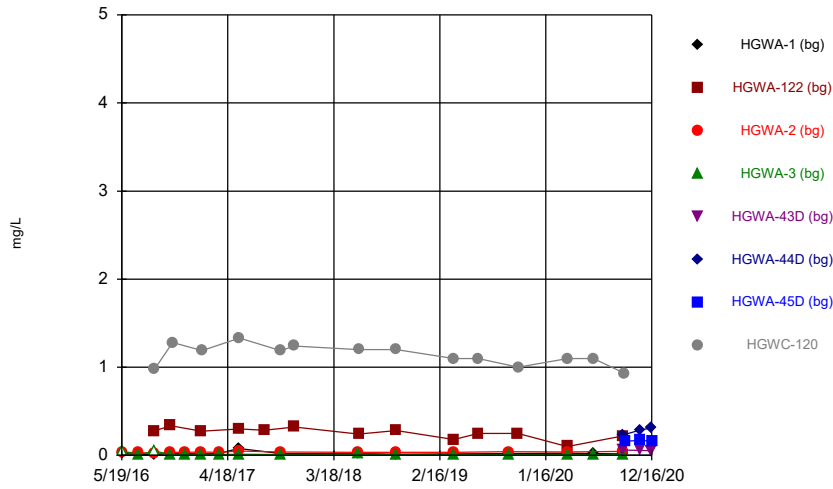
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 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



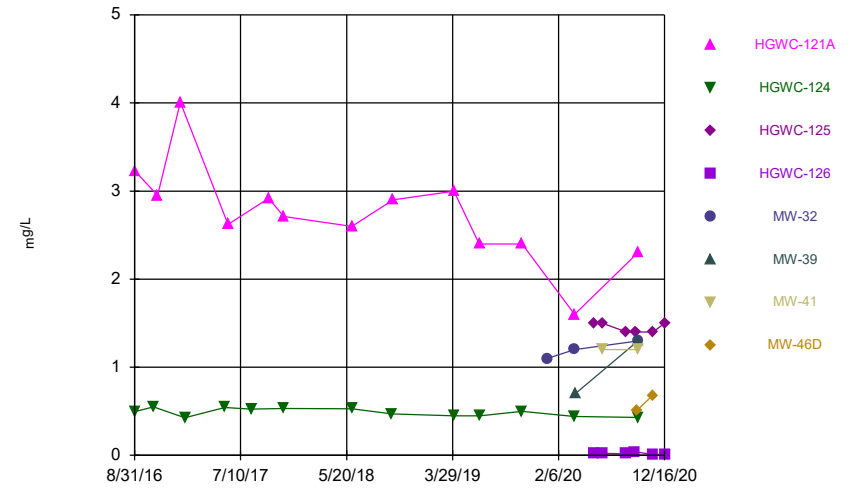
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 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



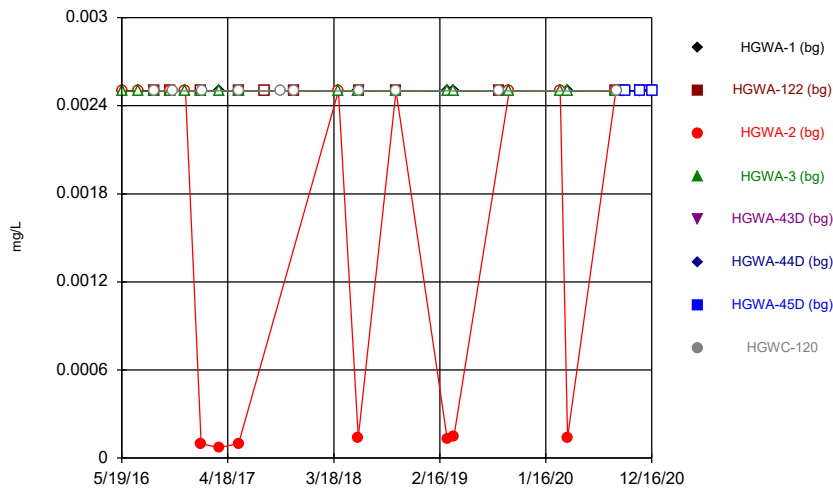
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 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



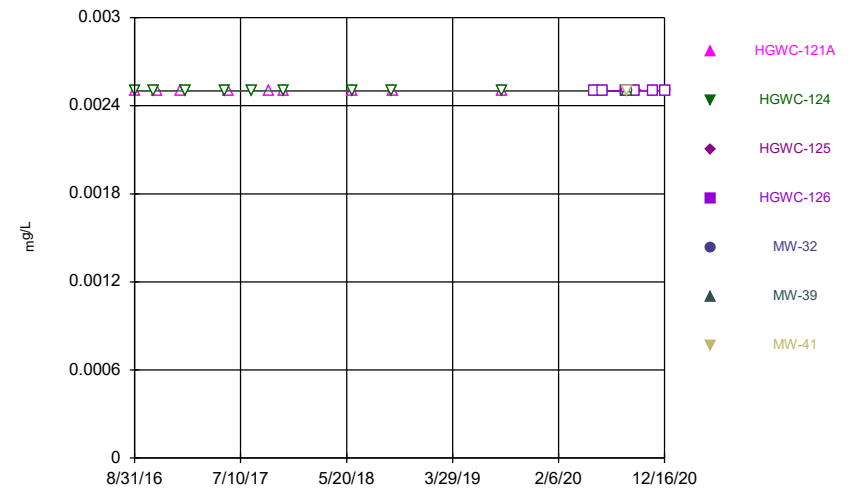
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 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



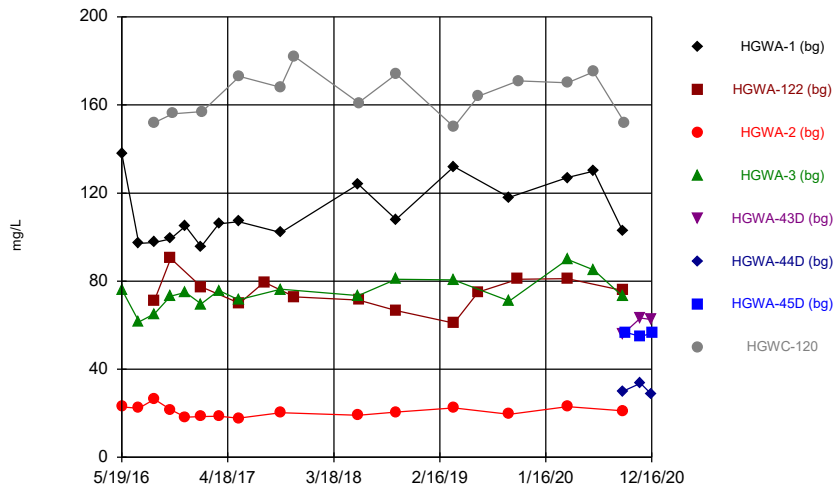
Constituent: Cadmium Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



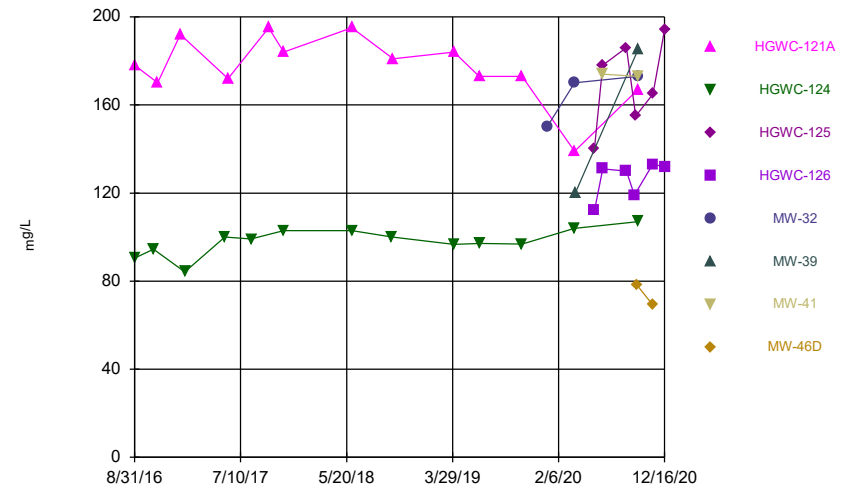
Constituent: Cadmium Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



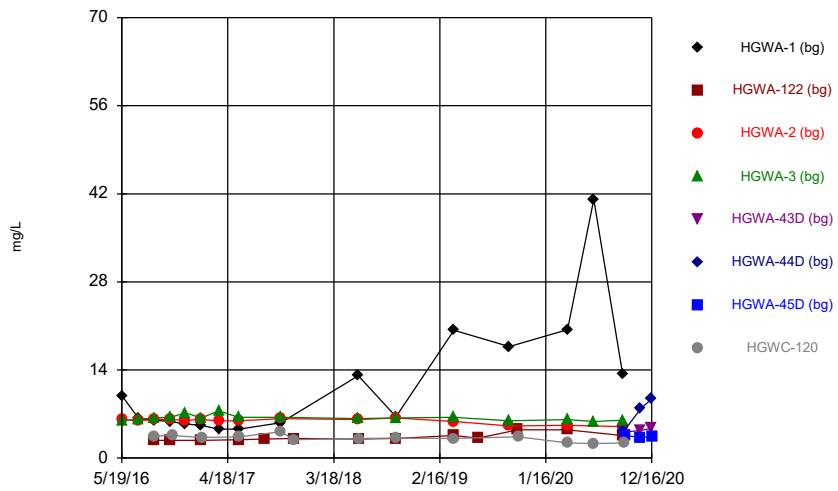
Constituent: Calcium Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



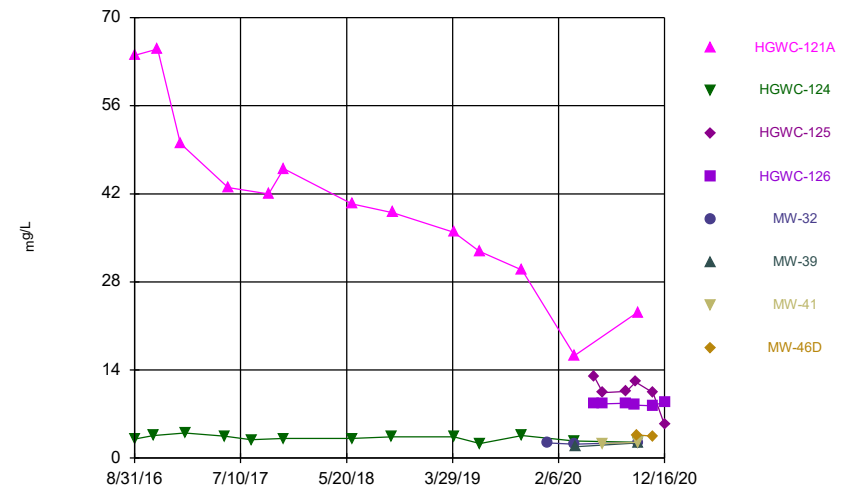
Constituent: Calcium Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



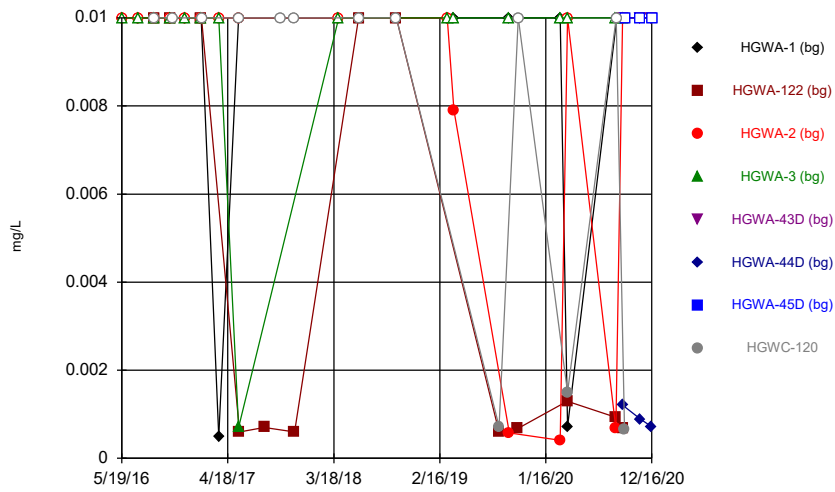
Constituent: Chloride Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



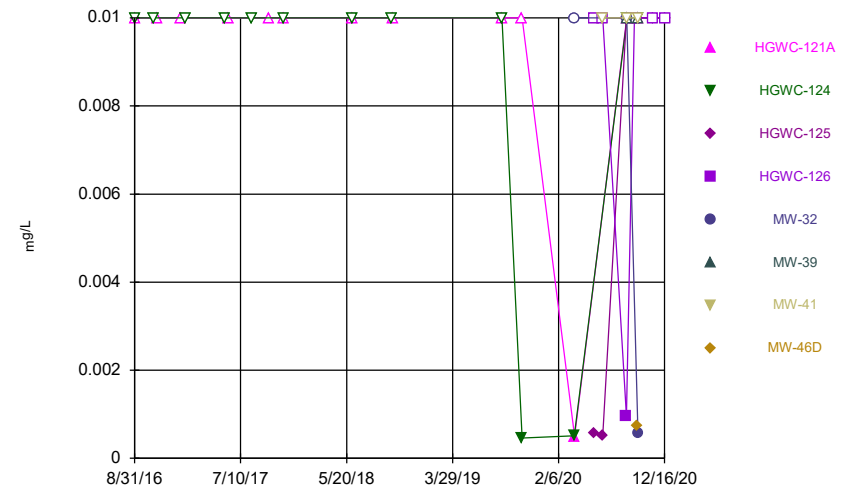
Constituent: Chloride Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



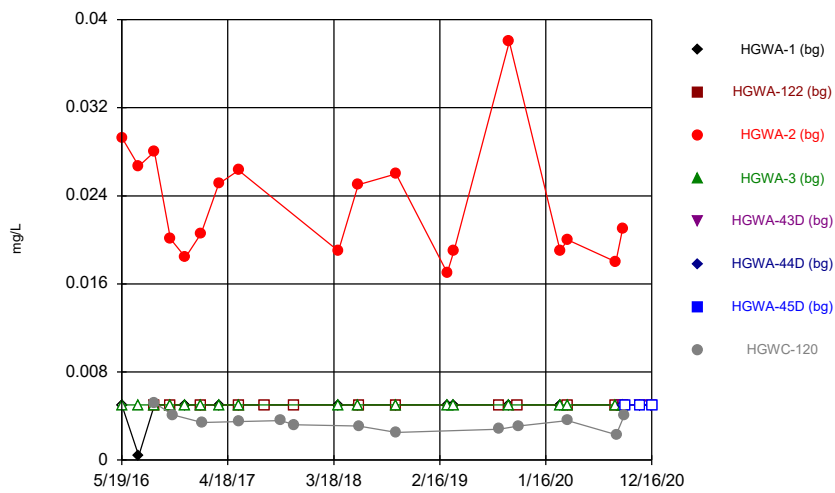
Constituent: Chromium Analysis Run 2/16/2021 12:25 PM View: Descriptive
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



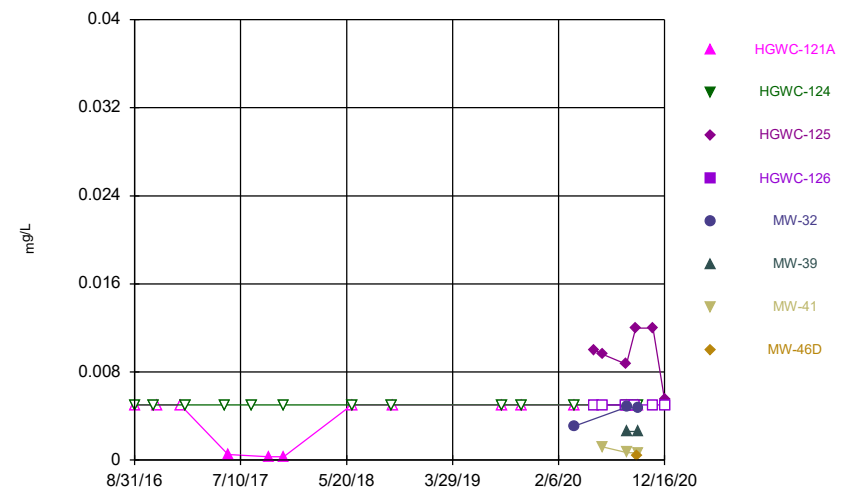
Constituent: Chromium Analysis Run 2/16/2021 12:25 PM View: Descriptive
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



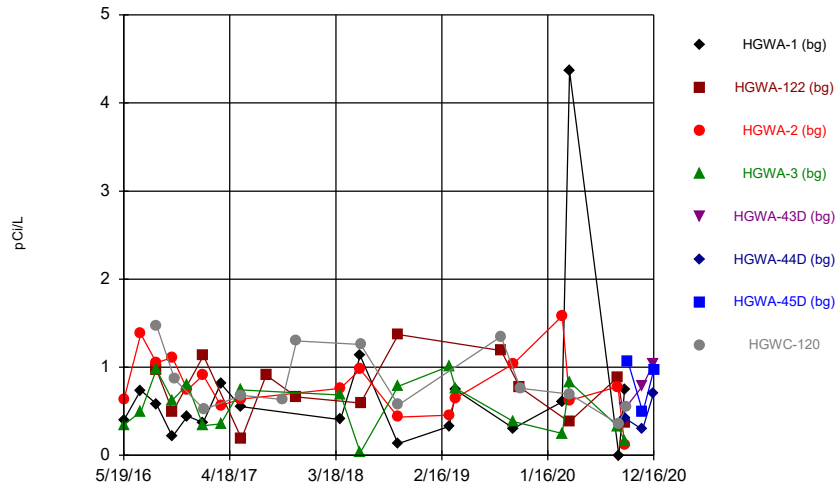
Constituent: Cobalt Analysis Run 2/16/2021 12:25 PM View: Descriptive
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



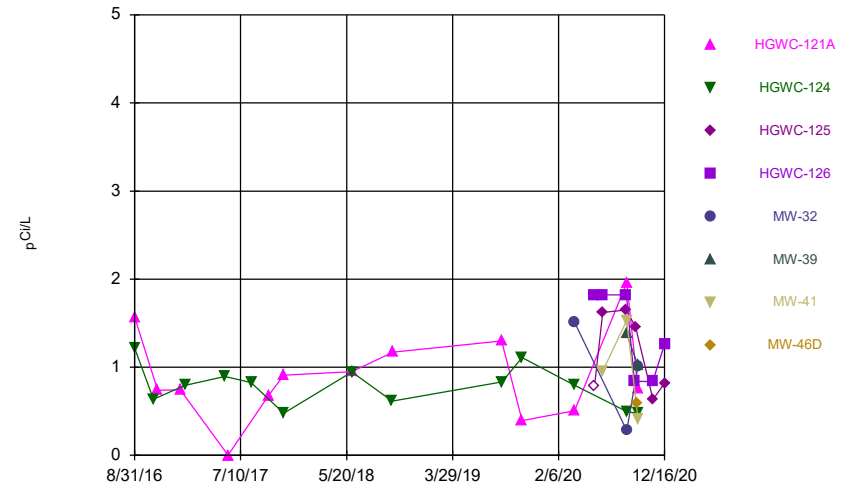
Constituent: Cobalt Analysis Run 2/16/2021 12:25 PM View: Descriptive
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



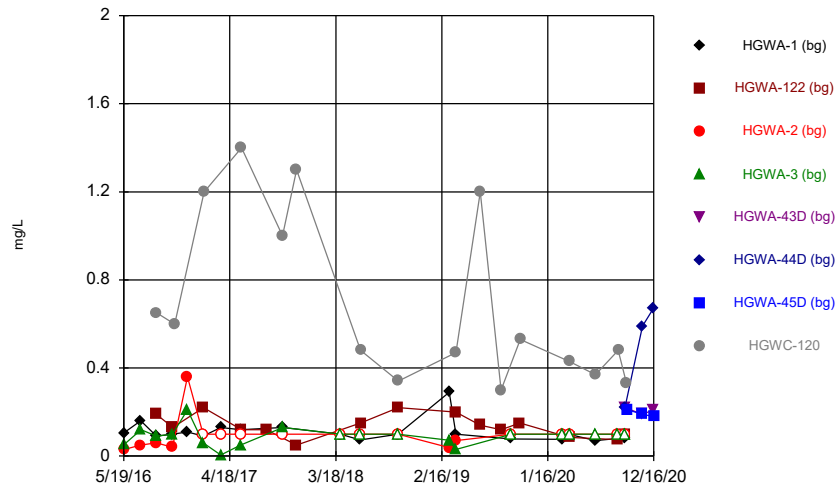
Constituent: Combined Radium 226 + 228 Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



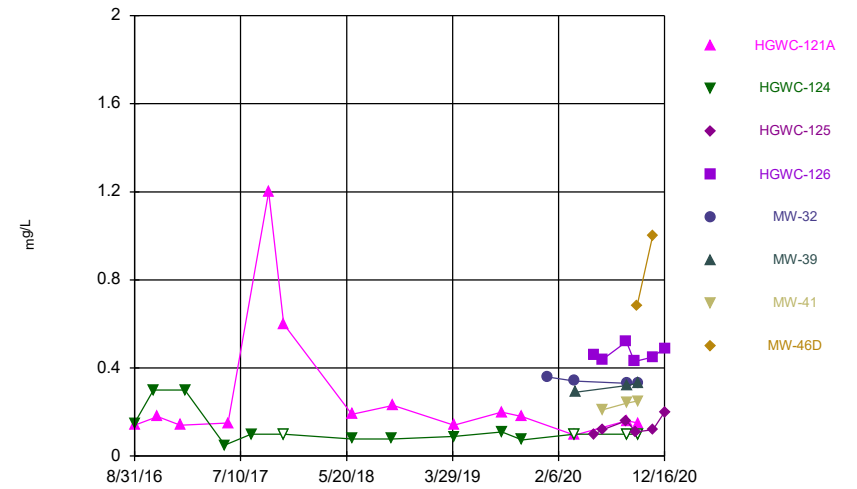
Constituent: Combined Radium 226 + 228 Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



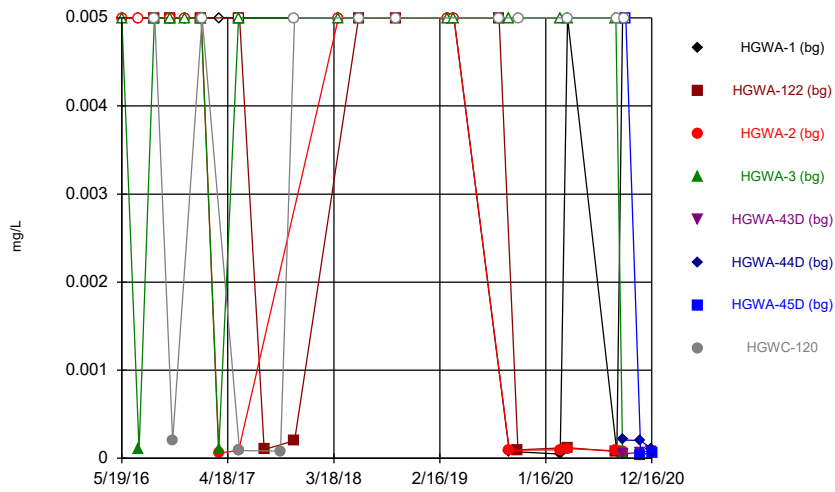
Constituent: Fluoride Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



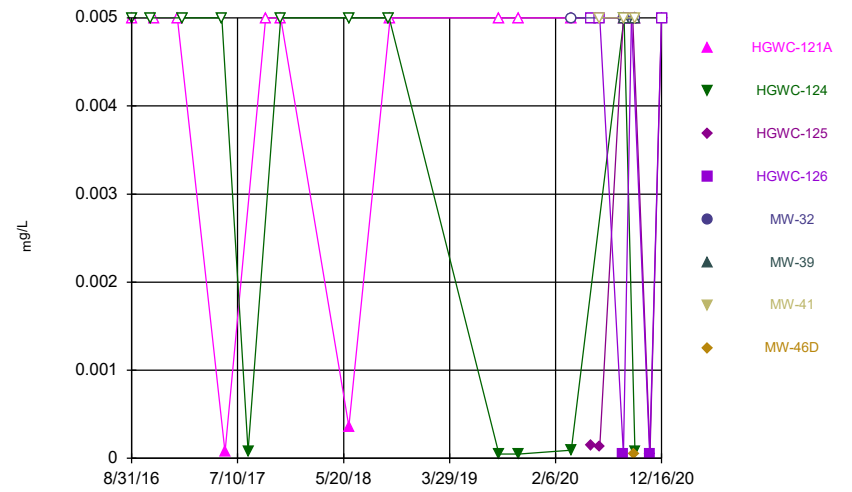
Constituent: Fluoride Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



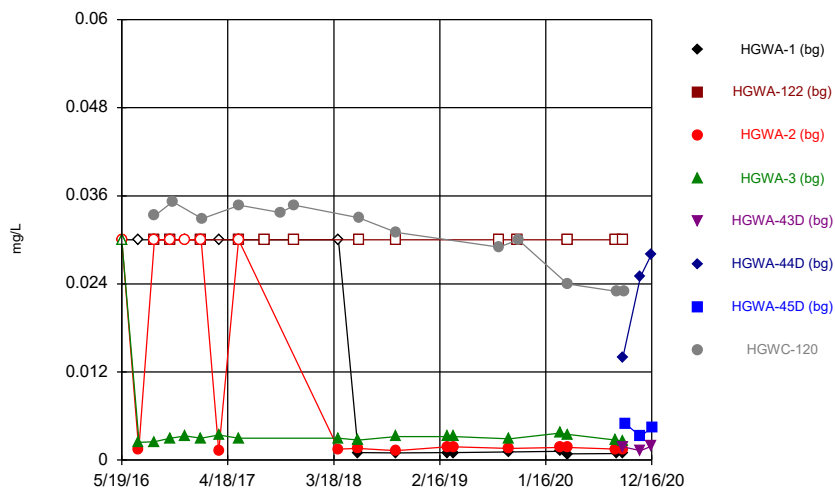
Constituent: Lead Analysis Run 2/16/2021 12:25 PM View: Descriptive
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



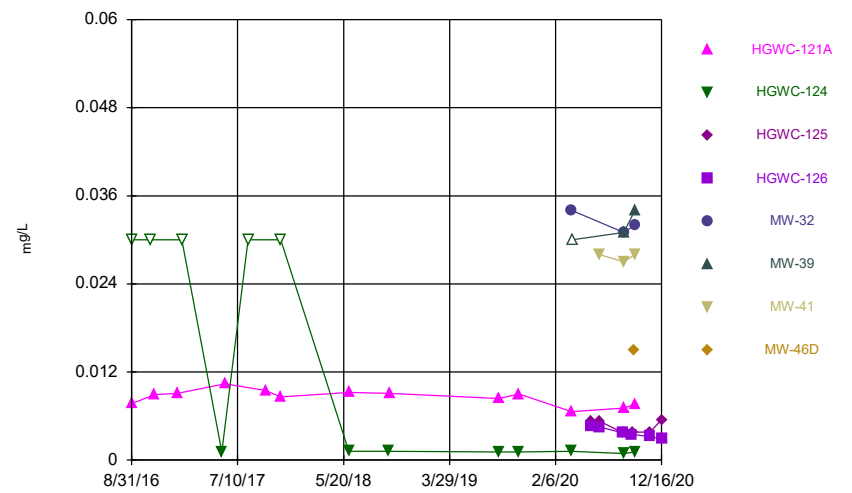
Constituent: Lead Analysis Run 2/16/2021 12:25 PM View: Descriptive
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



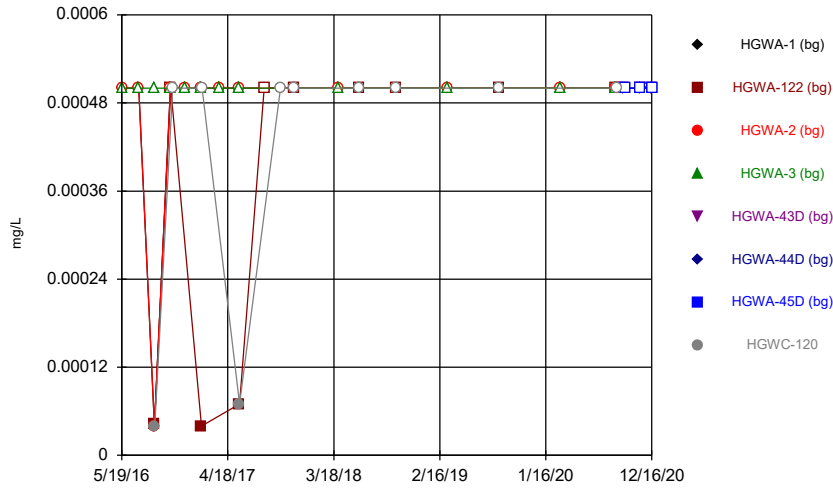
Constituent: Lithium Analysis Run 2/16/2021 12:25 PM View: Descriptive
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



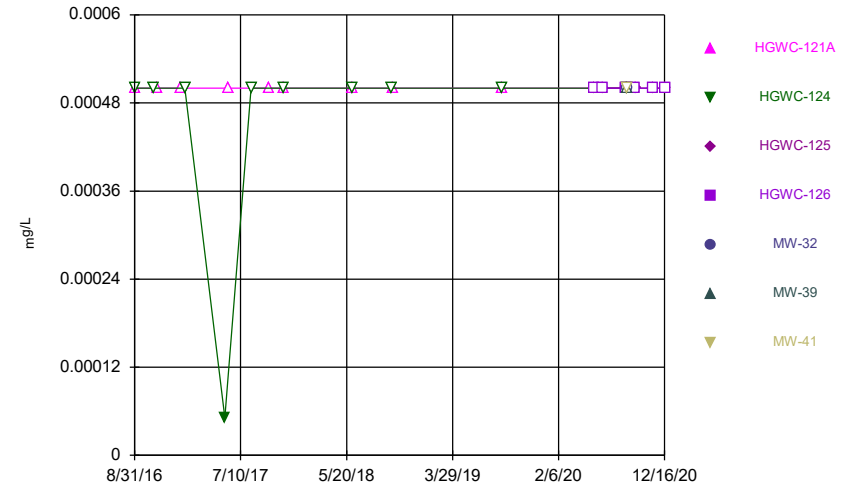
Constituent: Lithium Analysis Run 2/16/2021 12:25 PM View: Descriptive
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



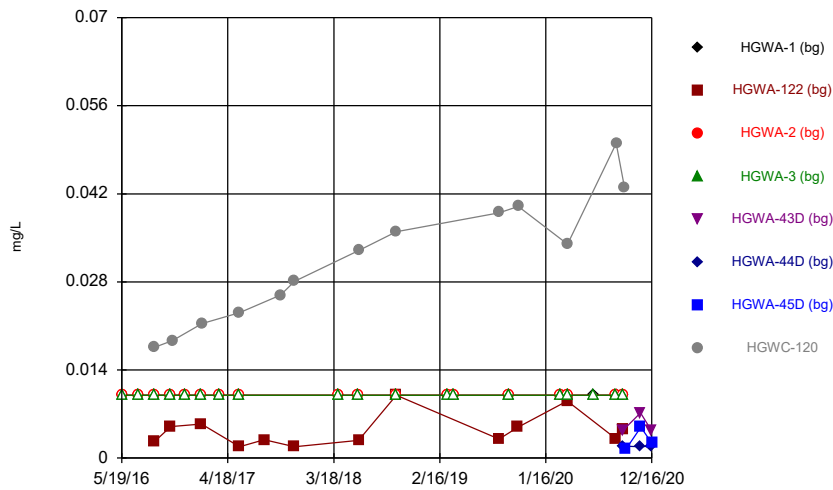
Constituent: Mercury Analysis Run 2/16/2021 12:25 PM View: Descriptive
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



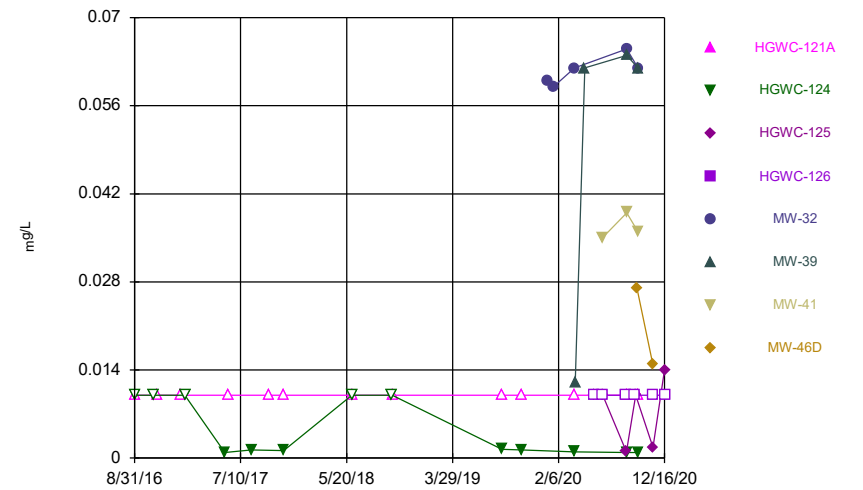
Constituent: Mercury Analysis Run 2/16/2021 12:25 PM View: Descriptive
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



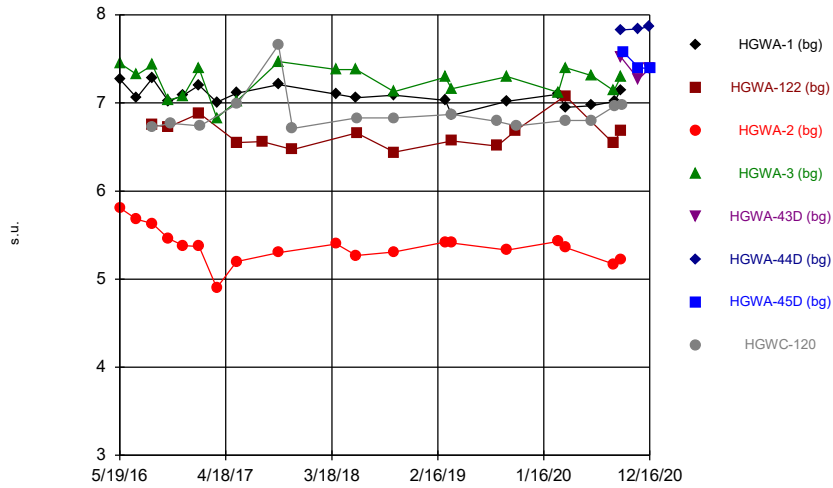
Constituent: Molybdenum Analysis Run 2/16/2021 12:25 PM View: Descriptive
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



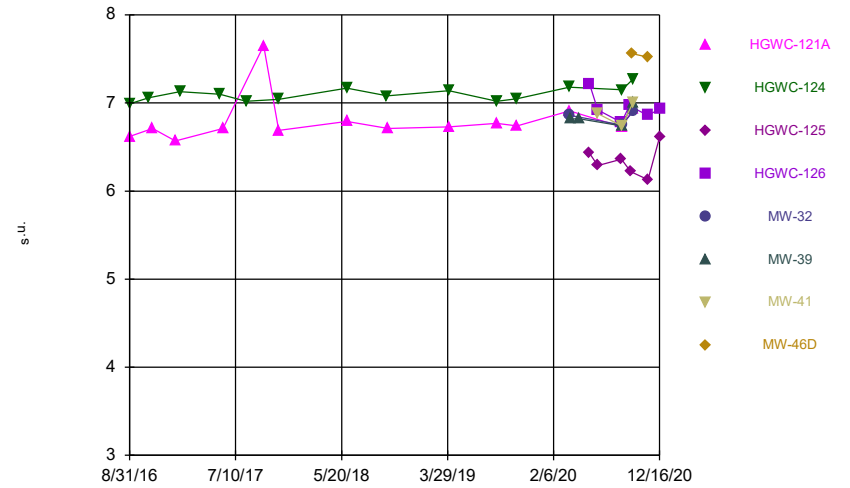
Constituent: Molybdenum Analysis Run 2/16/2021 12:25 PM View: Descriptive
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



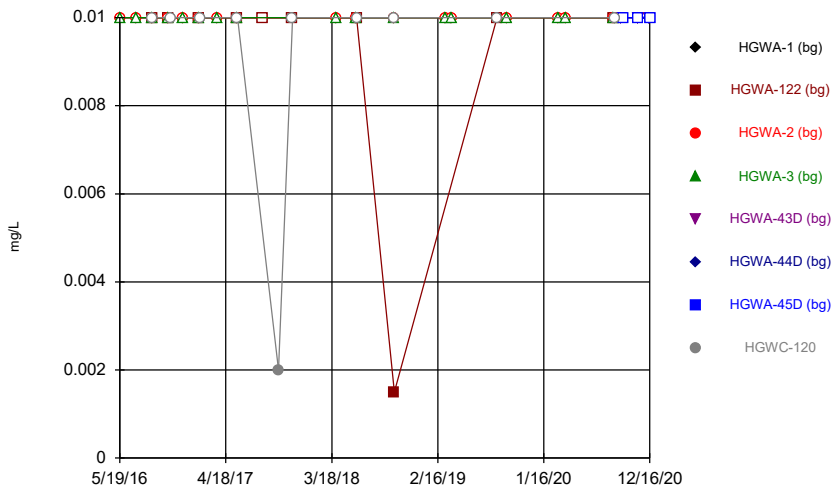
Constituent: pH Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



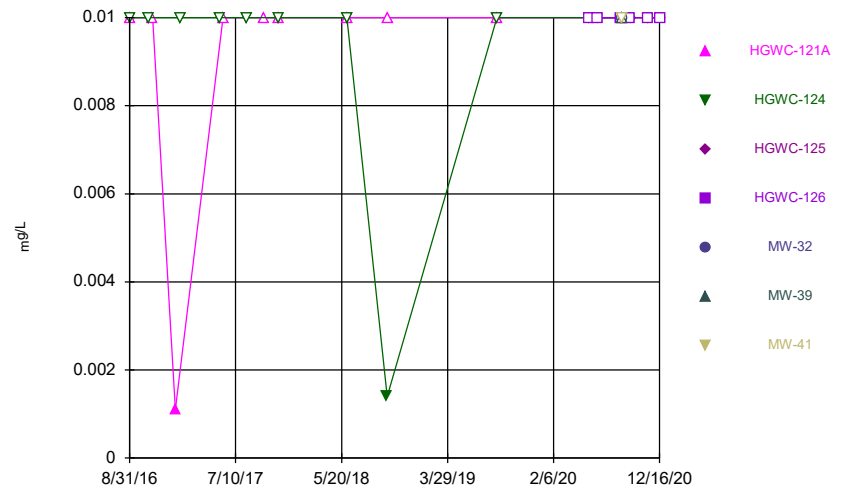
Constituent: pH Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



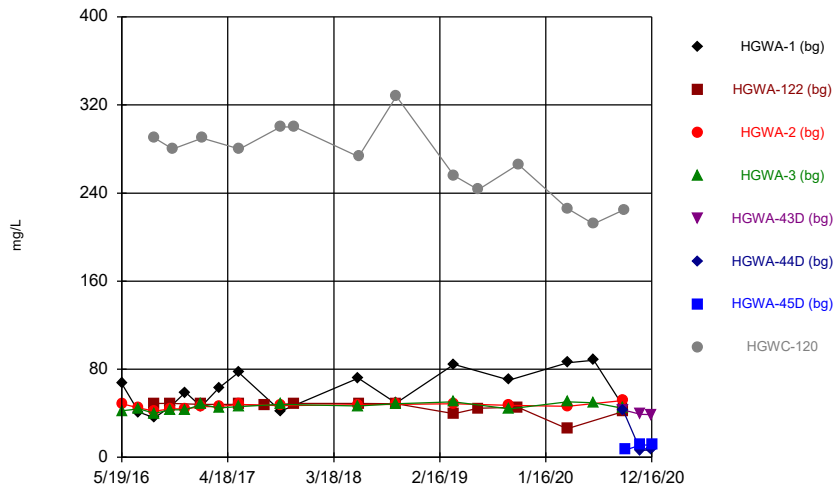
Constituent: Selenium Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



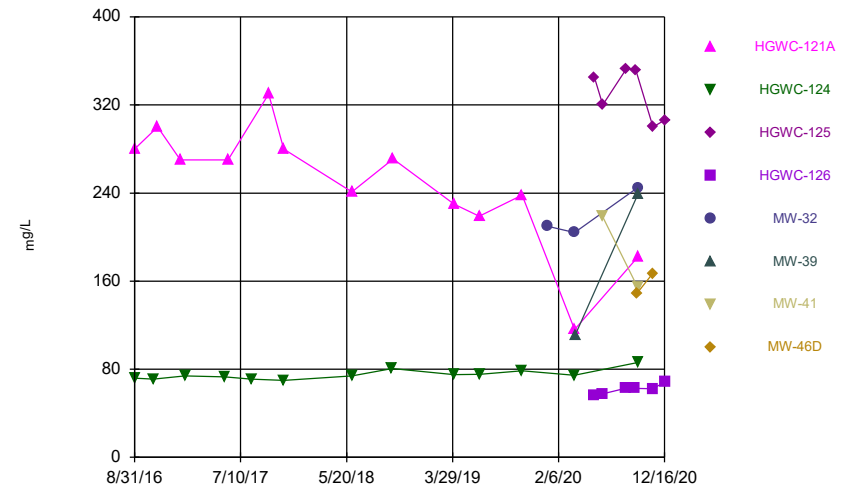
Constituent: Selenium Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



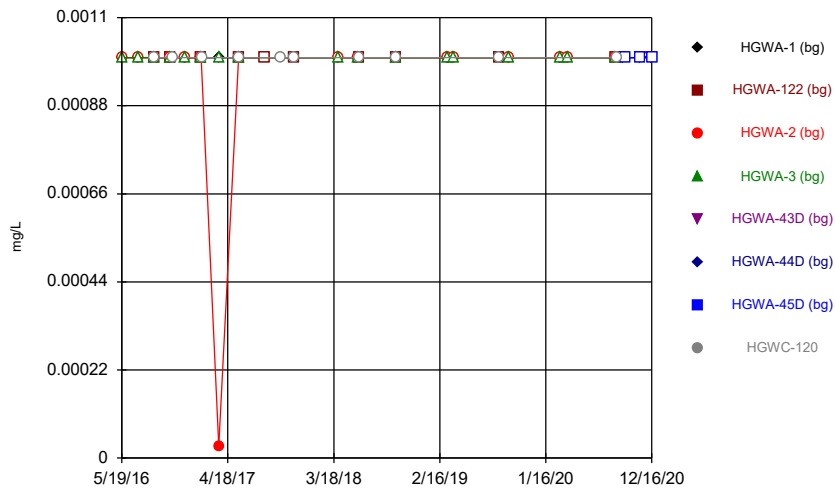
Constituent: Sulfate Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



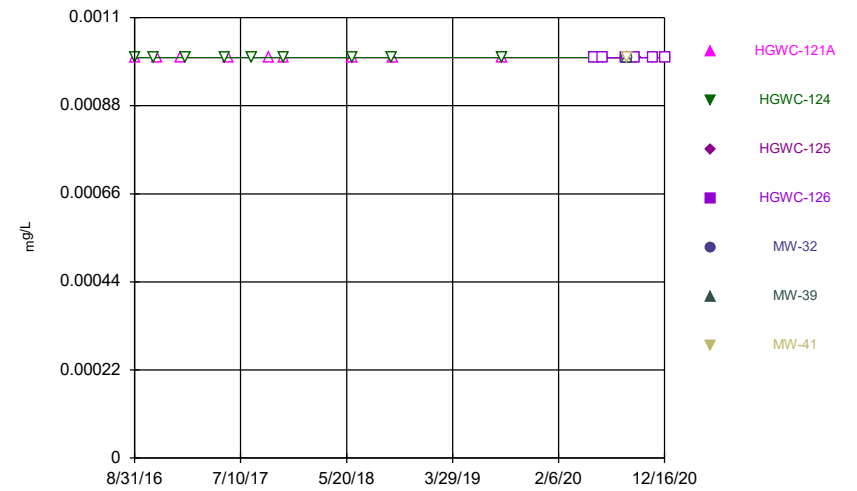
Constituent: Sulfate Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



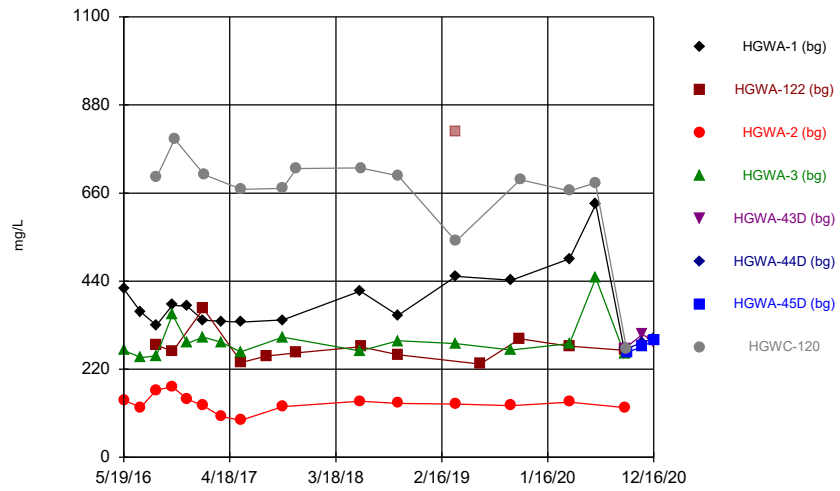
Constituent: Thallium Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



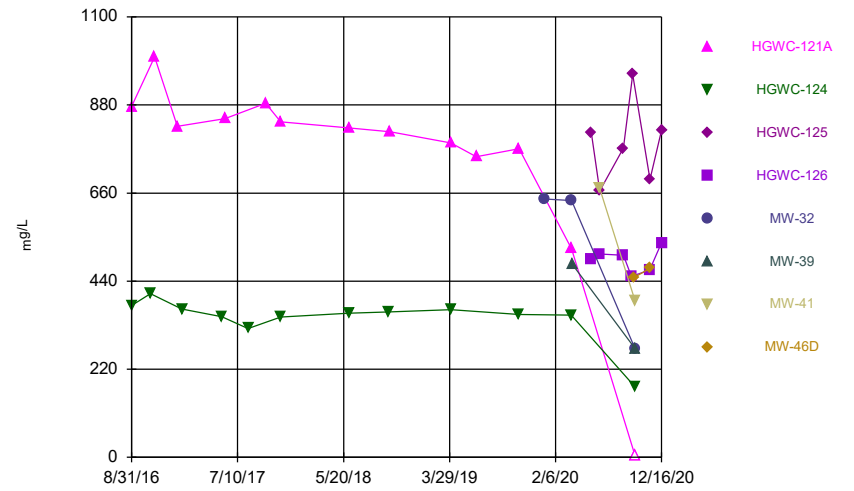
Constituent: Thallium Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:25 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series

Constituent: Antimony (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.003		<0.003	<0.003				
7/11/2016	<0.003		<0.003					
7/12/2016				0.0003 (J)				
8/30/2016	<0.003	<0.003	<0.003	<0.003				
8/31/2016								<0.003
10/19/2016	0.0014 (J)		<0.003	<0.003				
10/20/2016		<0.003						
10/26/2016								<0.003
12/6/2016	<0.003		<0.003	<0.003				
1/24/2017	<0.003		<0.003	<0.003				
1/25/2017		<0.003						
1/27/2017								<0.003
3/21/2017	<0.003		<0.003	<0.003				
5/22/2017	<0.003		<0.003	<0.003				
5/25/2017		<0.003						<0.003
8/11/2017		<0.003						
10/2/2017								<0.003
11/15/2017		<0.003						<0.003
4/2/2018	<0.003		<0.003					
4/3/2018				<0.003				
6/5/2018		<0.003						<0.003
10/2/2018		<0.003						<0.003
3/12/2019	<0.003		<0.003	<0.003				
4/1/2019				<0.003				
4/2/2019	<0.003		<0.003					
8/22/2019		<0.003						<0.003
9/23/2019	<0.003		<0.003	<0.003				
3/2/2020	<0.003		<0.003	<0.003				
3/25/2020	<0.003		<0.003	<0.003				
8/24/2020		<0.003						
8/25/2020			<0.003	<0.003				
8/26/2020								<0.003
8/28/2020	<0.003							
9/15/2020	<0.003	0.001 (J)	<0.003	<0.003				
9/16/2020					0.00051 (J)	0.00049 (J)		
9/21/2020								<0.003
9/25/2020							<0.003	
11/10/2020					0.00043 (J)	<0.003		
11/11/2020							0.00057 (J)	
12/15/2020					0.00031 (J)	0.00047 (J)		
12/16/2020							<0.003	

Time Series

Constituent: Antimony (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	<0.003	<0.003						
10/26/2016		<0.003						
11/7/2016	<0.003							
1/13/2017	<0.003							
1/27/2017		<0.003						
5/25/2017		<0.003						
6/3/2017	<0.003							
8/11/2017		<0.003						
10/2/2017	<0.003							
11/15/2017	<0.003	<0.003						
6/5/2018	<0.003	<0.003						
10/2/2018		<0.003						
10/5/2018	<0.003							
8/22/2019	<0.003							
8/23/2019		<0.003						
5/22/2020			0.00047 (J)	<0.003				
6/16/2020			<0.003	<0.003				
8/25/2020			<0.003	<0.003				
8/26/2020	<0.003				0.00035 (J)	<0.003	<0.003	
8/27/2020		<0.003						
9/18/2020				<0.003				
9/21/2020			<0.003					
9/25/2020								<0.003
9/28/2020	<0.003	<0.003			<0.003	<0.003	<0.003	
11/11/2020				0.0004 (J)				
11/12/2020			<0.003					
12/16/2020			<0.003	<0.003				

Time Series

Constituent: Arsenic (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.005		0.00127 (J)	<0.005				
7/11/2016	<0.005		0.002 (J)					
7/12/2016				0.0008 (J)				
8/30/2016	<0.005	<0.005	0.0017 (J)	<0.005				
8/31/2016								<0.005
10/19/2016	<0.005		<0.005	<0.005				
10/20/2016		<0.005						
10/26/2016								<0.005
12/6/2016	<0.005		<0.005	<0.005				
1/24/2017	<0.005		<0.005	<0.005				
1/25/2017		<0.005						
1/27/2017								<0.005
3/21/2017	0.0005 (J)		<0.005	0.0007 (J)				
5/22/2017	<0.005		0.0006 (J)	0.0006 (J)				
5/25/2017		<0.005						0.0014 (J)
8/11/2017		<0.005						
10/2/2017								0.0007 (J)
11/15/2017		<0.005						<0.005
4/2/2018	<0.005		<0.005					
4/3/2018				<0.005				
6/4/2018	<0.005		0.00088 (J)	0.0008 (J)				
6/5/2018		<0.005						0.001 (J)
10/1/2018	<0.005		<0.005	0.0011 (J)				
10/2/2018		<0.005						<0.005
3/12/2019	<0.005		0.00069 (J)	0.00063 (J)				
4/1/2019				<0.005				
4/2/2019	<0.005		<0.005					
8/22/2019		<0.005						<0.005
9/23/2019	0.00046 (J)		0.00067 (J)	0.0011 (J)				
3/2/2020	<0.005		0.00043 (J)	0.0004 (J)				
3/25/2020	<0.005		<0.005	<0.005				
8/24/2020		<0.005						
8/25/2020			<0.005	<0.005				
8/26/2020								<0.005
8/28/2020	<0.005							
9/16/2020					<0.005	<0.005		
9/25/2020							<0.005	
11/10/2020					0.0021 (J)	<0.005		
11/11/2020							0.0011 (J)	
12/15/2020					<0.005	<0.005		
12/16/2020							<0.005	

Time Series

Constituent: Arsenic (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41
8/31/2016	<0.005	<0.005					
10/26/2016		<0.005					
11/7/2016	<0.005						
1/13/2017	<0.005						
1/27/2017		<0.005					
5/25/2017		0.0006 (J)					
6/3/2017	0.001 (J)						
8/11/2017		<0.005					
10/2/2017	<0.005						
11/15/2017	<0.005	<0.005					
6/5/2018	0.0014 (J)	<0.005					
10/2/2018		<0.005					
10/5/2018	<0.005						
8/22/2019	<0.005						
8/23/2019		<0.005					
5/22/2020			0.00081 (J)	0.00071 (J)			
6/16/2020			0.0014 (J)	0.00091 (J)			
8/25/2020			<0.005	<0.005			
8/26/2020	<0.005				<0.005	<0.005	<0.005
8/27/2020		<0.005					
9/18/2020				<0.005			
9/21/2020			<0.005				
11/11/2020				<0.005			
11/12/2020			<0.005				
12/16/2020			<0.005	<0.005			

Time Series

Constituent: Barium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	0.0782	0.0744						
10/26/2016		0.0735						
11/7/2016	0.0764							
1/13/2017	0.0744							
1/27/2017		0.0632						
5/25/2017		0.0773						
6/3/2017	0.0933							
8/11/2017		0.0672						
10/2/2017	0.0815							
11/15/2017	0.0807	0.0707						
6/5/2018	0.078	0.07						
10/2/2018		0.067						
10/5/2018	0.074							
8/22/2019	0.066							
8/23/2019		0.066						
10/21/2019	0.074	0.075						
3/24/2020		0.075						
3/25/2020	0.099				0.062			
5/22/2020			0.048	0.24				
6/15/2020							0.074	
6/16/2020			0.049	0.24				
8/25/2020			0.045	0.23				
8/26/2020	0.057				0.055	0.059	0.066	
8/27/2020		0.062						
9/18/2020				0.21				
9/21/2020			0.042					
9/25/2020								0.04
9/28/2020	0.056	0.071			0.053	0.058	0.071	
11/11/2020				0.23				
11/12/2020			0.042					
12/16/2020			0.041	0.24				

Time Series

Constituent: Beryllium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.003		<0.003	<0.003				
7/11/2016	<0.003		0.0001 (J)					
7/12/2016				<0.003				
8/30/2016	<0.003	<0.003	<0.003	<0.003				
8/31/2016								<0.003
10/19/2016	<0.003		0.0001 (J)	<0.003				
10/20/2016		<0.003						
10/26/2016								<0.003
12/6/2016	<0.003		0.0002 (J)	<0.003				
1/24/2017	<0.003		0.0001 (J)	<0.003				
1/25/2017		<0.003						
1/27/2017								<0.003
3/21/2017	<0.003		0.0001 (J)	<0.003				
5/22/2017	<0.003		0.0001 (J)	<0.003				
5/25/2017		<0.003						<0.003
8/11/2017		<0.003						
10/2/2017								<0.003
11/15/2017		<0.003						<0.003
4/2/2018	<0.003		<0.003					
4/3/2018				<0.003				
6/5/2018		<0.003						<0.003
10/2/2018		<0.003						<0.003
3/12/2019	<0.003		0.00017 (J)	<0.003				
4/1/2019				<0.003				
4/2/2019	<0.003		0.00015 (J)					
8/22/2019		<0.003						<0.003
9/23/2019	<0.003		0.00011 (J)	<0.003				
3/2/2020	<0.003		0.00014 (J)	<0.003				
3/25/2020	<0.003		0.00016 (J)	<0.003				
8/24/2020		<0.003						
8/25/2020			0.00014 (J)	<0.003				
8/26/2020								<0.003
8/28/2020	<0.003							
9/15/2020	<0.003	<0.003	0.00013 (J)	<0.003				
9/16/2020					<0.003	<0.003		
9/21/2020								<0.003
9/25/2020							<0.003	
11/10/2020					<0.003	<0.003		
11/11/2020							<0.003	
12/15/2020					<0.003	<0.003		
12/16/2020							<0.003	

Time Series

Constituent: Beryllium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	<0.003	<0.003						
10/26/2016		<0.003						
11/7/2016	<0.003							
1/13/2017	<0.003							
1/27/2017		<0.003						
5/25/2017		<0.003						
6/3/2017	<0.003							
8/11/2017		<0.003						
10/2/2017	<0.003							
11/15/2017	<0.003	<0.003						
6/5/2018	<0.003	<0.003						
10/2/2018		<0.003						
10/5/2018	<0.003							
8/22/2019	<0.003							
8/23/2019		<0.003						
5/22/2020			<0.003	<0.003				
6/16/2020			<0.003	<0.003				
8/25/2020			<0.003	<0.003				
8/26/2020	<0.003				<0.003	<0.003	<0.003	
8/27/2020		<0.003						
9/18/2020				<0.003				
9/21/2020			<0.003					
9/25/2020								<0.003
9/28/2020	<0.003	<0.003			<0.003	<0.003	<0.003	
11/11/2020				<0.003				
11/12/2020			<0.003					
12/16/2020			<0.003	<0.003				

Time Series

Constituent: Boron (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	3.23	0.494						
10/26/2016		0.55						
11/7/2016	2.95							
1/13/2017	4.01							
1/27/2017		0.428						
5/25/2017		0.544						
6/3/2017	2.62							
8/11/2017		0.524						
10/2/2017	2.92							
11/15/2017	2.71	0.531						
6/5/2018	2.6	0.53						
10/2/2018		0.47						
10/5/2018	2.9							
4/3/2019	3	0.45						
6/17/2019	2.4							
6/18/2019		0.45						
10/21/2019	2.4	0.5						
1/3/2020					1.1			
3/24/2020		0.44						
3/25/2020	1.6				1.2			
3/27/2020						0.7		
5/22/2020			1.5	0.026 (J)				
6/15/2020							1.2	
6/16/2020			1.5	0.023 (J)				
8/25/2020			1.4	0.016 (J)				
9/18/2020				0.041 (J)				
9/21/2020			1.4					
9/25/2020								0.51
9/28/2020	2.3	0.43			1.3	1.3	1.2	
11/11/2020				0.009 (J)				0.68
11/12/2020			1.4					
12/16/2020			1.5	0.011 (J)				

Time Series

Constituent: Cadmium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.0025		<0.0025	<0.0025				
7/11/2016	<0.0025		<0.0025					
7/12/2016				<0.0025				
8/30/2016	<0.0025	<0.0025	<0.0025	<0.0025				
8/31/2016								<0.0025
10/19/2016	<0.0025		<0.0025	<0.0025				
10/20/2016		<0.0025						
10/26/2016								<0.0025
12/6/2016	<0.0025		<0.0025	<0.0025				
1/24/2017	<0.0025		0.0001 (J)	<0.0025				
1/25/2017		<0.0025						
1/27/2017								<0.0025
3/21/2017	<0.0025		7E-05 (J)	<0.0025				
5/22/2017	<0.0025		0.0001 (J)	<0.0025				
5/25/2017		<0.0025						<0.0025
8/11/2017		<0.0025						
10/2/2017								<0.0025
11/15/2017		<0.0025						<0.0025
4/2/2018	<0.0025		<0.0025					
4/3/2018				<0.0025				
6/4/2018	<0.0025		0.00014 (J)	<0.0025				
6/5/2018		<0.0025						<0.0025
10/1/2018	<0.0025		<0.0025	<0.0025				
10/2/2018		<0.0025						<0.0025
3/12/2019	<0.0025		0.00013 (J)	<0.0025				
4/1/2019				<0.0025				
4/2/2019	<0.0025		0.00015 (J)					
8/22/2019		<0.0025						<0.0025
9/23/2019	<0.0025		<0.0025	<0.0025				
3/2/2020	<0.0025		<0.0025	<0.0025				
3/25/2020	<0.0025		0.00014 (J)	<0.0025				
8/24/2020		<0.0025						
8/25/2020			<0.0025	<0.0025				
8/26/2020								<0.0025
8/28/2020	<0.0025							
9/16/2020					<0.0025	<0.0025		
9/25/2020							<0.0025	
11/10/2020					<0.0025	<0.0025		
11/11/2020							<0.0025	
12/15/2020					<0.0025	<0.0025		
12/16/2020							<0.0025	

Time Series

Constituent: Cadmium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41
8/31/2016	<0.0025	<0.0025					
10/26/2016		<0.0025					
11/7/2016	<0.0025						
1/13/2017	<0.0025						
1/27/2017		<0.0025					
5/25/2017		<0.0025					
6/3/2017	<0.0025						
8/11/2017		<0.0025					
10/2/2017	<0.0025						
11/15/2017	<0.0025	<0.0025					
6/5/2018	<0.0025	<0.0025					
10/2/2018		<0.0025					
10/5/2018	<0.0025						
8/22/2019	<0.0025						
8/23/2019		<0.0025					
5/22/2020			<0.0025	<0.0025			
6/16/2020			<0.0025	<0.0025			
8/25/2020			<0.0025	<0.0025			
8/26/2020	<0.0025				<0.0025	<0.0025	<0.0025
8/27/2020		<0.0025					
9/18/2020				<0.0025			
9/21/2020			<0.0025				
11/11/2020				<0.0025			
11/12/2020			<0.0025				
12/16/2020			<0.0025	<0.0025			

Time Series

Constituent: Calcium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	178	90.4						
10/26/2016		94.5						
11/7/2016	170							
1/13/2017	192							
1/27/2017		84.2						
5/25/2017		100						
6/3/2017	172							
8/11/2017		99.1						
10/2/2017	195							
11/15/2017	184	103						
6/5/2018	195	103						
10/2/2018		100						
10/5/2018	181							
4/3/2019	184	96.7						
6/17/2019	173							
6/18/2019		97.1						
10/21/2019	173	96.9						
1/3/2020					150			
3/24/2020		104						
3/25/2020	139				170			
3/27/2020						120		
5/22/2020			140	112				
6/15/2020							174	
6/16/2020			178	131				
8/25/2020			186	130				
9/18/2020				119				
9/21/2020			155					
9/25/2020								78.3
9/28/2020	167	107			173	185	173	
11/11/2020				133				69.3
11/12/2020			165					
12/16/2020			194	132				

Time Series

Constituent: Chloride (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	64	3						
10/26/2016		3.6						
11/7/2016	65							
1/13/2017	50							
1/27/2017		4						
5/25/2017		3.5						
6/3/2017	43							
8/11/2017		2.9						
10/2/2017	42							
11/15/2017	46	3.1						
6/5/2018	40.4	3.1						
10/2/2018		3.4						
10/5/2018	39							
4/3/2019	35.9	3.4						
6/17/2019	32.9							
6/18/2019		2.3 (J)						
10/21/2019	29.9	3.6						
1/3/2020					2.4			
3/24/2020		2.7						
3/25/2020	16.3				2.2			
3/27/2020						1.8		
5/22/2020			12.9	8.6				
6/15/2020							2.3	
6/16/2020			10.4	8.6				
8/25/2020			10.6	8.7				
9/18/2020				8.4				
9/21/2020			12.1					
9/25/2020								3.7
9/28/2020	23.2	2.5			2.5	2.4	2.5	
11/11/2020				8.3				3.5
11/12/2020			10.4					
12/16/2020			5.3	8.9				

Time Series

Constituent: Chromium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.01		<0.01	<0.01				
7/11/2016	<0.01		<0.01					
7/12/2016				<0.01				
8/30/2016	<0.01	<0.01	<0.01	<0.01				
8/31/2016								<0.01
10/19/2016	<0.01		<0.01	<0.01				
10/20/2016		<0.01						
10/26/2016								<0.01
12/6/2016	<0.01		<0.01	<0.01				
1/24/2017	<0.01		<0.01	<0.01				
1/25/2017		<0.01						
1/27/2017								<0.01
3/21/2017	0.0005 (J)		<0.01	<0.01				
5/22/2017	<0.01		<0.01	0.0007 (J)				
5/25/2017		0.0006 (J)						<0.01
8/11/2017		0.0007 (J)						
10/2/2017								<0.01
11/15/2017		0.0006 (J)						<0.01
4/2/2018	<0.01		<0.01					
4/3/2018				<0.01				
6/5/2018		<0.01						<0.01
10/2/2018		<0.01						<0.01
3/12/2019	<0.01		<0.01	<0.01				
4/1/2019				<0.01				
4/2/2019	<0.01		0.0079 (J)					
8/22/2019		0.0006 (J)						0.00072 (J)
9/23/2019	<0.01		0.00058 (J)	<0.01				
10/21/2019		0.00068 (J)						
10/22/2019								<0.01
3/2/2020	<0.01		0.00041 (J)	<0.01				
3/24/2020		0.0013 (J)						
3/25/2020	0.00072 (J)		<0.01	<0.01				0.0015 (J)
8/24/2020		0.00093 (J)						
8/25/2020			0.00067 (J)	<0.01				
8/26/2020								<0.01
8/28/2020	<0.01							
9/15/2020	<0.01	0.00067 (J)	<0.01	<0.01				
9/16/2020					<0.01	0.0012 (J)		
9/21/2020								0.00065 (J)
9/25/2020							<0.01	
11/10/2020					<0.01	0.00089 (J)		
11/11/2020							<0.01	
12/15/2020					<0.01	0.00072 (J)		
12/16/2020							<0.01	

Time Series

Constituent: Chromium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	<0.01	<0.01						
10/26/2016		<0.01						
11/7/2016	<0.01							
1/13/2017	<0.01							
1/27/2017		<0.01						
5/25/2017		<0.01						
6/3/2017	<0.01							
8/11/2017		<0.01						
10/2/2017	<0.01							
11/15/2017	<0.01	<0.01						
6/5/2018	<0.01	<0.01						
10/2/2018		<0.01						
10/5/2018	<0.01							
8/22/2019	<0.01							
8/23/2019		<0.01						
10/21/2019	<0.01	0.00046 (J)						
3/24/2020		0.00051 (J)						
3/25/2020	0.0005 (J)				<0.01			
5/22/2020			0.00058 (J)	<0.01				
6/15/2020							<0.01	
6/16/2020			0.00052 (J)	<0.01				
8/25/2020			<0.01	0.00096 (J)				
8/26/2020	<0.01				<0.01	<0.01	<0.01	
8/27/2020		<0.01						
9/18/2020				<0.01				
9/21/2020			<0.01					
9/25/2020								0.00075 (J)
9/28/2020	<0.01	<0.01			0.00058 (J)	<0.01	<0.01	
11/11/2020				<0.01				
11/12/2020			<0.01					
12/16/2020			<0.01	<0.01				

Time Series

Constituent: Cobalt (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.005		0.0293	<0.005				
7/11/2016	0.0004 (J)		0.0267					
7/12/2016				<0.005				
8/30/2016	<0.005	<0.005	0.028	<0.005				
8/31/2016								0.0052 (J)
10/19/2016	<0.005		0.0201	<0.005				
10/20/2016		<0.005						
10/26/2016								0.0041 (J)
12/6/2016	<0.005		0.0184	<0.005				
1/24/2017	<0.005		0.0206	<0.005				
1/25/2017		<0.005						
1/27/2017								0.0034 (J)
3/21/2017	<0.005		0.0251	<0.005				
5/22/2017	<0.005		0.0263	<0.005				
5/25/2017		<0.005						0.0035 (J)
8/11/2017		<0.005						
10/2/2017								0.0036 (J)
11/15/2017		<0.005						0.0032 (J)
4/2/2018	<0.005		0.019					
4/3/2018				<0.005				
6/4/2018	<0.005		0.025	<0.005				
6/5/2018		<0.005						0.0031 (J)
10/1/2018	<0.005		0.026	<0.005				
10/2/2018		<0.005						0.0025 (J)
3/12/2019	<0.005		0.017	<0.005				
4/1/2019				<0.005				
4/2/2019	<0.005		0.019					
8/22/2019		<0.005						0.0028 (J)
9/23/2019	<0.005		0.038	<0.005				
10/21/2019		<0.005						
10/22/2019								0.0031 (J)
3/2/2020	<0.005		0.019	<0.005				
3/24/2020		<0.005						
3/25/2020	<0.005		0.02	<0.005				0.0036 (J)
8/24/2020		<0.005						
8/25/2020			0.018	<0.005				
8/26/2020								0.0023 (J)
8/28/2020	<0.005							
9/15/2020	<0.005	<0.005	0.021	<0.005				
9/16/2020					<0.005	<0.005		
9/21/2020								0.0041 (J)
9/25/2020							<0.005	
11/10/2020					<0.005	<0.005		
11/11/2020							<0.005	
12/15/2020					<0.005	<0.005		
12/16/2020							<0.005	

Time Series

Constituent: Cobalt (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	<0.005	<0.005						
10/26/2016		<0.005						
11/7/2016	<0.005							
1/13/2017	<0.005							
1/27/2017		<0.005						
5/25/2017		<0.005						
6/3/2017	0.0005 (J)							
8/11/2017		<0.005						
10/2/2017	0.0003 (J)							
11/15/2017	0.0003 (J)	<0.005						
6/5/2018	<0.005	<0.005						
10/2/2018		<0.005						
10/5/2018	<0.005							
8/22/2019	<0.005							
8/23/2019		<0.005						
10/21/2019	<0.005	<0.005						
3/24/2020		<0.005						
3/25/2020	<0.005				0.0031 (J)			
5/22/2020			0.01	<0.005				
6/15/2020							0.0012 (J)	
6/16/2020			0.0096	<0.005				
8/25/2020			0.0087	<0.005				
8/26/2020	<0.005				0.0048 (J)	0.0026 (J)	0.00068 (J)	
8/27/2020		<0.005						
9/18/2020				<0.005				
9/21/2020			0.012					
9/25/2020								0.00041 (J)
9/28/2020	<0.005	<0.005			0.0047 (J)	0.0026 (J)	0.00066 (J)	
11/11/2020				<0.005				
11/12/2020			0.012					
12/16/2020			0.0055	<0.005				

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	0.397 (U)		0.627 (U)	0.342 (U)				
7/11/2016	0.738 (U)		1.38					
7/12/2016				0.499 (U)				
8/30/2016	0.581 (U)	0.972 (U)	1.05 (U)	0.976 (U)				
8/31/2016								1.47
10/19/2016	0.213 (U)		1.11 (U)	0.626 (U)				
10/20/2016		0.496 (U)						
10/26/2016								0.864 (U)
12/6/2016	0.444 (U)		0.741 (U)	0.805 (U)				
1/24/2017	0.373 (U)		0.908 (U)	0.336 (U)				
1/25/2017		1.13 (U)						
1/27/2017								0.521 (U)
3/21/2017	0.816 (U)		0.567 (U)	0.358 (U)				
5/22/2017	0.554 (U)		0.638 (U)	0.744 (U)				
5/25/2017		0.192 (U)						0.681 (U)
8/11/2017		0.908 (U)						
10/2/2017								0.632 (U)
11/15/2017		0.662 (U)						1.3
4/2/2018	0.405 (U)		0.761 (U)					
4/3/2018				0.684 (U)				
6/4/2018	1.13 (U)		0.975 (U)	0.0291 (U)				
6/5/2018		0.593 (U)						1.26 (U)
10/1/2018	0.132 (U)		0.434 (U)	0.781 (U)				
10/2/2018		1.37						0.572 (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)					
8/22/2019		1.19 (U)						1.35
9/30/2019	0.306 (U)		1.04 (U)	0.384 (U)				
10/21/2019		0.772 (U)						
10/22/2019								0.76 (U)
3/2/2020	0.61 (U)		1.58	0.249 (U)				
3/24/2020		0.379 (U)						
3/25/2020	4.36		0.621 (U)	0.833 (U)				0.696 (U)
8/24/2020		0.883 (U)						
8/25/2020			0.778 (U)	0.33 (U)				
8/26/2020								0.357 (U)
8/28/2020	0 (U)							
9/15/2020	0.748 (U)	0.375 (U)	0.124 (U)	0.161 (U)				
9/16/2020					0.531 (U)	0.422 (U)		
9/21/2020								0.553 (U)
9/25/2020							1.07 (U)	
11/10/2020					0.788 (U)	0.293 (U)		
11/11/2020							0.49 (U)	
12/15/2020					1.04 (U)	0.7 (U)		
12/16/2020							0.963 (U)	

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	1.57	1.22						
10/26/2016		0.637 (U)						
11/7/2016	0.739 (U)							
1/13/2017	0.744 (U)							
1/27/2017		0.795 (U)						
5/25/2017		0.896 (U)						
6/3/2017	0 (U)							
8/11/2017		0.828 (U)						
10/2/2017	0.68 (U)							
11/15/2017	0.911 (U)	0.478 (U)						
6/5/2018	0.948 (U)	0.947 (U)						
10/2/2018		0.617 (U)						
10/5/2018	1.17 (U)							
8/22/2019	1.3							
8/23/2019		0.834						
10/21/2019	0.393 (U)	1.11 (U)						
3/24/2020		0.796 (U)						
3/25/2020	0.505 (U)				1.51			
5/22/2020			<1.56	1.82				
6/15/2020							0.948 (U)	
6/16/2020			1.62	1.82				
8/25/2020			1.65	1.82				
8/26/2020	1.96				0.281 (U)	1.38	1.53	
8/27/2020		0.494 (U)						
9/18/2020				0.841 (U)				
9/21/2020			1.45					
9/25/2020								0.594 (U)
9/28/2020	0.761 (U)	0.477 (U)			1.01 (U)	1.02 (U)	0.409 (U)	
11/11/2020				0.837 (U)				
11/12/2020			0.633 (U)					
12/16/2020			0.818 (U)	1.26 (U)				

Time Series

Constituent: Fluoride (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	0.14 (J)	0.15 (J)						
10/26/2016		0.3						
11/7/2016	0.18 (J)							
1/13/2017	0.14 (J)							
1/27/2017		0.3						
5/25/2017		0.05 (J)						
6/3/2017	0.15 (J)							
8/11/2017		0.1 (J)						
10/2/2017	1.2							
11/15/2017	0.6	<0.1						
6/5/2018	0.19 (J)	0.078 (J)						
10/2/2018		0.078 (J)						
10/5/2018	0.23 (J)							
4/3/2019	0.14 (J)	0.089 (J)						
8/22/2019	0.2 (J)							
8/23/2019		0.11 (J)						
10/21/2019	0.18 (J)	0.073 (J)						
1/3/2020					0.36			
3/24/2020		<0.1						
3/25/2020	0.095 (J)				0.34			
3/27/2020						0.29		
5/22/2020			0.1 (J)	0.46				
6/15/2020							0.21	
6/16/2020			0.12	0.44				
8/25/2020			0.16	0.52				
8/26/2020	0.16				0.33	0.32	0.24	
8/27/2020		<0.1						
9/18/2020				0.43				
9/21/2020			0.11					
9/25/2020								0.68
9/28/2020	0.15	<0.1			0.33	0.33	0.25	
11/11/2020				0.45				1
11/12/2020			0.12					
12/16/2020			0.2	0.49				

Time Series

Constituent: Lead (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.005		<0.005	<0.005				
7/11/2016	<0.005		<0.005					
7/12/2016				0.0001 (J)				
8/30/2016	<0.005	<0.005	<0.005	<0.005				
8/31/2016								<0.005
10/19/2016	<0.005		<0.005	<0.005				
10/20/2016		<0.005						
10/26/2016								0.0002 (J)
12/6/2016	<0.005		<0.005	<0.005				
1/24/2017	<0.005		<0.005	<0.005				
1/25/2017		<0.005						
1/27/2017								<0.005
3/21/2017	<0.005		6E-05 (J)	0.0001 (J)				
5/22/2017	<0.005		9E-05 (J)	<0.005				
5/25/2017		<0.005						9E-05 (J)
8/11/2017		0.0001 (J)						
10/2/2017								8E-05 (J)
11/15/2017		0.0002 (J)						<0.005
4/2/2018	<0.005		<0.005					
4/3/2018				<0.005				
6/5/2018		<0.005						<0.005
10/2/2018		<0.005						<0.005
3/12/2019	<0.005		<0.005	<0.005				
4/1/2019				<0.005				
4/2/2019	<0.005		<0.005					
8/22/2019		<0.005						<0.005
9/23/2019	7.8E-05 (J)		9.2E-05 (J)	<0.005				
10/21/2019		9.7E-05 (J)						
10/22/2019								<0.005
3/2/2020	4.8E-05 (J)		9.5E-05 (J)	<0.005				
3/24/2020		0.00012 (J)						
3/25/2020	<0.005		0.00011 (J)	<0.005				<0.005
8/24/2020		7.7E-05 (J)						
8/25/2020			8.5E-05 (J)	<0.005				
8/26/2020								<0.005
8/28/2020	7E-05 (J)							
9/15/2020	<0.005	4.3E-05 (J)	8E-05 (J)	4.2E-05 (J)				
9/16/2020					5E-05 (J)	0.00021 (J)		
9/21/2020								<0.005
9/25/2020							<0.005	
11/10/2020					6.9E-05 (J)	0.0002 (J)		
11/11/2020							4E-05 (J)	
12/15/2020					8.2E-05 (J)	0.00011 (J)		
12/16/2020							5.8E-05 (J)	

Time Series

Constituent: Lead (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	<0.005	<0.005						
10/26/2016		<0.005						
11/7/2016	<0.005							
1/13/2017	<0.005							
1/27/2017		<0.005						
5/25/2017		<0.005						
6/3/2017	7E-05 (J)							
8/11/2017		8E-05 (J)						
10/2/2017	<0.005							
11/15/2017	<0.005	<0.005						
6/5/2018	0.00036 (J)	<0.005						
10/2/2018		<0.005						
10/5/2018	<0.005							
8/22/2019	<0.005							
8/23/2019		4.9E-05 (J)						
10/21/2019	<0.005	4.9E-05 (J)						
3/24/2020		9.4E-05 (J)						
3/25/2020	<0.005				<0.005			
5/22/2020			0.00014 (J)	<0.005				
6/15/2020							<0.005	
6/16/2020			0.00013 (J)	<0.005				
8/25/2020			<0.005	4.5E-05 (J)				
8/26/2020	<0.005				<0.005	<0.005	<0.005	
8/27/2020		<0.005						
9/18/2020				<0.005				
9/21/2020			<0.005					
9/25/2020								4.8E-05 (J)
9/28/2020	<0.005	7.5E-05 (J)			<0.005	<0.005	<0.005	
11/11/2020				4.2E-05 (J)				
11/12/2020			4.7E-05 (J)					
12/16/2020			<0.005	<0.005				

Time Series

Constituent: Lithium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.03		<0.03	<0.03				
7/11/2016	<0.03		0.0014 (J)					
7/12/2016				0.0024 (J)				
8/30/2016	<0.03	<0.03	<0.03	0.0025 (J)				
8/31/2016								0.0333 (J)
10/19/2016	<0.03		<0.03	0.003 (J)				
10/20/2016		<0.03						
10/26/2016								0.0352 (J)
12/6/2016	<0.03		<0.03	0.0033 (J)				
1/24/2017	<0.03		<0.03	0.003 (J)				
1/25/2017		<0.03						
1/27/2017								0.0329 (J)
3/21/2017	<0.03		0.0012 (J)	0.0034 (J)				
5/22/2017	<0.03		<0.03	0.003 (J)				
5/25/2017		<0.03						0.0347 (J)
8/11/2017		<0.03						
10/2/2017								0.0337 (J)
11/15/2017		<0.03						0.0347 (J)
4/2/2018	<0.03		0.0015 (J)					
4/3/2018				0.003 (J)				
6/4/2018	0.001 (J)		0.0016 (J)	0.0027 (J)				
6/5/2018		<0.03						0.033 (J)
10/1/2018	0.00099 (J)		0.0013 (J)	0.0032 (J)				
10/2/2018		<0.03						0.031 (J)
3/12/2019	0.001 (J)		0.0018 (J)	0.0032 (J)				
4/1/2019				0.0032 (J)				
4/2/2019	0.001 (J)		0.0018 (J)					
8/22/2019		<0.03						0.029 (J)
9/23/2019	0.0011 (J)		0.0016 (J)	0.0029 (J)				
10/21/2019		<0.03						
10/22/2019								0.03 (J)
3/2/2020	0.0012 (J)		0.0017 (J)	0.0037 (J)				
3/24/2020		<0.03						
3/25/2020	0.00083 (J)		0.0017 (J)	0.0035 (J)				0.024 (J)
8/24/2020		<0.03						
8/25/2020			0.0015 (J)	0.0027 (J)				
8/26/2020								0.023 (J)
8/28/2020	0.00087 (J)							
9/15/2020	0.00087 (J)	<0.03	0.0015 (J)	0.0026 (J)				
9/16/2020					0.0018 (J)	0.014 (J)		
9/21/2020								0.023 (J)
9/25/2020							0.0049 (J)	
11/10/2020					0.0013 (J)	0.025 (J)		
11/11/2020							0.0032 (J)	
12/15/2020					0.0019 (J)	0.028 (J)		
12/16/2020							0.0045 (J)	

Time Series

Constituent: Lithium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	0.0077 (J)	<0.03						
10/26/2016		<0.03						
11/7/2016	0.0089 (J)							
1/13/2017	0.0091 (J)							
1/27/2017		<0.03						
5/25/2017		0.0011 (J)						
6/3/2017	0.0104 (J)							
8/11/2017		<0.03						
10/2/2017	0.0095 (J)							
11/15/2017	0.0086 (J)	<0.03						
6/5/2018	0.0092 (J)	0.0012 (J)						
10/2/2018		0.0012 (J)						
10/5/2018	0.0091 (J)							
8/22/2019	0.0084 (J)							
8/23/2019		0.0011 (J)						
10/21/2019	0.009 (J)	0.0011 (J)						
3/24/2020		0.0012 (J)						
3/25/2020	0.0066 (J)				0.034			
3/27/2020						<0.03		
5/22/2020			0.0052 (J)	0.0046 (J)				
6/15/2020							0.028 (J)	
6/16/2020			0.0053 (J)	0.0045 (J)				
8/25/2020			0.0037 (J)	0.0037 (J)				
8/26/2020	0.0071 (J)				0.031	0.031	0.027 (J)	
8/27/2020		0.00091 (J)						
9/18/2020				0.0035 (J)				
9/21/2020			0.0038 (J)					
9/25/2020								0.015 (J)
9/28/2020	0.0076 (J)	0.0011 (J)			0.032	0.034	0.028 (J)	
11/11/2020				0.0032 (J)				
11/12/2020			0.0038 (J)					
12/16/2020			0.0055 (J)	0.0029 (J)				

Time Series

Constituent: Mercury (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.0005		<0.0005	<0.0005				
7/11/2016	<0.0005		<0.0005					
7/12/2016				<0.0005				
8/30/2016	4E-05 (J)	4.3E-05 (J)	4E-05 (J)	<0.0005				
8/31/2016								4E-05 (J)
10/19/2016	<0.0005		<0.0005	<0.0005				
10/20/2016		<0.0005						
10/26/2016								<0.0005
12/6/2016	<0.0005		<0.0005	<0.0005				
1/24/2017	<0.0005		<0.0005	<0.0005				
1/25/2017		4E-05 (J)						
1/27/2017								<0.0005
3/21/2017	<0.0005		<0.0005	<0.0005				
5/22/2017	<0.0005		<0.0005	<0.0005				
5/25/2017		7E-05 (J)						7E-05 (J)
8/11/2017		<0.0005						
10/2/2017								<0.0005
11/15/2017		<0.0005						<0.0005
4/2/2018	<0.0005		<0.0005					
4/3/2018				<0.0005				
6/5/2018		<0.0005						<0.0005
10/2/2018		<0.0005						<0.0005
3/12/2019	<0.0005		<0.0005	<0.0005				
8/22/2019		<0.0005						<0.0005
3/2/2020	<0.0005		<0.0005	<0.0005				
8/24/2020		<0.0005						
8/25/2020			<0.0005	<0.0005				
8/26/2020								<0.0005
8/28/2020	<0.0005							
9/16/2020					<0.0005	<0.0005		
9/25/2020							<0.0005	
11/10/2020					<0.0005	<0.0005		
11/11/2020							<0.0005	
12/15/2020					<0.0005	<0.0005		
12/16/2020							<0.0005	

Time Series

Constituent: Mercury (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41
8/31/2016	<0.0005	<0.0005					
10/26/2016		<0.0005					
11/7/2016	<0.0005						
1/13/2017	<0.0005						
1/27/2017		<0.0005					
5/25/2017		5.1E-05 (J)					
6/3/2017	<0.0005						
8/11/2017		<0.0005					
10/2/2017	<0.0005						
11/15/2017	<0.0005	<0.0005					
6/5/2018	<0.0005	<0.0005					
10/2/2018		<0.0005					
10/5/2018	<0.0005						
8/22/2019	<0.0005						
8/23/2019		<0.0005					
5/22/2020			<0.0005	<0.0005			
6/16/2020			<0.0005	<0.0005			
8/25/2020			<0.0005	<0.0005			
8/26/2020	<0.0005				<0.0005	<0.0005	<0.0005
8/27/2020		<0.0005					
9/18/2020				<0.0005			
9/21/2020			<0.0005				
11/11/2020				<0.0005			
11/12/2020			<0.0005				
12/16/2020			<0.0005	<0.0005			

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.01		<0.01	<0.01				
7/11/2016	<0.01		<0.01					
7/12/2016				<0.01				
8/30/2016	<0.01	0.0026 (J)	<0.01	<0.01				
8/31/2016								0.0176
10/19/2016	<0.01		<0.01	<0.01				
10/20/2016		0.005 (J)						
10/26/2016								0.0187
12/6/2016	<0.01		<0.01	<0.01				
1/24/2017	<0.01		<0.01	<0.01				
1/25/2017		0.0054 (J)						
1/27/2017								0.0214
3/21/2017	<0.01		<0.01	<0.01				
5/22/2017	<0.01		<0.01	<0.01				
5/25/2017		0.0018 (J)						0.0231
8/11/2017		0.0029 (J)						
10/2/2017								0.0259
11/15/2017		0.0018 (J)						0.0281
4/2/2018	<0.01		<0.01					
4/3/2018				<0.01				
6/4/2018	<0.01		<0.01	<0.01				
6/5/2018		0.0028 (J)						0.033
10/1/2018	<0.01		<0.01	<0.01				
10/2/2018		<0.01						0.036
3/12/2019	<0.01		<0.01	<0.01				
4/1/2019				<0.01				
4/2/2019	<0.01		<0.01					
8/22/2019		0.003 (J)						0.039
9/23/2019	<0.01		<0.01	<0.01				
10/21/2019		0.0049 (J)						
10/22/2019								0.04
3/2/2020	<0.01		<0.01	<0.01				
3/24/2020		0.0091 (J)						
3/25/2020	<0.01		<0.01	<0.01				0.034
6/16/2020	<0.01			<0.01				
8/24/2020		0.0031 (J)						
8/25/2020			<0.01	<0.01				
8/26/2020								0.05
8/28/2020	<0.01							
9/15/2020	<0.01	0.0045 (J)	<0.01	<0.01				
9/16/2020					0.0044 (J)	0.0019 (J)		
9/21/2020								0.043
9/25/2020							0.0014 (J)	
11/10/2020					0.0072 (J)	0.0018 (J)		
11/11/2020							0.0049 (J)	
12/15/2020					0.0044 (J)	0.0019 (J)		
12/16/2020							0.0024 (J)	

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	<0.01	<0.01						
10/26/2016		<0.01						
11/7/2016	<0.01							
1/13/2017	<0.01							
1/27/2017		<0.01						
5/25/2017		0.0009 (J)						
6/3/2017	<0.01							
8/11/2017		0.0013 (J)						
10/2/2017	<0.01							
11/15/2017	<0.01	0.0012 (J)						
6/5/2018	<0.01	<0.01						
10/2/2018		<0.01						
10/5/2018	<0.01							
8/22/2019	<0.01							
8/23/2019		0.0014 (J)						
10/21/2019	<0.01	0.0013 (J)						
1/3/2020					0.06			
1/22/2020					0.059			
3/24/2020		0.001 (J)						
3/25/2020	<0.01				0.062			
3/27/2020						0.012		
4/24/2020						0.062		
5/22/2020			<0.01	<0.01				
6/15/2020							0.035	
6/16/2020			<0.01	<0.01				
8/25/2020			0.00099 (J)	<0.01				
8/26/2020	<0.01				0.065	0.064	0.039	
8/27/2020		0.00091 (J)						
9/18/2020				<0.01				
9/21/2020			<0.01					
9/25/2020								0.027
9/28/2020	<0.01	0.0009 (J)			0.062	0.062	0.036	
11/11/2020				<0.01				0.015
11/12/2020			0.0017 (J)					
12/16/2020			0.014	<0.01				

Time Series

Constituent: pH (s.u.) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	6.62	6.99						
10/27/2016		7.06						
11/7/2016	6.71							
1/13/2017	6.57							
1/27/2017		7.13						
5/25/2017		7.1						
6/3/2017	6.71							
8/11/2017		7.02						
10/2/2017	7.65							
11/15/2017	6.69	7.04						
6/5/2018	6.79	7.17						
10/2/2018		7.08						
10/5/2018	6.71							
4/3/2019	6.73	7.14						
8/22/2019	6.77							
8/23/2019		7.02						
10/21/2019	6.74	7.05						
3/24/2020		7.18						
3/25/2020	6.91				6.86			
3/27/2020						6.82		
4/24/2020						6.82		
5/22/2020			6.43	7.22				
6/15/2020							6.88	
6/16/2020			6.29	6.92				
8/25/2020			6.36	6.78				
8/26/2020	6.73				6.75	6.74	6.74	
8/27/2020		7.15						
9/18/2020				6.97				
9/21/2020			6.22					
9/25/2020								7.56
9/28/2020	6.93	7.27			6.9	7	7	
11/11/2020				6.86				7.52
11/12/2020			6.13					
12/16/2020			6.61	6.93				

Time Series

Constituent: Selenium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.01		<0.01	<0.01				
7/11/2016	<0.01		<0.01					
7/12/2016				<0.01				
8/30/2016	<0.01	<0.01	<0.01	<0.01				
8/31/2016								<0.01
10/19/2016	<0.01		<0.01	<0.01				
10/20/2016		<0.01						
10/26/2016								<0.01
12/6/2016	<0.01		<0.01	<0.01				
1/24/2017	<0.01		<0.01	<0.01				
1/25/2017		<0.01						
1/27/2017								<0.01
3/21/2017	<0.01		<0.01	<0.01				
5/22/2017	<0.01		<0.01	<0.01				
5/25/2017		<0.01						<0.01
8/11/2017		<0.01						
10/2/2017								0.002 (J)
11/15/2017		<0.01						<0.01
4/2/2018	<0.01		<0.01					
4/3/2018				<0.01				
6/4/2018	<0.01		<0.01	<0.01				
6/5/2018		<0.01						<0.01
10/1/2018	<0.01		<0.01	<0.01				
10/2/2018		0.0015 (J)						<0.01
3/12/2019	<0.01		<0.01	<0.01				
4/1/2019				<0.01				
4/2/2019	<0.01		<0.01					
8/22/2019		<0.01						<0.01
9/23/2019	<0.01		<0.01	<0.01				
3/2/2020	<0.01		<0.01	<0.01				
3/25/2020	<0.01		<0.01	<0.01				
8/24/2020		<0.01						
8/25/2020			<0.01	<0.01				
8/26/2020								<0.01
8/28/2020	<0.01							
9/16/2020					<0.01	<0.01		
9/25/2020							<0.01	
11/10/2020					<0.01	<0.01		
11/11/2020							<0.01	
12/15/2020					<0.01	<0.01		
12/16/2020							<0.01	

Time Series

Constituent: Selenium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41
8/31/2016	<0.01	<0.01					
10/26/2016		<0.01					
11/7/2016	<0.01						
1/13/2017	0.0011 (J)						
1/27/2017		<0.01					
5/25/2017		<0.01					
6/3/2017	<0.01						
8/11/2017		<0.01					
10/2/2017	<0.01						
11/15/2017	<0.01	<0.01					
6/5/2018	<0.01	<0.01					
10/2/2018		0.0014 (J)					
10/5/2018	<0.01						
8/22/2019	<0.01						
8/23/2019		<0.01					
5/22/2020			<0.01	<0.01			
6/16/2020			<0.01	<0.01			
8/25/2020			<0.01	<0.01			
8/26/2020	<0.01				<0.01	<0.01	<0.01
8/27/2020		<0.01					
9/18/2020				<0.01			
9/21/2020			<0.01				
11/11/2020				<0.01			
11/12/2020			<0.01				
12/16/2020			<0.01	<0.01			

Time Series

Constituent: Sulfate (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	280	72						
10/26/2016		71						
11/7/2016	300							
1/13/2017	270							
1/27/2017		74						
5/25/2017		73						
6/3/2017	270							
8/11/2017		71						
10/2/2017	330							
11/15/2017	280	70						
6/5/2018	241	74						
10/2/2018		80.7						
10/5/2018	271							
4/3/2019	230	75.2						
6/17/2019	219							
6/18/2019		75.3						
10/21/2019	238	78.5						
1/3/2020					210			
3/24/2020		74.6						
3/25/2020	116				204			
3/27/2020						111		
5/22/2020			345	56.1				
6/15/2020							219	
6/16/2020			320	57.6				
8/25/2020			353	62.8				
9/18/2020				62.7				
9/21/2020			352					
9/25/2020								149
9/28/2020	182	86.2			245	239	154	
11/11/2020				62.3				167
11/12/2020			300					
12/16/2020			306	68.1				

Time Series

Constituent: Thallium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.001		<0.001	<0.001				
7/11/2016	<0.001		<0.001					
7/12/2016				<0.001				
8/30/2016	<0.001	<0.001	<0.001	<0.001				
8/31/2016								<0.001
10/19/2016	<0.001		<0.001	<0.001				
10/20/2016		<0.001						
10/26/2016								<0.001
12/6/2016	<0.001		<0.001	<0.001				
1/24/2017	<0.001		<0.001	<0.001				
1/25/2017		<0.001						
1/27/2017								<0.001
3/21/2017	<0.001		3E-05 (J)	<0.001				
5/22/2017	<0.001		<0.001	<0.001				
5/25/2017		<0.001						<0.001
8/11/2017		<0.001						
10/2/2017								<0.001
11/15/2017		<0.001						<0.001
4/2/2018	<0.001		<0.001					
4/3/2018				<0.001				
6/4/2018	<0.001		<0.001	<0.001				
6/5/2018		<0.001						<0.001
10/1/2018	<0.001		<0.001	<0.001				
10/2/2018		<0.001						<0.001
3/12/2019	<0.001		<0.001	<0.001				
4/1/2019				<0.001				
4/2/2019	<0.001		<0.001					
8/22/2019		<0.001						<0.001
9/23/2019	<0.001		<0.001	<0.001				
3/2/2020	<0.001		<0.001	<0.001				
3/25/2020	<0.001		<0.001	<0.001				
8/24/2020		<0.001						
8/25/2020			<0.001	<0.001				
8/26/2020								<0.001
8/28/2020	<0.001							
9/16/2020					<0.001	<0.001		
9/25/2020							<0.001	
11/10/2020					<0.001	<0.001		
11/11/2020							<0.001	
12/15/2020					<0.001	<0.001		
12/16/2020							<0.001	

Time Series

Constituent: Thallium (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41
8/31/2016	<0.001	<0.001					
10/26/2016		<0.001					
11/7/2016	<0.001						
1/13/2017	<0.001						
1/27/2017		<0.001					
5/25/2017		<0.001					
6/3/2017	<0.001						
8/11/2017		<0.001					
10/2/2017	<0.001						
11/15/2017	<0.001	<0.001					
6/5/2018	<0.001	<0.001					
10/2/2018		<0.001					
10/5/2018	<0.001						
8/22/2019	<0.001						
8/23/2019		<0.001					
5/22/2020			<0.001	<0.001			
6/16/2020			<0.001	<0.001			
8/25/2020			<0.001	<0.001			
8/26/2020	<0.001				<0.001	<0.001	<0.001
8/27/2020		<0.001					
9/18/2020				<0.001			
9/21/2020			<0.001				
11/11/2020				<0.001			
11/12/2020			<0.001				
12/16/2020			<0.001	<0.001			

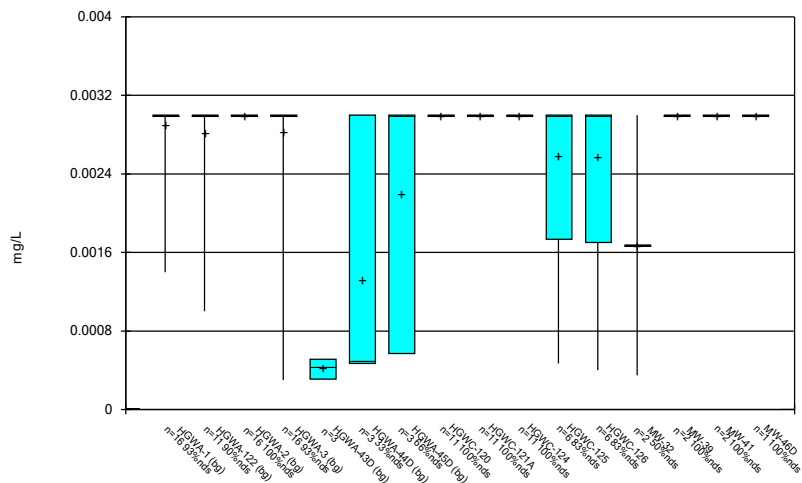
Time Series

Constituent: T Total Dissolved Solids (mg/L) Analysis Run 2/16/2021 12:27 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	876	379						
10/26/2016		409						
11/7/2016	1000							
1/13/2017	827							
1/27/2017		370						
5/25/2017		351						
6/3/2017	846							
8/11/2017		322						
10/2/2017	884							
11/15/2017	838	350						
6/5/2018	823	360						
10/2/2018		363						
10/5/2018	813							
4/3/2019	785	369						
6/17/2019	751							
10/21/2019	771	357						
1/3/2020					645			
3/24/2020		355						
3/25/2020	521				641			
3/27/2020						482		
5/22/2020			809	496				
6/15/2020							674	
6/16/2020			665	508				
8/25/2020			772	505				
9/18/2020				452				
9/21/2020			956					
9/25/2020								449
9/28/2020	<10	176			272	272	392	
11/11/2020				468				472
11/12/2020			694					
12/16/2020			816	536				

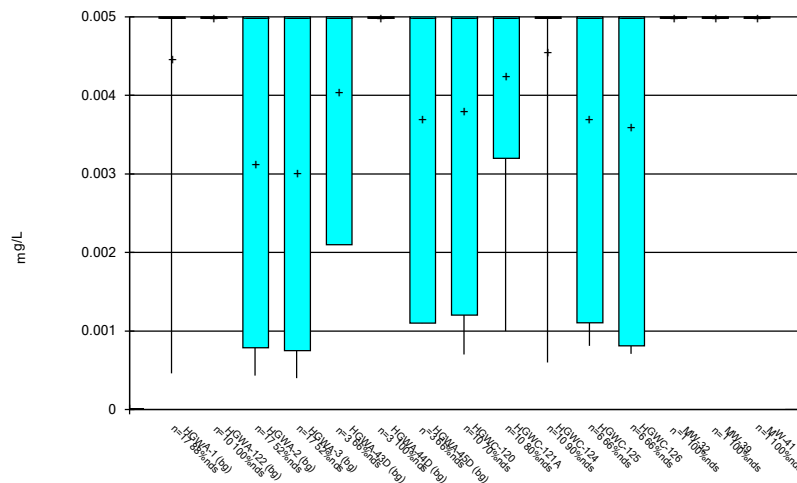
FIGURE B.

Box & Whiskers Plot



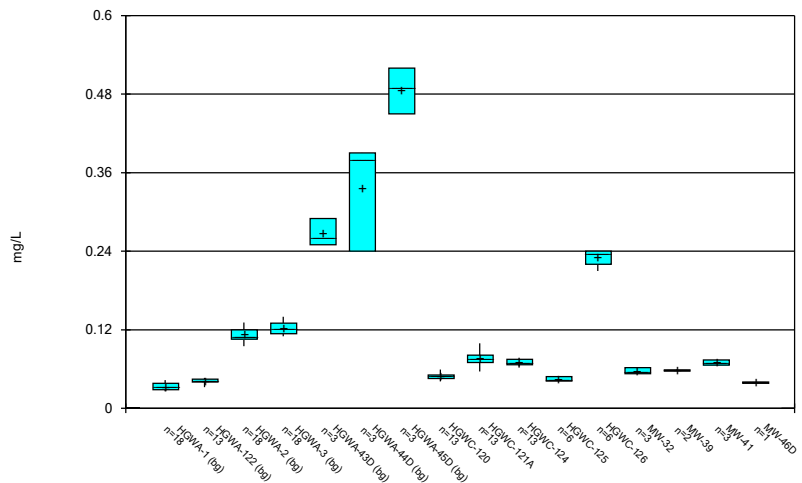
Constituent: Antimony Analysis Run 2/16/2021 12:32 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



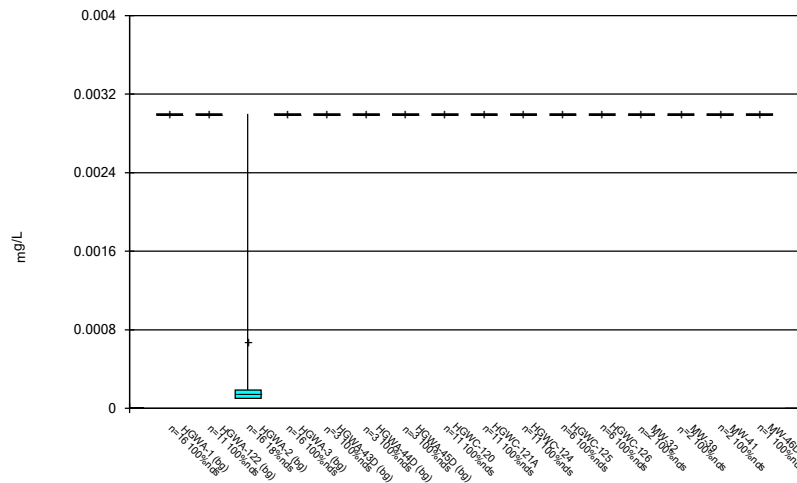
Constituent: Arsenic Analysis Run 2/16/2021 12:32 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



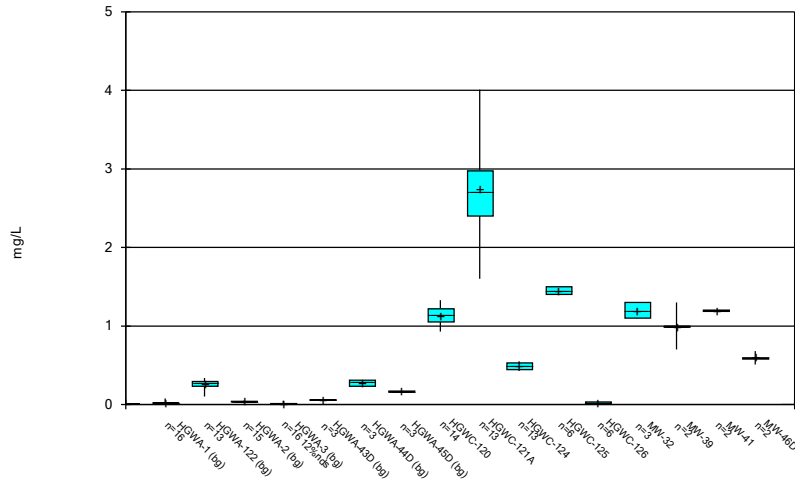
Constituent: Barium Analysis Run 2/16/2021 12:32 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



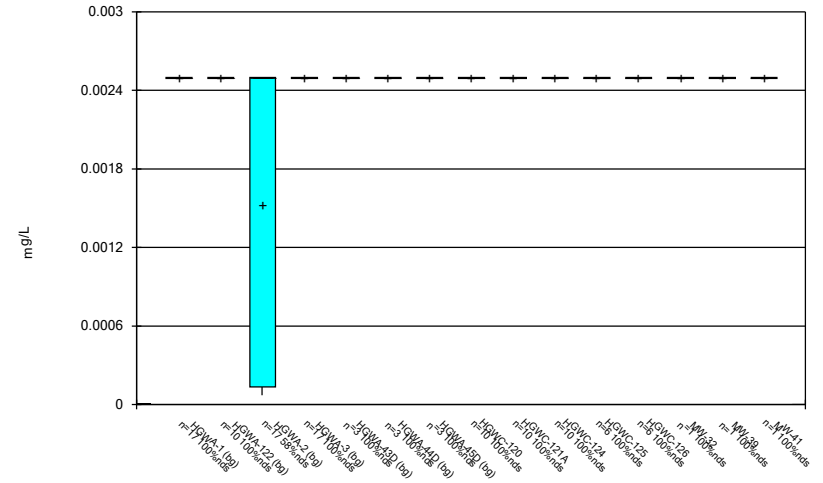
Constituent: Beryllium Analysis Run 2/16/2021 12:32 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



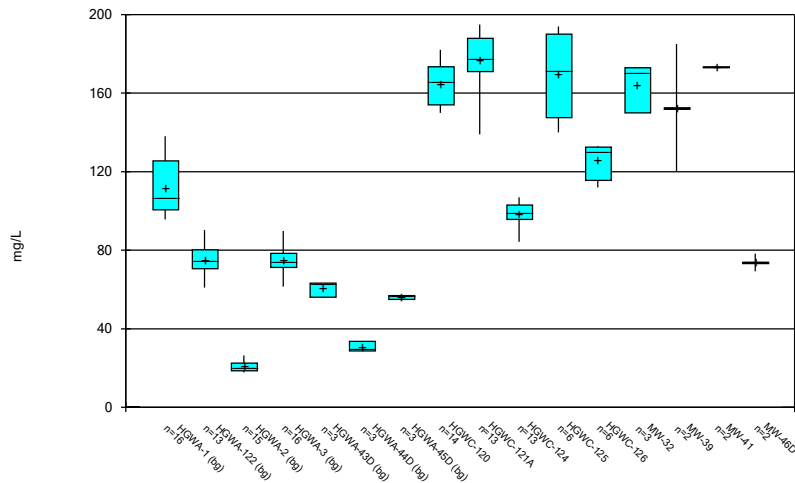
Constituent: Boron Analysis Run 2/16/2021 12:32 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



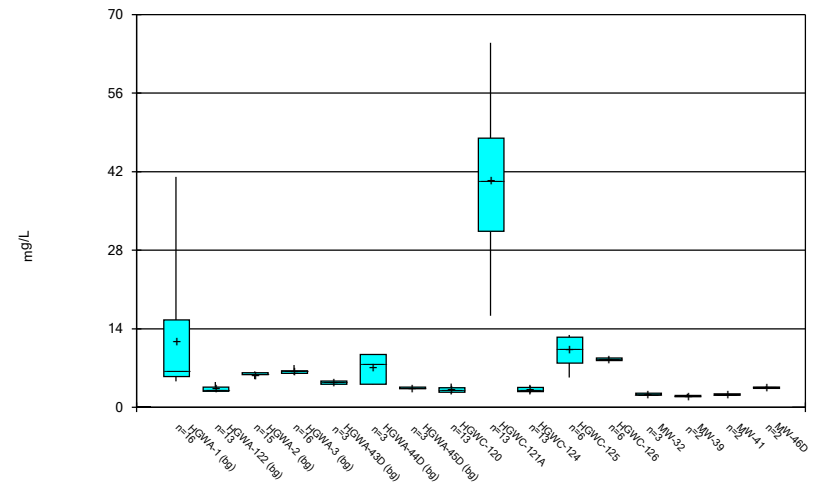
Constituent: Cadmium Analysis Run 2/16/2021 12:32 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



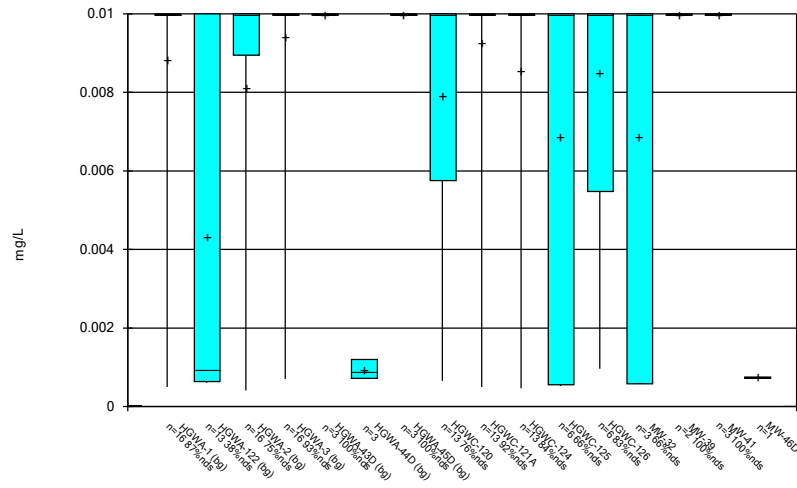
Constituent: Calcium Analysis Run 2/16/2021 12:32 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



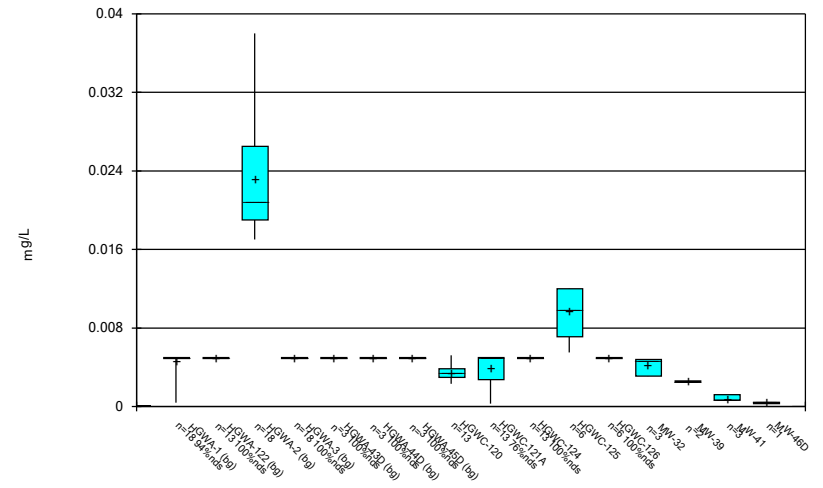
Constituent: Chloride Analysis Run 2/16/2021 12:32 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



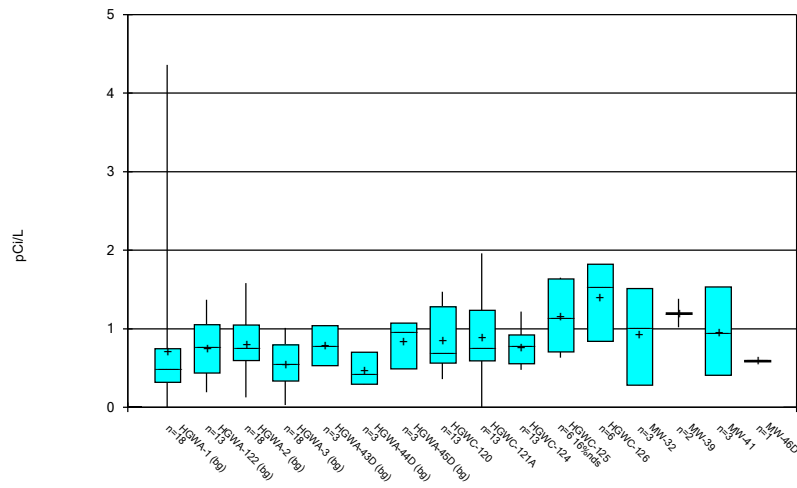
Constituent: Chromium Analysis Run 2/16/2021 12:32 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



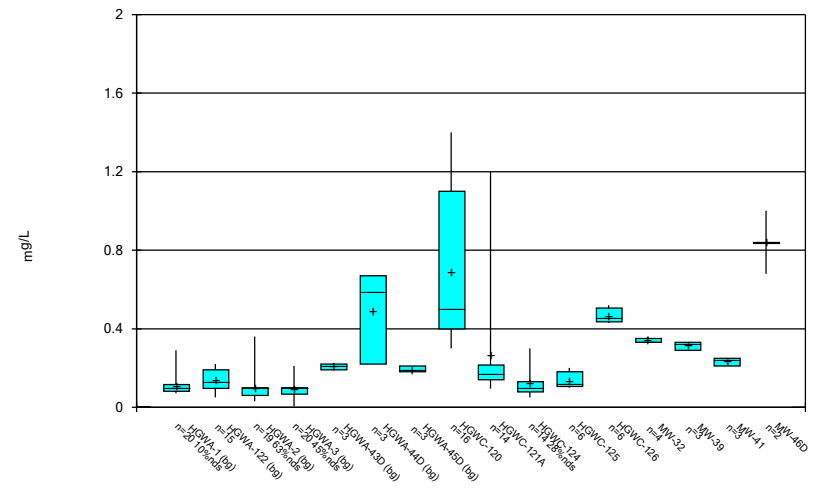
Constituent: Cobalt Analysis Run 2/16/2021 12:32 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



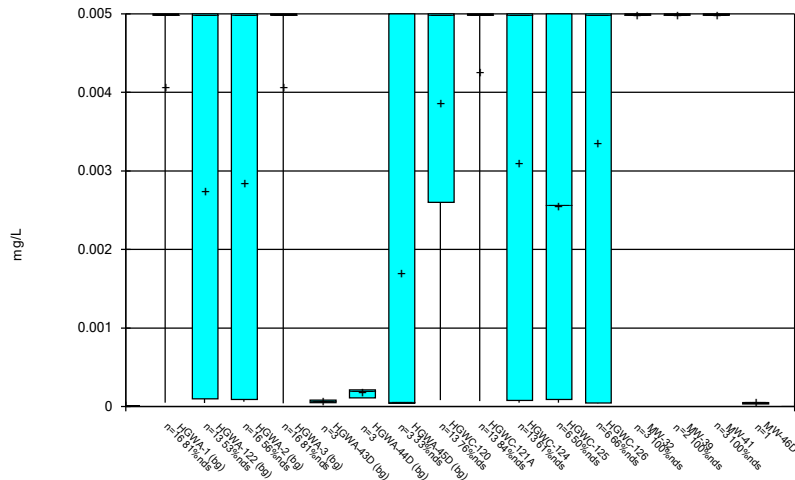
Constituent: Combined Radium 226 + 228 Analysis Run 2/16/2021 12:32 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



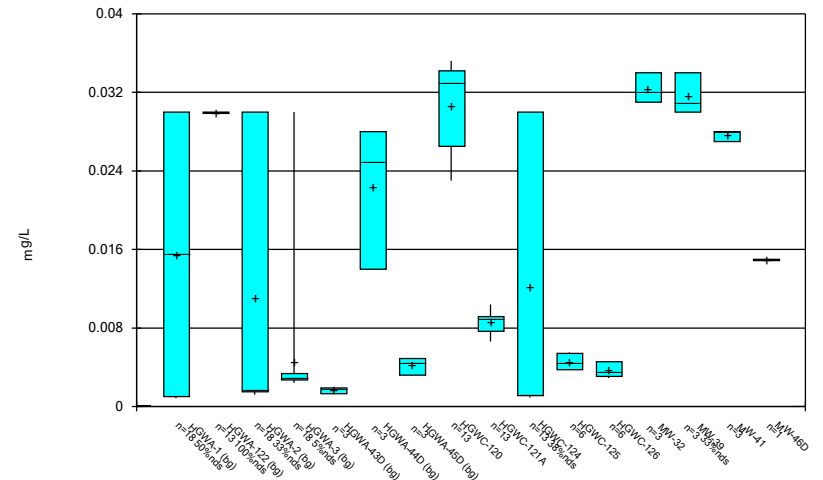
Constituent: Fluoride Analysis Run 2/16/2021 12:32 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



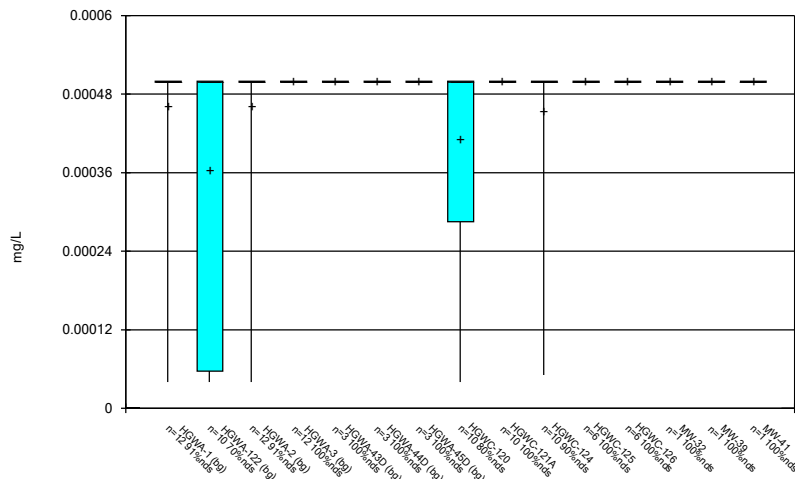
Constituent: Lead Analysis Run 2/16/2021 12:33 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



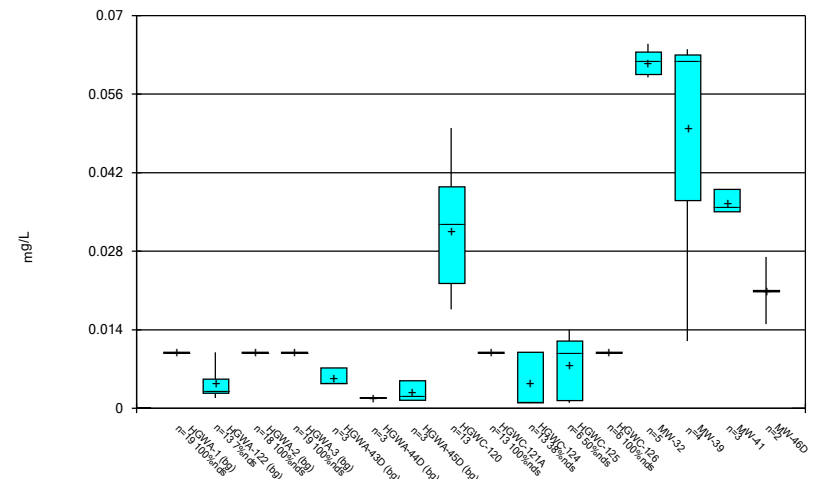
Constituent: Lithium Analysis Run 2/16/2021 12:33 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



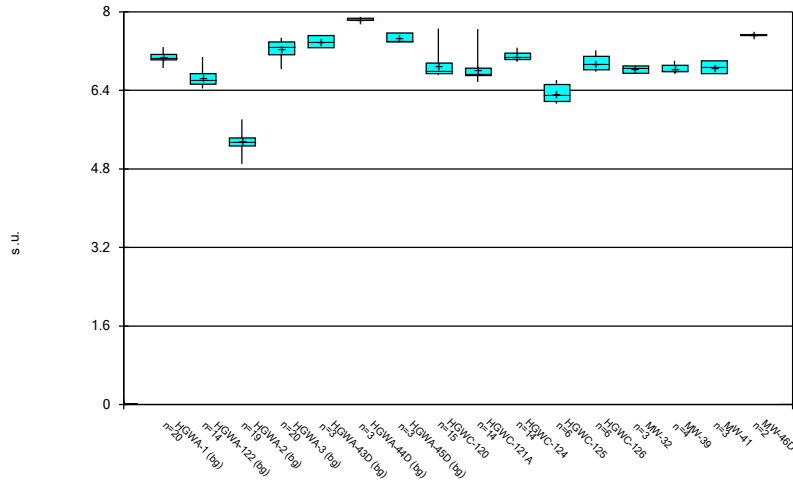
Constituent: Mercury Analysis Run 2/16/2021 12:33 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



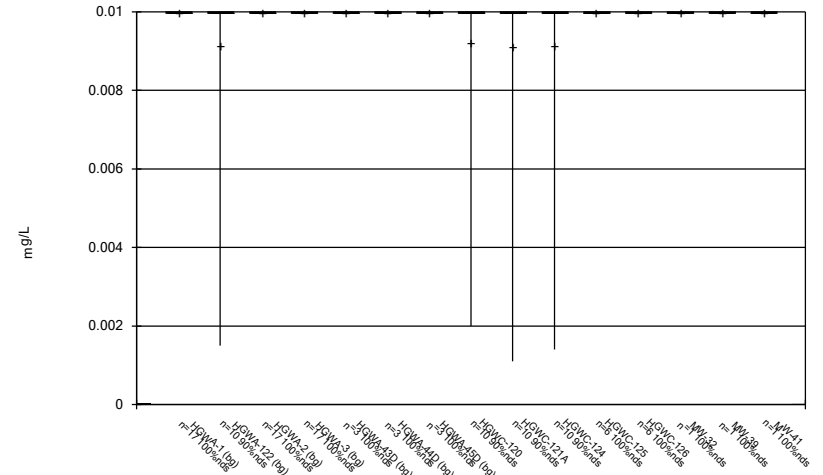
Constituent: Molybdenum Analysis Run 2/16/2021 12:33 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



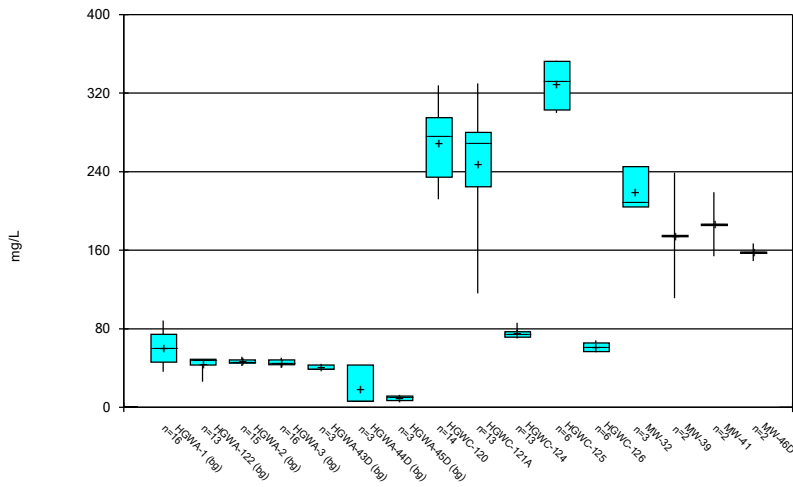
Constituent: pH Analysis Run 2/16/2021 12:33 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



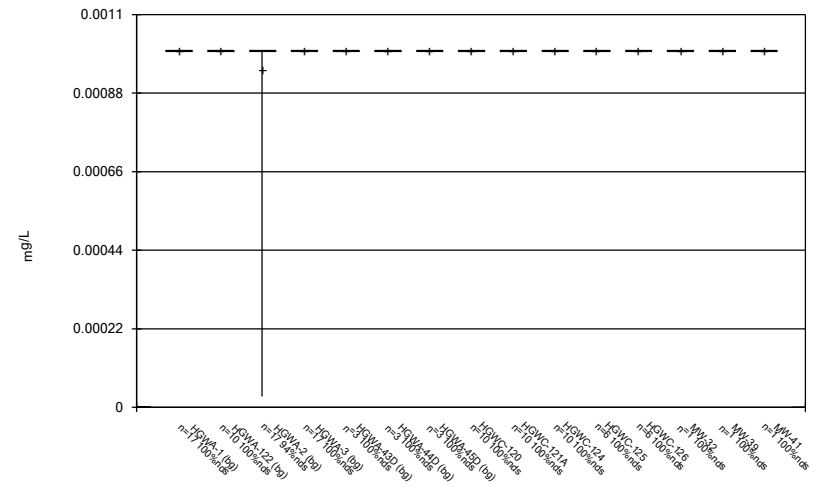
Constituent: Selenium Analysis Run 2/16/2021 12:33 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



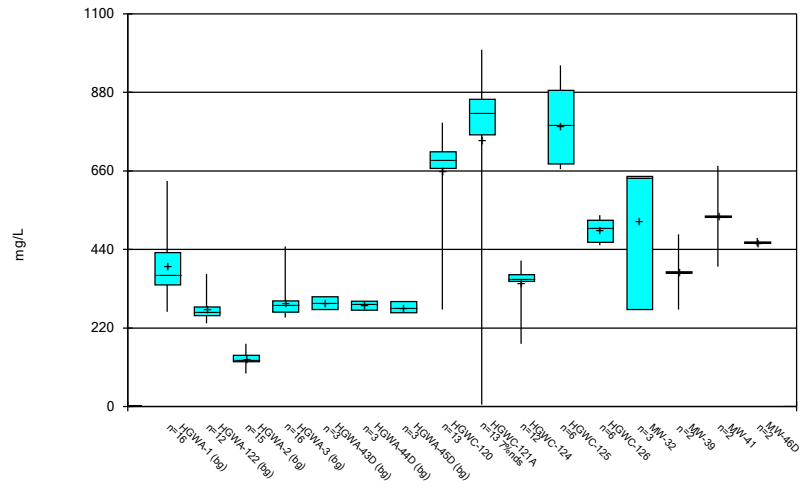
Constituent: Sulfate Analysis Run 2/16/2021 12:33 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



Constituent: Thallium Analysis Run 2/16/2021 12:33 PM View: Descriptive
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:33 PM View: Descriptive
Plant Hammond Client: Southern Company Data: Hammond AP-3

FIGURE C.

Outlier Summary

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 12/16/2020, 10:30 PM

HDWA-122 Total Dissolved Solids (mg/L)

4/2/2019

814 (o)

FIGURE D.

Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 12:39 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-120	0.336	9/21/2020	0.93	Yes	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-121A	0.336	9/28/2020	2.3	Yes	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-124	0.336	9/28/2020	0.43	Yes	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-125	0.336	12/16/2020	1.5	Yes	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-120	138	9/21/2020	152	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-121A	138	9/28/2020	167	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-125	138	12/16/2020	194	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-120	88.2	9/21/2020	225	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-121A	88.2	9/28/2020	182	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-125	88.2	12/16/2020	306	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-125	632	12/16/2020	816	Yes	68	n/a	n/a	0	n/a	n/a	0.0004151	NP Inter (normality) 1 of 2

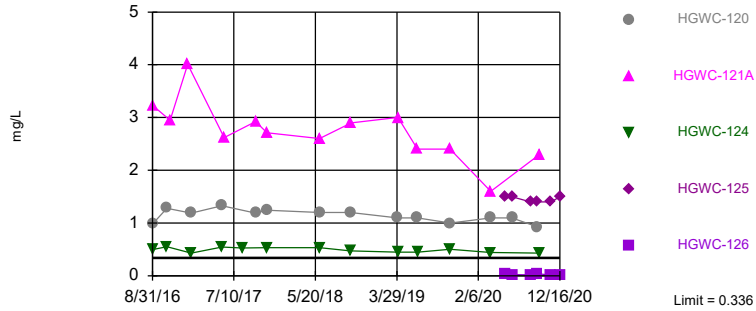
Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 12:39 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-120	0.336	9/21/2020	0.93	Yes	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-121A	0.336	9/28/2020	2.3	Yes	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-124	0.336	9/28/2020	0.43	Yes	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-125	0.336	12/16/2020	1.5	Yes	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-126	0.336	12/16/2020	0.011J	No	69	n/a	n/a	2.899	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-120	138	9/21/2020	152	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-121A	138	9/28/2020	167	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-124	138	9/28/2020	107	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-125	138	12/16/2020	194	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-126	138	12/16/2020	132	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-120	41.1	9/21/2020	2.4	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-121A	41.1	9/28/2020	23.2	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-124	41.1	9/28/2020	2.5	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-125	41.1	12/16/2020	5.3	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-126	41.1	12/16/2020	8.9	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-120	0.67	9/21/2020	0.33	No	83	n/a	n/a	27.71	n/a	n/a	0.0002807	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-121A	0.67	9/28/2020	0.15	No	83	n/a	n/a	27.71	n/a	n/a	0.0002807	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-124	0.67	9/28/2020	0.1ND	No	83	n/a	n/a	27.71	n/a	n/a	0.0002807	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-125	0.67	12/16/2020	0.2	No	83	n/a	n/a	27.71	n/a	n/a	0.0002807	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-126	0.67	12/16/2020	0.49	No	83	n/a	n/a	27.71	n/a	n/a	0.0002807	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-120	7.87	9/21/2020	6.98	No	82	n/a	n/a	0	n/a	n/a	0.0005738	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-121A	7.87	9/28/2020	6.93	No	82	n/a	n/a	0	n/a	n/a	0.0005738	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-124	7.87	9/28/2020	7.27	No	82	n/a	n/a	0	n/a	n/a	0.0005738	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-125	7.87	12/16/2020	6.61	No	82	n/a	n/a	0	n/a	n/a	0.0005738	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-126	7.87	12/16/2020	6.93	No	82	n/a	n/a	0	n/a	n/a	0.0005738	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-120	88.2	9/21/2020	225	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-121A	88.2	9/28/2020	182	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-124	88.2	9/28/2020	86.2	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-125	88.2	12/16/2020	306	Yes	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-126	88.2	12/16/2020	68.1	No	69	n/a	n/a	0	n/a	n/a	0.0004016	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-120	632	9/21/2020	272	No	68	n/a	n/a	0	n/a	n/a	0.0004151	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-121A	632	9/28/2020	5ND	No	68	n/a	n/a	0	n/a	n/a	0.0004151	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-124	632	9/28/2020	176	No	68	n/a	n/a	0	n/a	n/a	0.0004151	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-125	632	12/16/2020	816	Yes	68	n/a	n/a	0	n/a	n/a	0.0004151	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-126	632	12/16/2020	536	No	68	n/a	n/a	0	n/a	n/a	0.0004151	NP Inter (normality) 1 of 2

Exceeds Limit: HGWC-120, HGWC-121A, HGWC-124, HGWC-125

Prediction Limit
Interwell Non-parametric

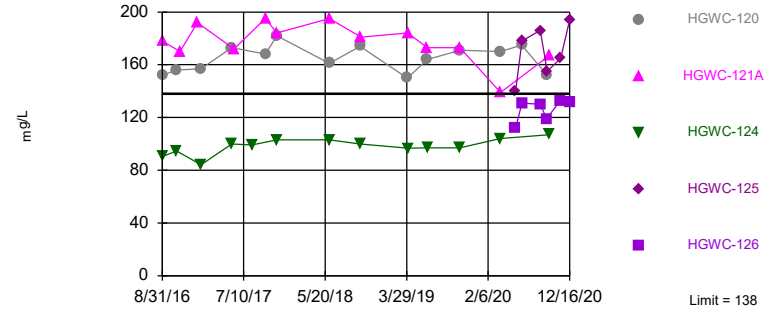


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 69 background values. 2.899% NDs. Annual per-constituent alpha = 0.004009. Individual comparison alpha = 0.0004016 (1 of 2). Comparing 5 points to limit.

Constituent: Boron Analysis Run 2/16/2021 12:36 PM View: PLS
Plant Hammond Client: Southern Company Data: Hammond AP-3

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

Prediction Limit
Interwell Non-parametric

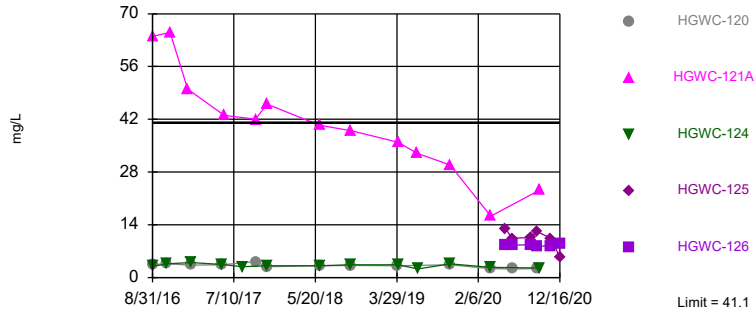


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 69 background values. Annual per-constituent alpha = 0.004009. Individual comparison alpha = 0.0004016 (1 of 2). Comparing 5 points to limit.

Constituent: Calcium Analysis Run 2/16/2021 12:36 PM View: PLS
Plant Hammond Client: Southern Company Data: Hammond AP-3

Within Limit

Prediction Limit
Interwell Non-parametric

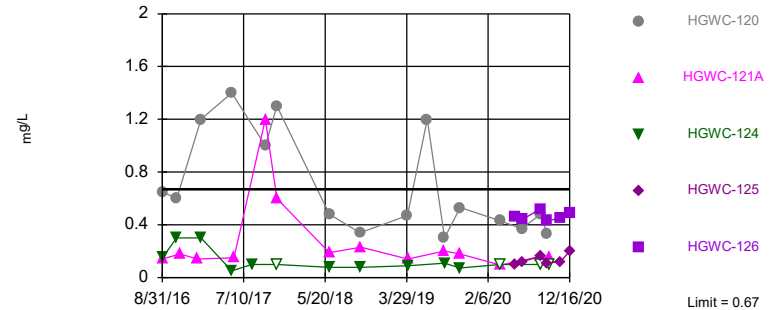


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 69 background values. Annual per-constituent alpha = 0.004009. Individual comparison alpha = 0.0004016 (1 of 2). Comparing 5 points to limit.

Constituent: Chloride Analysis Run 2/16/2021 12:36 PM View: PLS
Plant Hammond Client: Southern Company Data: Hammond AP-3

Within Limit

Prediction Limit
Interwell Non-parametric

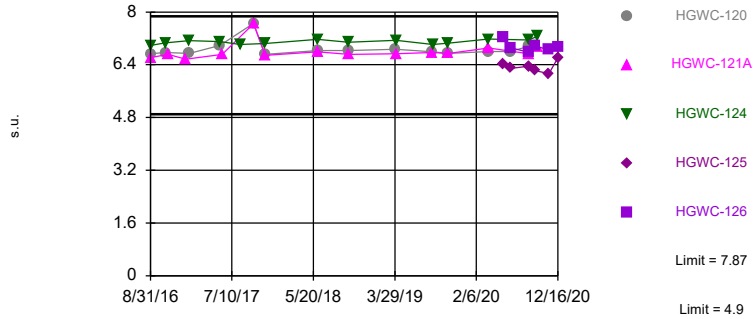


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 83 background values. 27.71% NDs. Annual per-constituent alpha = 0.002804. Individual comparison alpha = 0.0002807 (1 of 2). Comparing 5 points to limit.

Constituent: Fluoride Analysis Run 2/16/2021 12:36 PM View: PLS
Plant Hammond Client: Southern Company Data: Hammond AP-3

Within Limits

Prediction Limit
Interwell Non-parametric

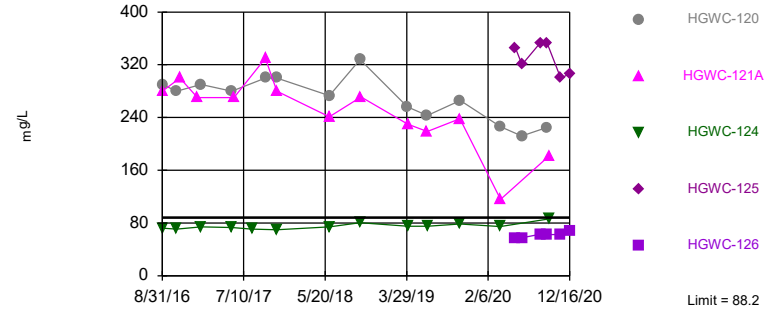


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 82 background values. Annual per-constituent alpha = 0.00573. Individual comparison alpha = 0.0005738 (1 of 2). Comparing 5 points to limit.

Constituent: pH Analysis Run 2/16/2021 12:36 PM View: PLS
 Plant Hammond Client: Southern Company Data: Hammond AP-3

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

Prediction Limit
Interwell Non-parametric

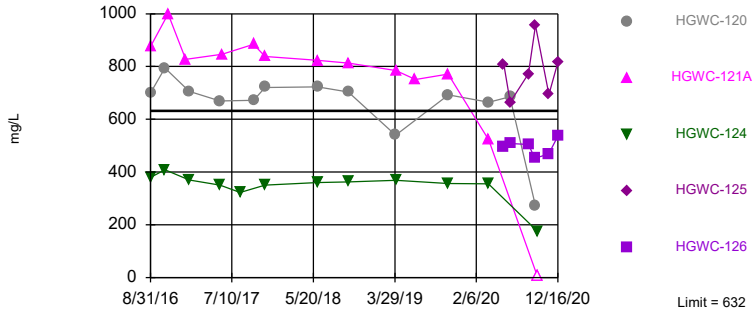


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 69 background values. Annual per-constituent alpha = 0.004009. Individual comparison alpha = 0.0004016 (1 of 2). Comparing 5 points to limit.

Constituent: Sulfate Analysis Run 2/16/2021 12:36 PM View: PLS
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Exceeds Limit: HGWC-125

Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 68 background values. Annual per-constituent alpha = 0.004143. Individual comparison alpha = 0.0004151 (1 of 2). Comparing 5 points to limit.

Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:36 PM View: PLS
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS

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

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

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS
Plant Hammond Client: Southern Company Data: Hammond AP-3

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

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS
Plant Hammond Client: Southern Company Data: Hammond AP-3

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

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS

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

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-124	HGWC-121A	HGWC-120	HGWC-125	HGWC-126
5/19/2016	9.94	5.93	6.14						
7/11/2016	6.3		5.9						
7/12/2016		6.2							
8/30/2016	6	6.4	6.2	2.8					
8/31/2016					3	64	3.5		
10/19/2016	5.8	6.5	6.1						
10/20/2016				2.8					
10/26/2016					3.6		3.6		
11/7/2016						65			
12/6/2016	5.4	7.2	6						
1/13/2017						50			
1/24/2017	5.2	6.4	6.1						
1/25/2017				2.8					
1/27/2017					4		3.3		
3/21/2017	4.6	7.5	5.9						
5/22/2017	4.6	6.5	5.9						
5/25/2017				2.9	3.5		3.4		
6/3/2017						43			
8/11/2017				3	2.9				
10/2/2017						42	4.2		
10/3/2017	5.6	6.5	6.3						
11/15/2017				3.1	3.1	46	2.9		
6/4/2018	13.1	6.3	6.1						
6/5/2018				3	3.1	40.4	3.1		
10/1/2018	6.6	6.4	6.4						
10/2/2018				3.1	3.4		3.2		
10/5/2018						39			
4/1/2019		6.5							
4/2/2019	20.3		5.8	3.6			3.1		
4/3/2019					3.4	35.9			
6/17/2019						32.9			
6/18/2019				3.2	2.3 (J)				
9/23/2019	17.7	5.9	5.1						
10/21/2019				4.5	3.6	29.9			
10/22/2019							3.4		
3/24/2020				4.5	2.7				
3/25/2020	20.4	6.1	5.2			16.3	2.4		
5/22/2020								12.9	8.6
6/15/2020							2.3		
6/16/2020	41.1	5.8						10.4	8.6
8/25/2020								10.6	8.7
9/15/2020	13.4	6	5	3.6					
9/16/2020									
9/18/2020									8.4
9/21/2020							2.4	12.1	
9/25/2020									
9/28/2020					2.5	23.2			
11/10/2020									
11/11/2020									8.3
11/12/2020								10.4	
12/15/2020									
12/16/2020							5.3		8.9

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS
Plant Hammond Client: Southern Company Data: Hammond AP-3

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

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS

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

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

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS

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

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

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

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
9/16/2020	0.22	0.22	
9/18/2020			
9/21/2020			
9/25/2020			0.21
9/28/2020			
11/10/2020	0.19	0.59	
11/11/2020			0.19
11/12/2020			
12/15/2020	0.21	0.67	
12/16/2020			0.18

Prediction Limit

Constituent: pH (s.u.) Analysis Run 2/16/2021 12:39 PM View: PLS

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

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-124	HGWC-120	HGWC-126	HGWC-125
5/19/2016	7.27	5.81	7.45						
7/11/2016	7.06	5.68							
7/12/2016			7.32						
8/30/2016	7.28	5.63	7.43	6.75					
8/31/2016					6.62	6.99	6.73		
10/19/2016	7.02	5.46	7.03						
10/20/2016				6.73					
10/27/2016						7.06	6.77		
11/7/2016					6.71				
12/6/2016	7.09	5.38	7.08						
1/13/2017					6.57				
1/24/2017	7.2	5.37	7.39						
1/25/2017				6.88					
1/27/2017						7.13	6.74		
3/21/2017	7.01	4.9	6.83						
5/22/2017	7.11	5.2	7.02						
5/25/2017				6.55		7.1	6.99		
6/3/2017					6.71				
8/11/2017				6.56		7.02			
10/2/2017					7.65		7.66		
10/3/2017	7.21	5.3	7.47						
11/15/2017				6.47	6.69	7.04	6.71		
4/2/2018	7.1	5.4							
4/3/2018			7.38						
6/4/2018	7.06	5.27	7.38						
6/5/2018				6.66	6.79	7.17	6.83		
10/1/2018	7.09	5.31	7.13						
10/2/2018				6.44		7.08	6.83		
10/5/2018					6.71				
3/12/2019	7.03	5.42	7.29						
4/1/2019			7.16						
4/2/2019	6.86	5.41		6.57			6.87		
4/3/2019					6.73	7.14			
8/22/2019				6.51	6.77		6.79		
8/23/2019						7.02			
9/23/2019	7.02	5.33	7.3						
10/21/2019				6.69	6.74	7.05			
10/22/2019							6.74		
3/2/2020	7.1	5.43	7.12						
3/24/2020				7.08		7.18			
3/25/2020	6.95	5.36	7.4		6.91		6.8		
5/22/2020								7.22	6.43
6/15/2020							6.8		
6/16/2020	6.97		7.31					6.92	6.29
8/24/2020				6.54					
8/25/2020		5.17	7.14					6.78	6.36
8/26/2020					6.73		6.96		
8/27/2020						7.15			
8/28/2020	7.02								
9/15/2020	7.15	5.22	7.29	6.68					
9/16/2020									
9/18/2020							6.97		

Prediction Limit

Constituent: pH (s.u.) Analysis Run 2/16/2021 12:39 PM View: PLS
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
5/19/2016			
7/11/2016			
7/12/2016			
8/30/2016			
8/31/2016			
10/19/2016			
10/20/2016			
10/27/2016			
11/7/2016			
12/6/2016			
1/13/2017			
1/24/2017			
1/25/2017			
1/27/2017			
3/21/2017			
5/22/2017			
5/25/2017			
6/3/2017			
8/11/2017			
10/2/2017			
10/3/2017			
11/15/2017			
4/2/2018			
4/3/2018			
6/4/2018			
6/5/2018			
10/1/2018			
10/2/2018			
10/5/2018			
3/12/2019			
4/1/2019			
4/2/2019			
4/3/2019			
8/22/2019			
8/23/2019			
9/23/2019			
10/21/2019			
10/22/2019			
3/2/2020			
3/24/2020			
3/25/2020			
5/22/2020			
6/15/2020			
6/16/2020			
8/24/2020			
8/25/2020			
8/26/2020			
8/27/2020			
8/28/2020			
9/15/2020			
9/16/2020	7.52	7.83	
9/18/2020			

Prediction Limit

Constituent: pH (s.u.) Analysis Run 2/16/2021 12:39 PM View: PLS
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
9/21/2020			
9/25/2020			7.57
9/28/2020			
11/10/2020	7.27	7.84	
11/11/2020			7.4
11/12/2020			
12/15/2020	7.39	7.87	
12/16/2020			7.39

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS

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

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-122 (bg)	HGWC-124	HGWC-121A	HGWC-120	HGWC-125	HGWC-126
5/19/2016	66.9	48.6	42.3						
7/11/2016	41	45							
7/12/2016			44						
8/30/2016	36	42	40	49					
8/31/2016					72	280	290		
10/19/2016	46	44	43						
10/20/2016				49					
10/26/2016					71		280		
11/7/2016						300			
12/6/2016	59	44	43						
1/13/2017						270			
1/24/2017	46	46	48						
1/25/2017				48					
1/27/2017					74		290		
3/21/2017	63	46	45						
5/22/2017	77	48	46						
5/25/2017				48	73		280		
6/3/2017						270			
8/11/2017				47	71				
10/2/2017						330	300		
10/3/2017	42	47	48						
11/15/2017				49	70	280	300		
6/4/2018	71.8	47.8	46.6						
6/5/2018				48.9	74	241	273		
10/1/2018	49.1	48.1	48.6						
10/2/2018				48.6	80.7		328		
10/5/2018						271			
4/1/2019			50.4						
4/2/2019	84.3	48.7		39.6			256		
4/3/2019					75.2	230			
6/17/2019						219	243		
6/18/2019				44.5	75.3				
9/23/2019	70.2	47.2	43.9						
10/21/2019				45.6	78.5	238			
10/22/2019							266		
3/24/2020				25.9	74.6				
3/25/2020	85.9	46.3	50.5			116	226		
5/22/2020								345	56.1
6/15/2020							212		
6/16/2020	88.2		49.5					320	57.6
8/25/2020								353	62.8
9/15/2020	47.3	51.5	44.7	41.4					
9/16/2020									
9/18/2020									62.7
9/21/2020							225	352	
9/25/2020									
9/28/2020					86.2	182			
11/10/2020									
11/11/2020									62.3
11/12/2020							300		
12/15/2020									
12/16/2020							306		68.1

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS

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

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

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 2/16/2021 12:39 PM View: PLS
Plant Hammond Client: Southern Company Data: Hammond AP-3

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

FIGURE E.

Trend Test Summary - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 12:46 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Boron (mg/L)	HGWA-2 (bg)	0.002014	57	53	Yes	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-121A	-0.2314	-49	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-122 (bg)	-1.81	-46	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-3 (bg)	1.639	64	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-120	-17.58	-50	-48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-121A	-25.97	-50	-43	Yes	13	0	n/a	n/a	0.01	NP

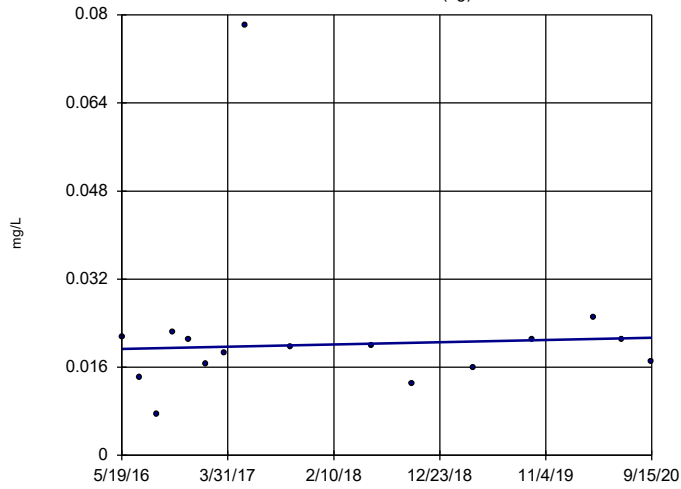
Trend Test Summary - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 12:46 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-1 (bg)	0.0004675	7	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-122 (bg)	-0.02677	-41	-43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-2 (bg)	0.002014	57	53	Yes	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-3 (bg)	-0.0006127	-25	-58	No	16	12.5	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-43D (bg)	-0.0365	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Boron (mg/L)	HGWA-44D (bg)	0.3244	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Boron (mg/L)	HGWA-45D (bg)	0	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Boron (mg/L)	HGWC-120	-0.05419	-39	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-121A	-0.2314	-49	-43	Yes	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-124	-0.01814	-35	-43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-125	0	-3	-14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-1 (bg)	6.226	48	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-122 (bg)	0.6171	4	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-2 (bg)	0.02596	1	53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	2.935	46	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-43D (bg)	26.77	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Calcium (mg/L)	HGWA-44D (bg)	-5.272	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Calcium (mg/L)	HGWA-45D (bg)	-1.78	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Calcium (mg/L)	HGWC-120	2.933	18	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-121A	-5.808	-21	-43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-125	44.88	7	14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-1 (bg)	7.687	53	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-122 (bg)	-1.81	-46	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.235	49	53	No	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-3 (bg)	1.639	64	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-43D (bg)	-17.03	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Sulfate (mg/L)	HGWA-44D (bg)	-147.2	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Sulfate (mg/L)	HGWA-45D (bg)	20.03	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Sulfate (mg/L)	HGWC-120	-17.58	-50	-48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-121A	-25.97	-50	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-125	-48.99	-5	-14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	18.73	26	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-122 (bg)	-1.249	-2	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-2 (bg)	-3.989	-24	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-3 (bg)	2.145	12	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-43D (bg)	68.94	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Total Dissolved Solids (mg/L)	HGWA-44D (bg)	101.4	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Total Dissolved Solids (mg/L)	HGWA-45D (bg)	138	NaN	NaN	No	3	0	n/a	n/a	NaN	NP
Total Dissolved Solids (mg/L)	HGWC-125	71.04	3	14	No	6	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

HGWA-1 (bg)

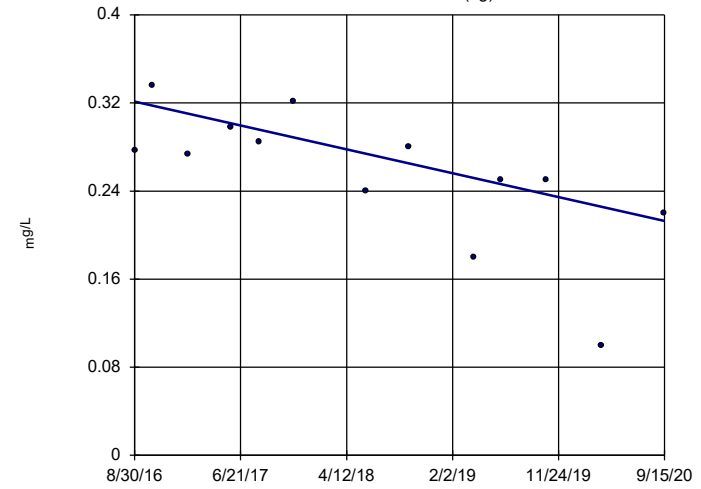


n = 16
 Slope = 0.0004675 units per year.
 Mann-Kendall statistic = 7
 critical = 58
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 2/16/2021 12:42 PM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

HGWA-122 (bg)

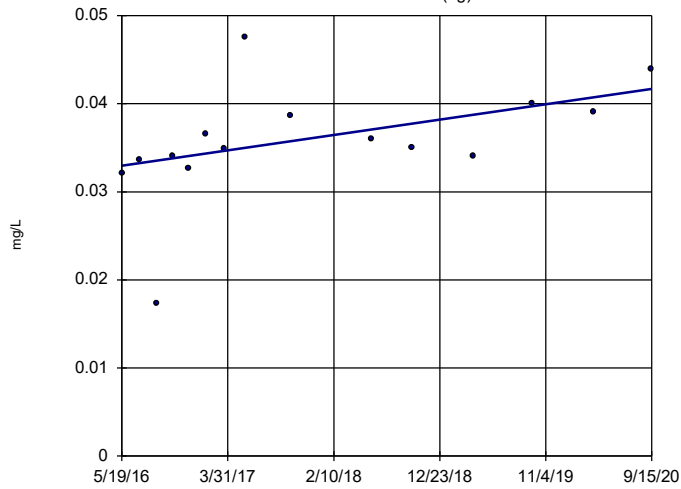


n = 13
 Slope = -0.02677 units per year.
 Mann-Kendall statistic = -41
 critical = -43
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 2/16/2021 12:42 PM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

HGWA-2 (bg)



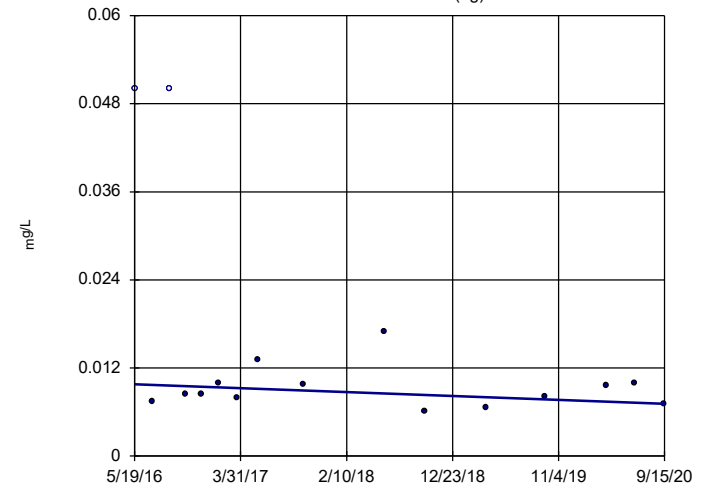
n = 15
 Slope = 0.002014 units per year.
 Mann-Kendall statistic = 57
 critical = 53
 Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 2/16/2021 12:42 PM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Hollow symbols indicate censored values.

Sen's Slope Estimator

HGWA-3 (bg)

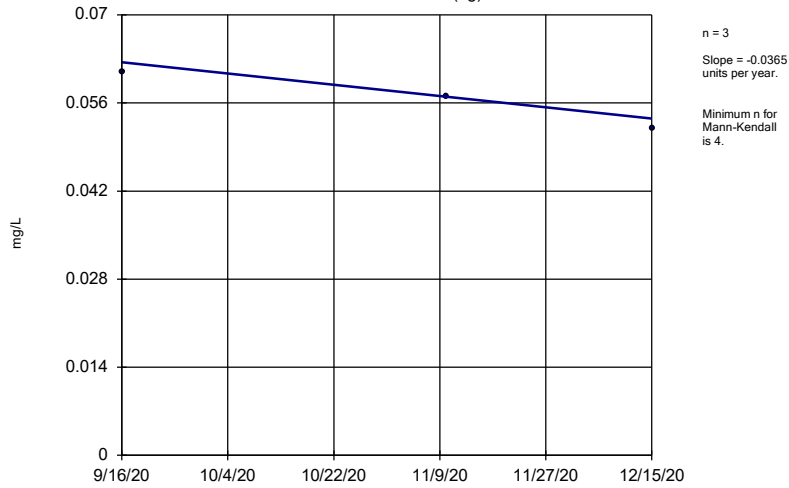


n = 16
 Slope = -0.0006127 units per year.
 Mann-Kendall statistic = -25
 critical = -58
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 2/16/2021 12:42 PM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

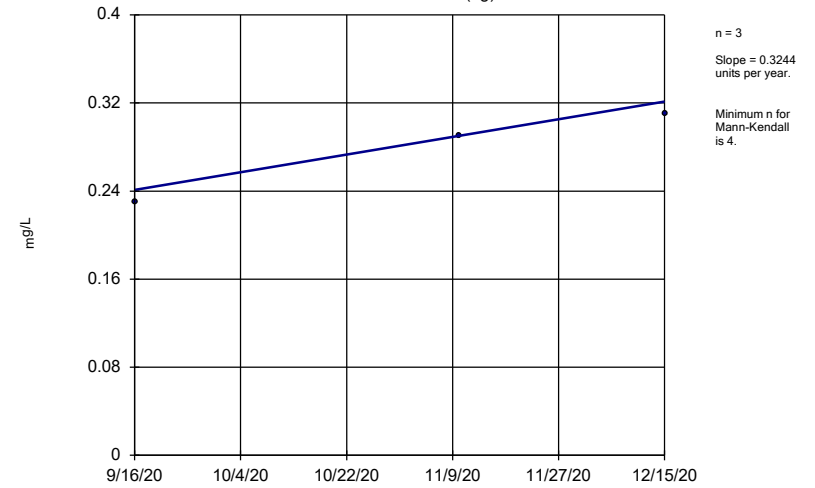
HGWA-43D (bg)



Constituent: Boron Analysis Run 2/16/2021 12:42 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

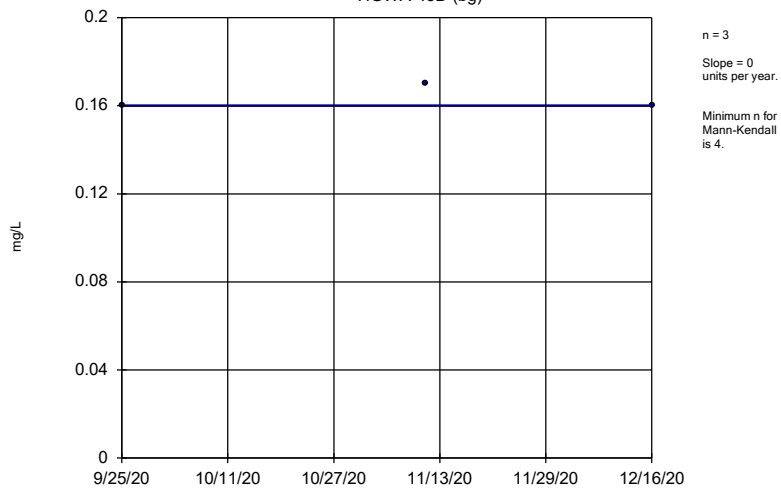
HGWA-44D (bg)



Constituent: Boron Analysis Run 2/16/2021 12:42 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

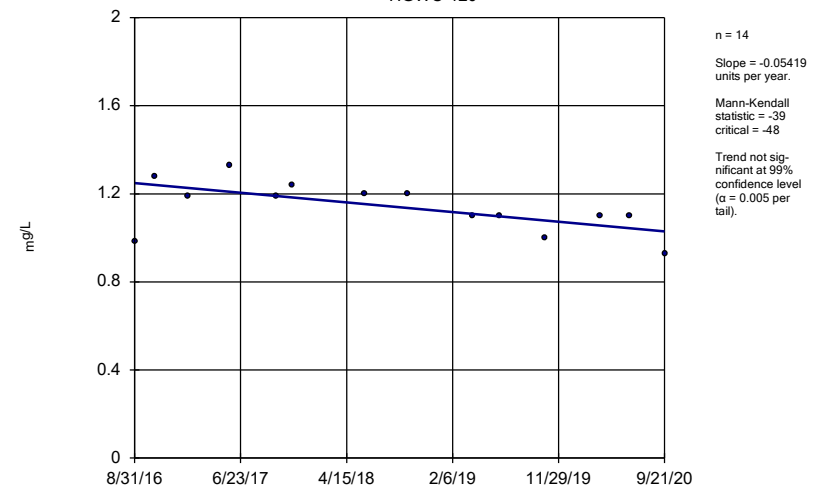
HGWA-45D (bg)



Constituent: Boron Analysis Run 2/16/2021 12:42 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

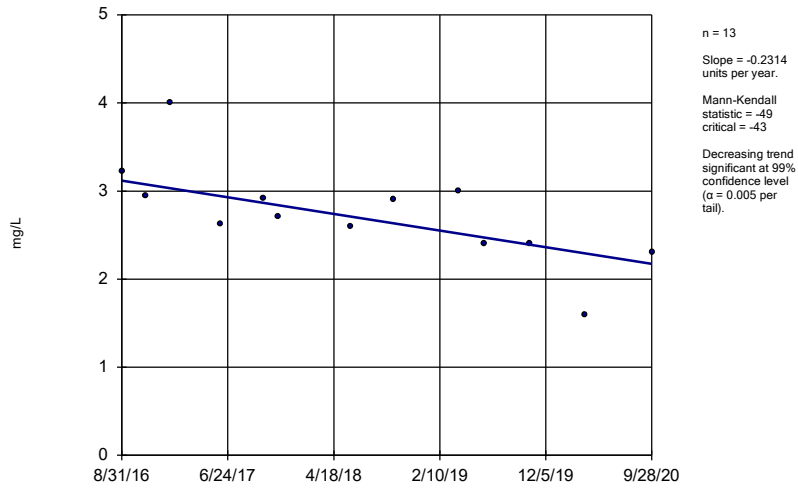
Sen's Slope Estimator

HGWC-120



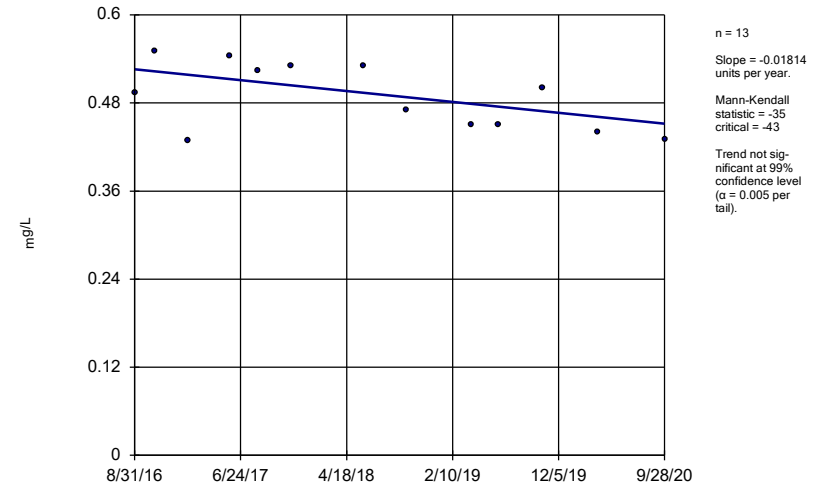
Constituent: Boron Analysis Run 2/16/2021 12:42 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator
HGWC-121A



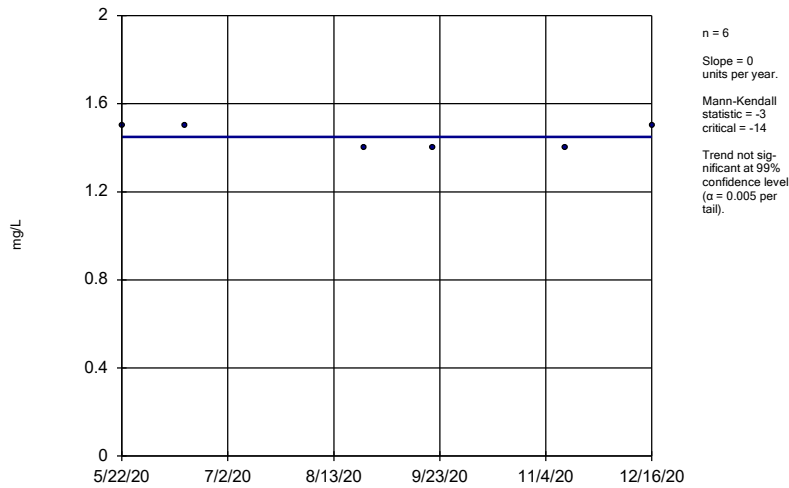
Constituent: Boron Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator
HGWC-124



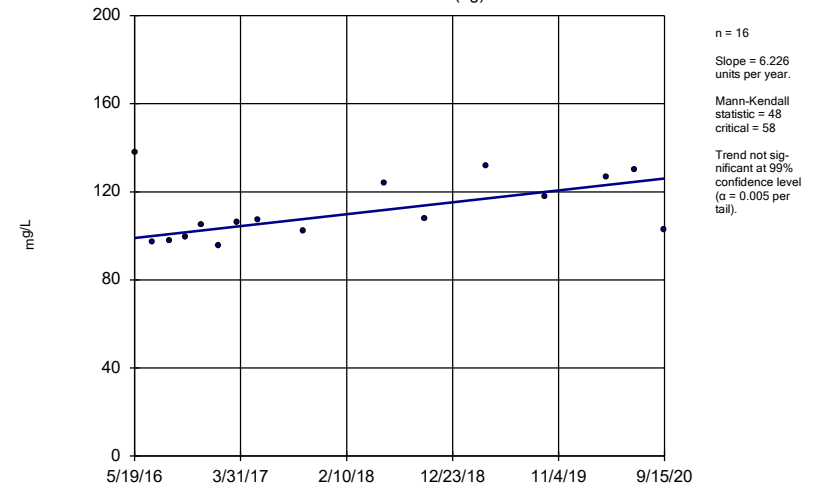
Constituent: Boron Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator
HGWC-125



Constituent: Boron Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

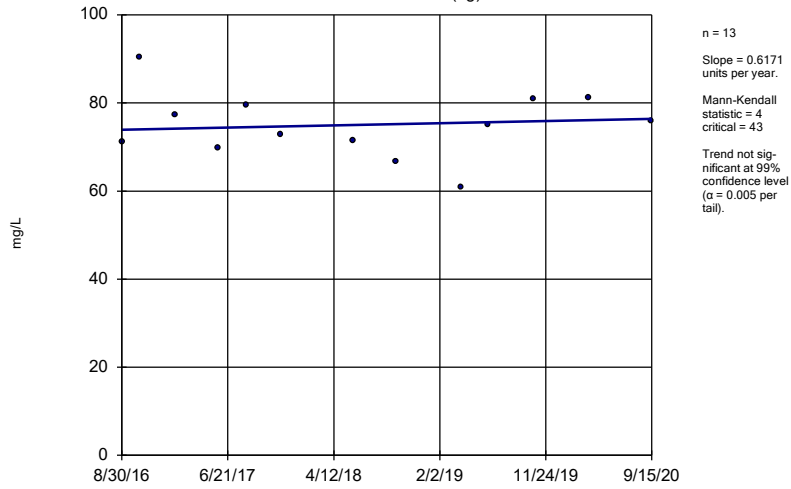
Sen's Slope Estimator
HGWA-1 (bg)



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

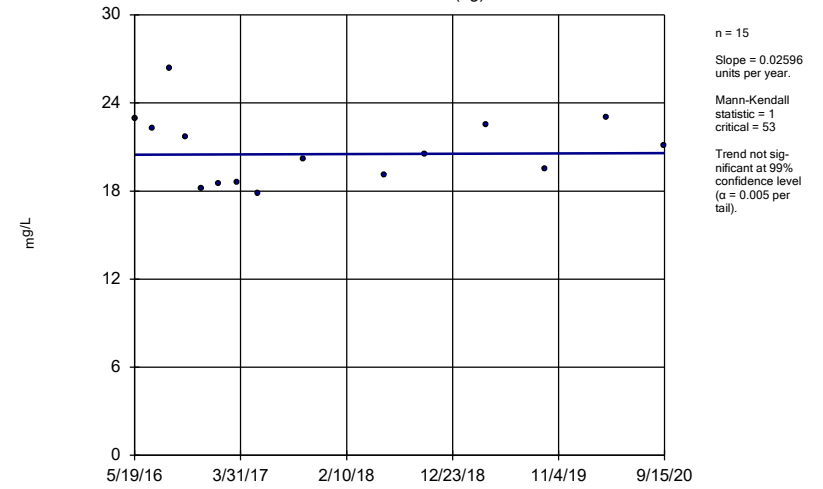
HGWA-122 (bg)



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

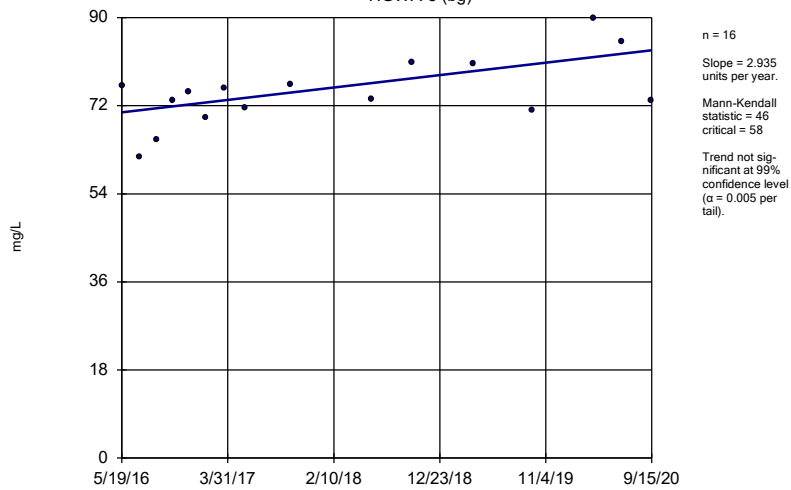
HGWA-2 (bg)



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

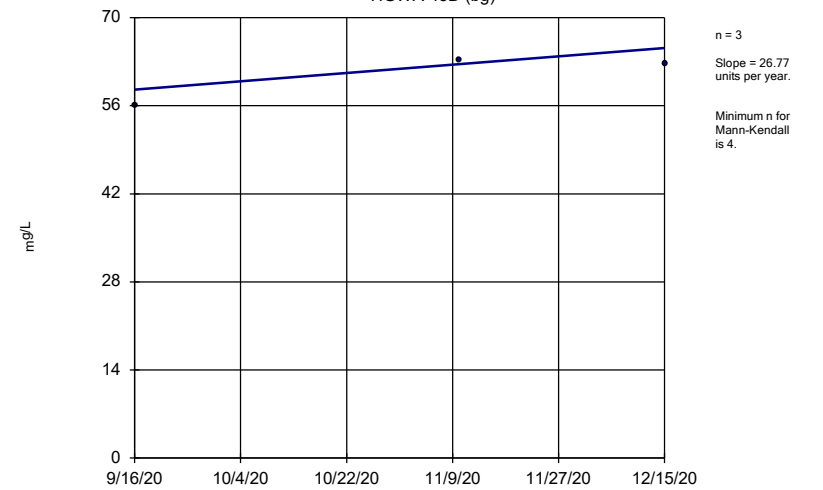
HGWA-3 (bg)



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

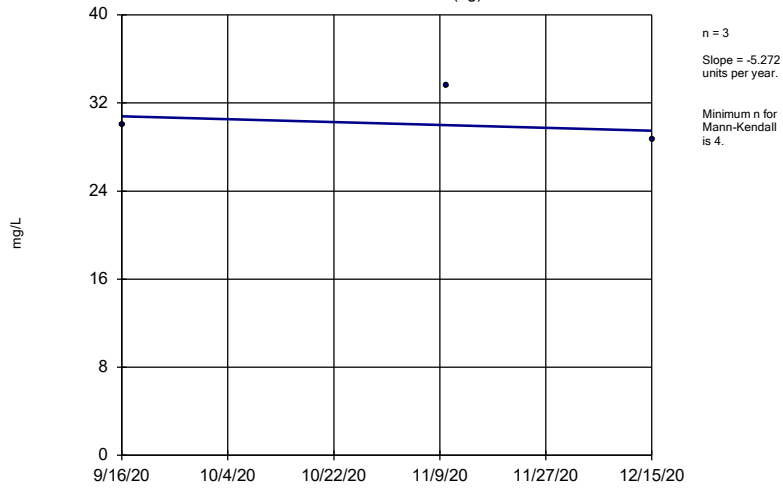
HGWA-43D (bg)



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

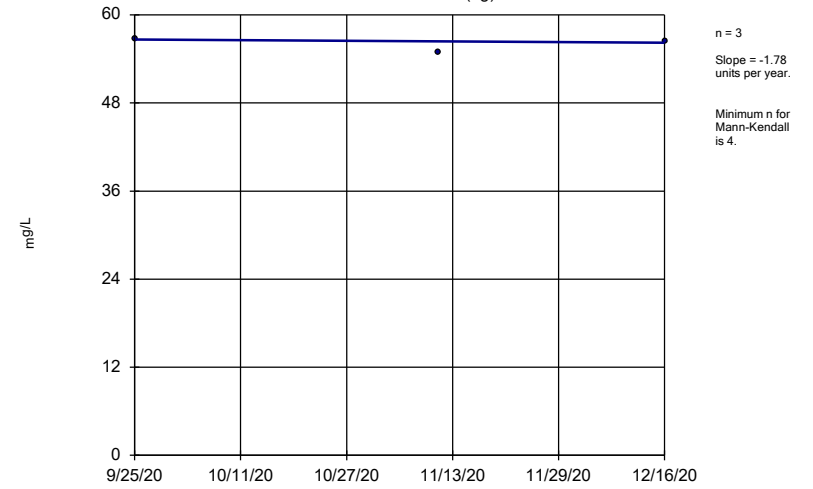
HGWA-44D (bg)



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

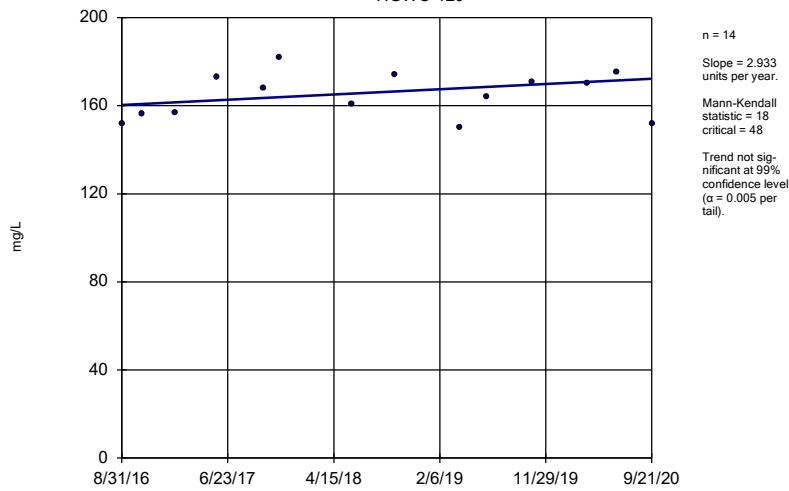
HGWA-45D (bg)



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

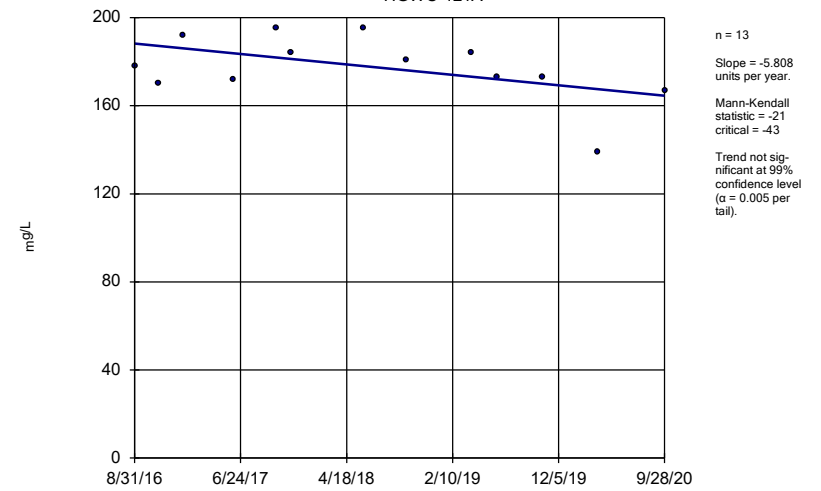
HGWC-120



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

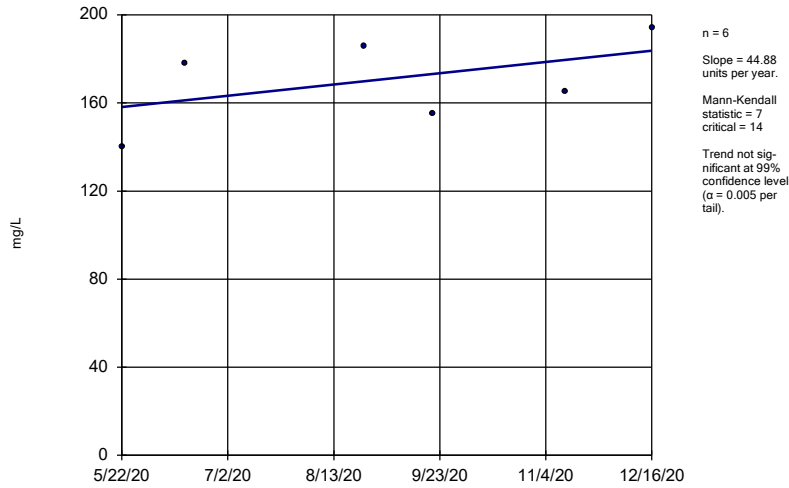
HGWC-121A



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

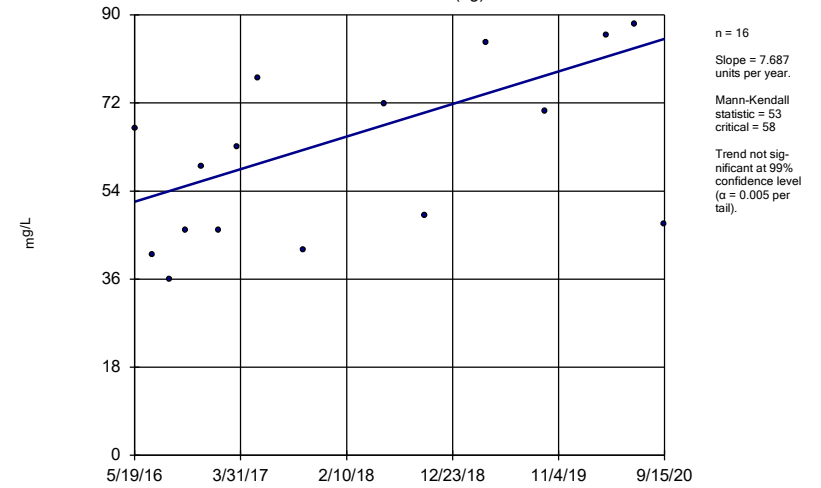
HGWC-125



Constituent: Calcium Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

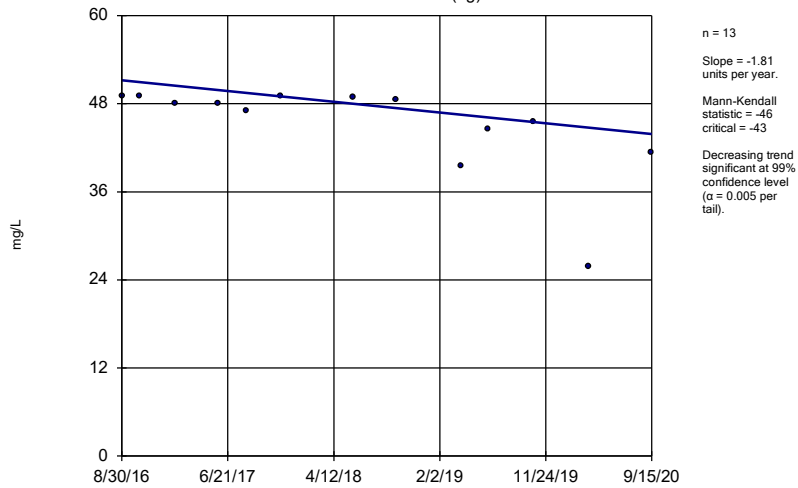
HGWA-1 (bg)



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

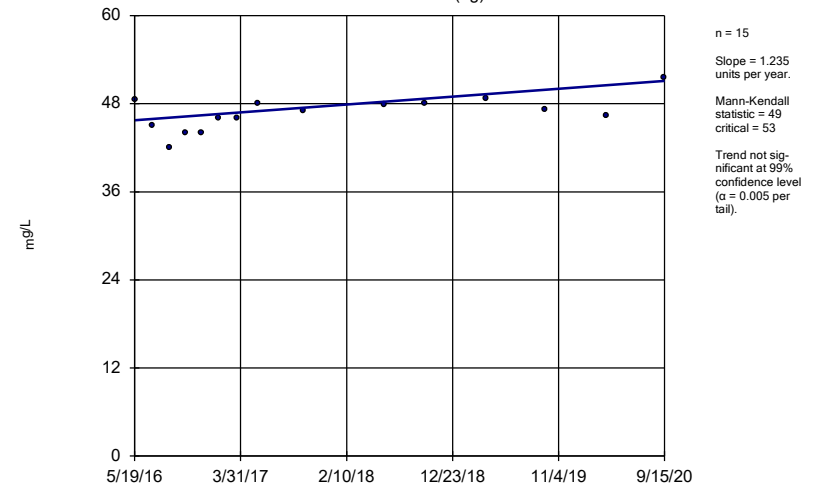
HGWA-122 (bg)



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

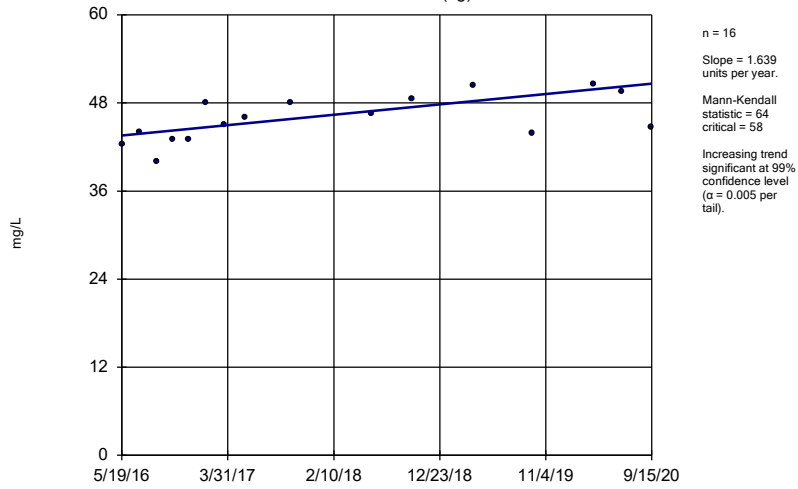
HGWA-2 (bg)



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

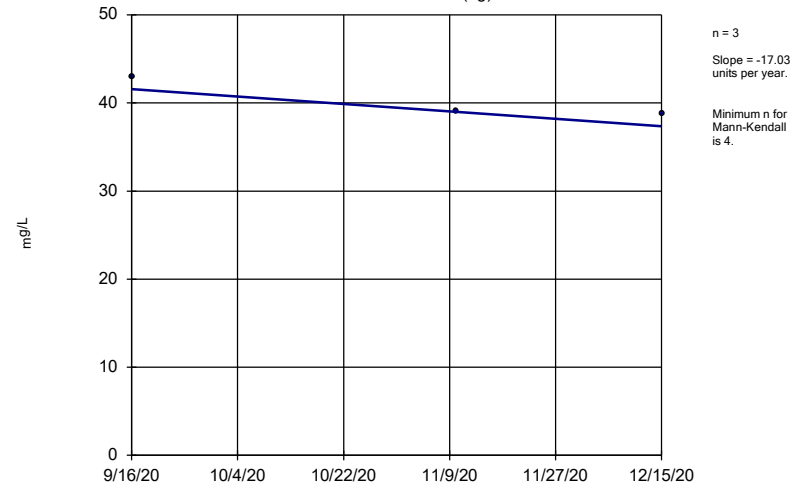
HGWA-3 (bg)



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

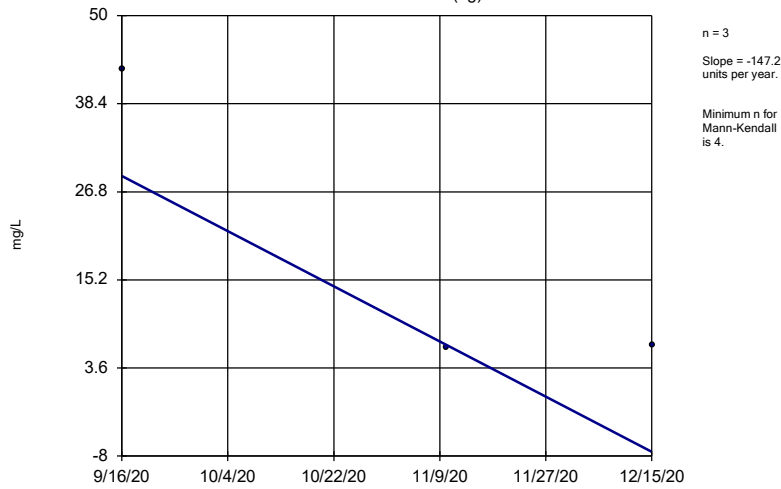
HGWA-43D (bg)



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

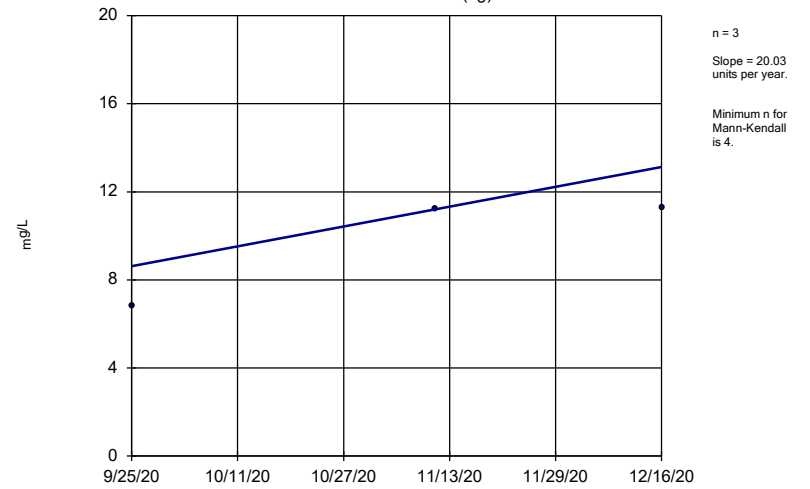
HGWA-44D (bg)



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

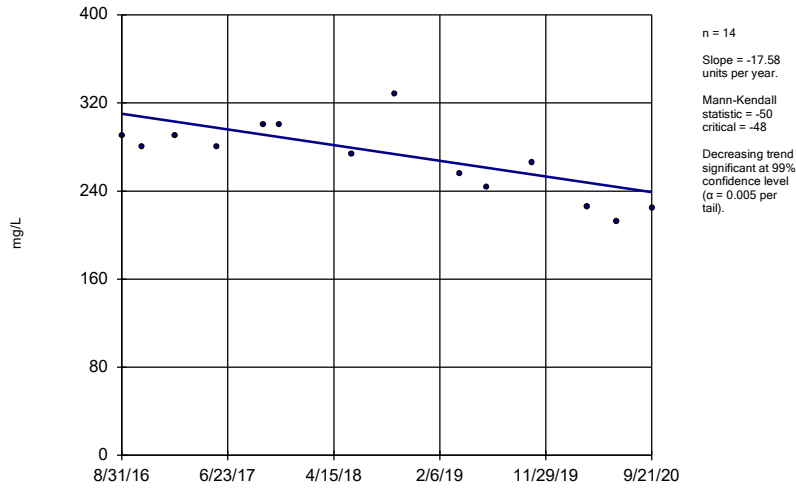
HGWA-45D (bg)



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

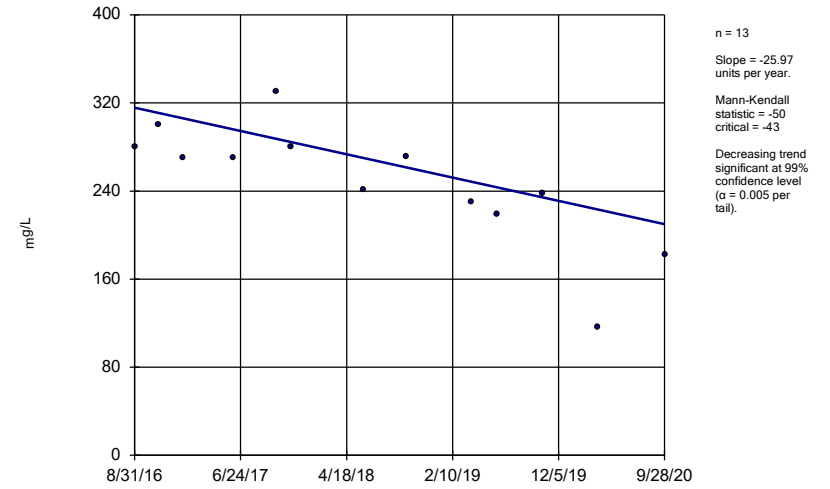
HGWC-120



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

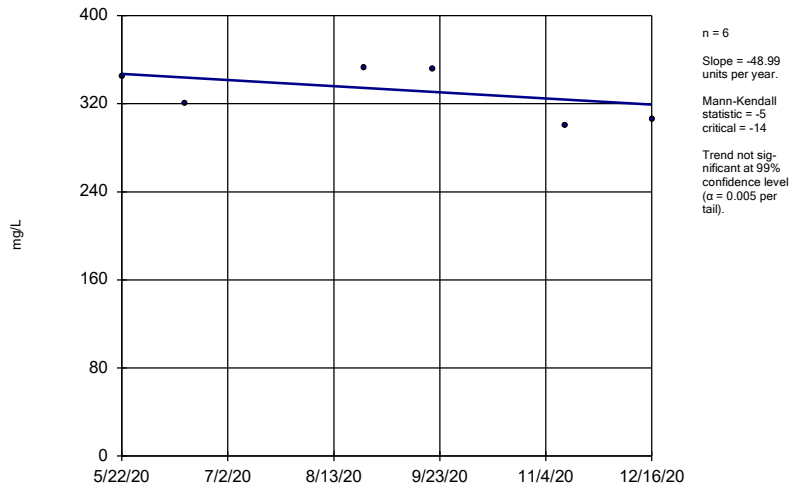
HGWC-121A



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

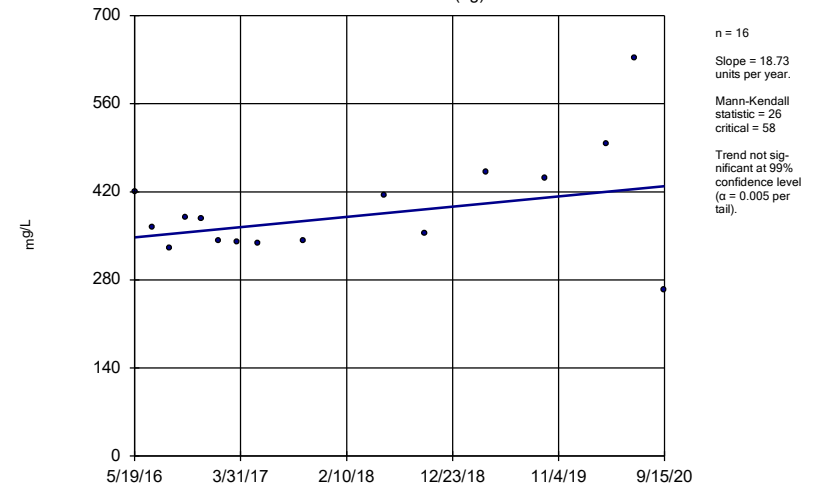
HGWC-125



Constituent: Sulfate Analysis Run 2/16/2021 12:43 PM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

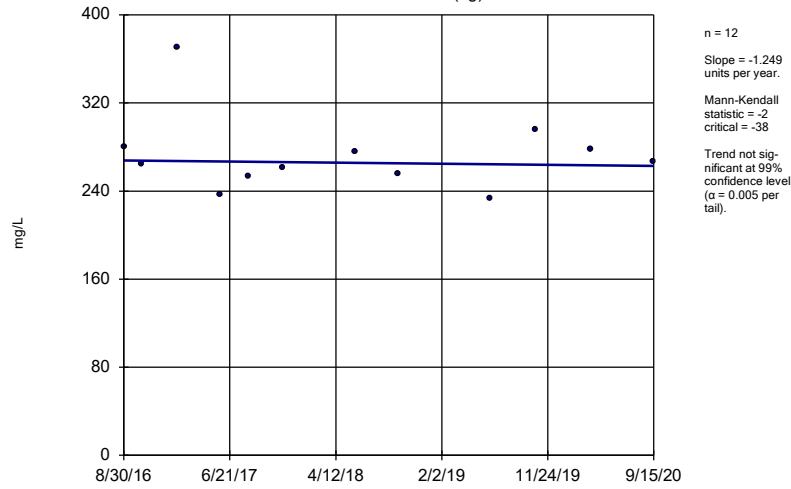
HGWA-1 (bg)



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:43 PM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

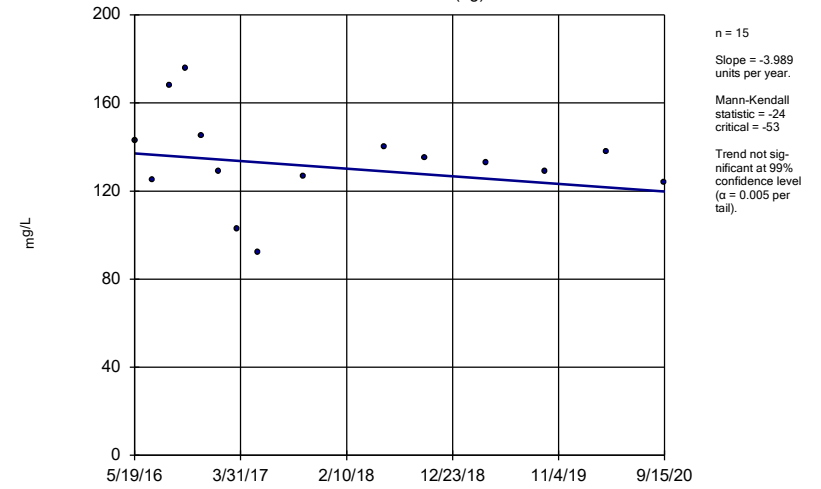
HGWA-122 (bg)



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

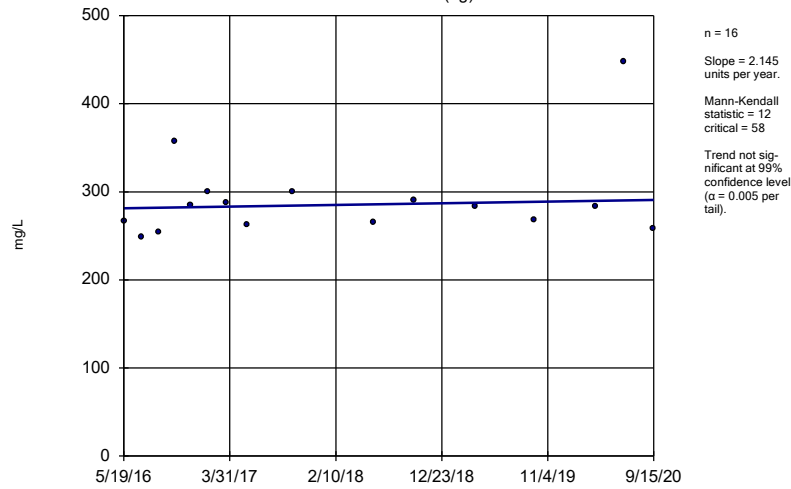
HGWA-2 (bg)



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

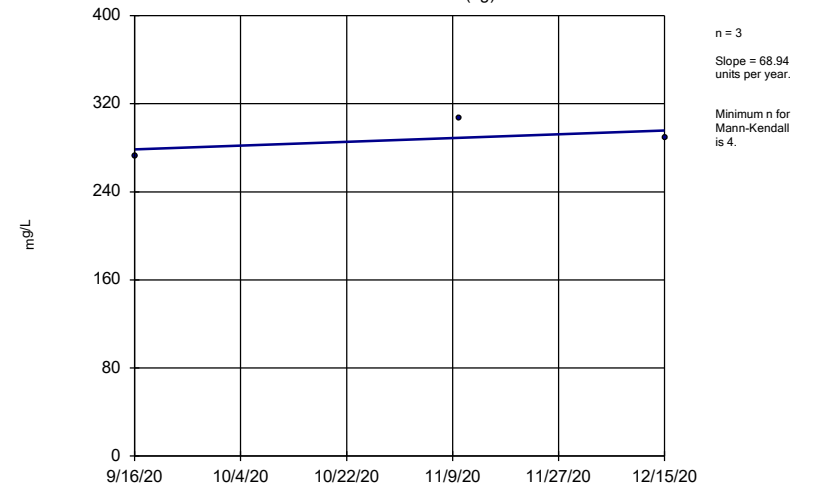
HGWA-3 (bg)



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

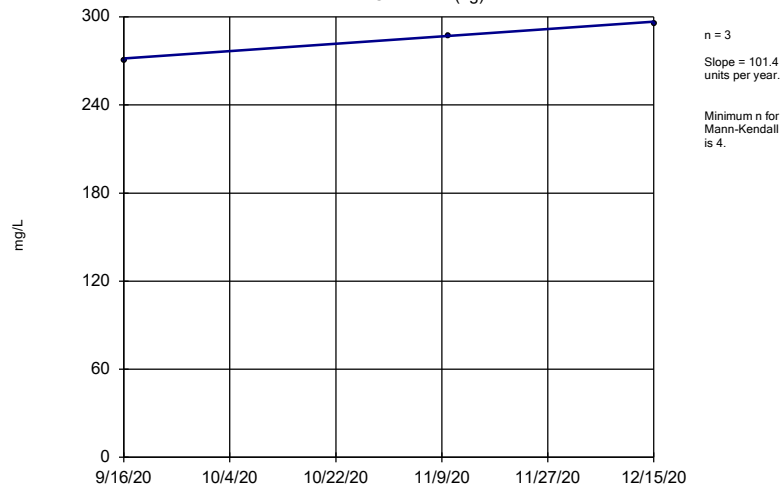
HGWA-43D (bg)



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

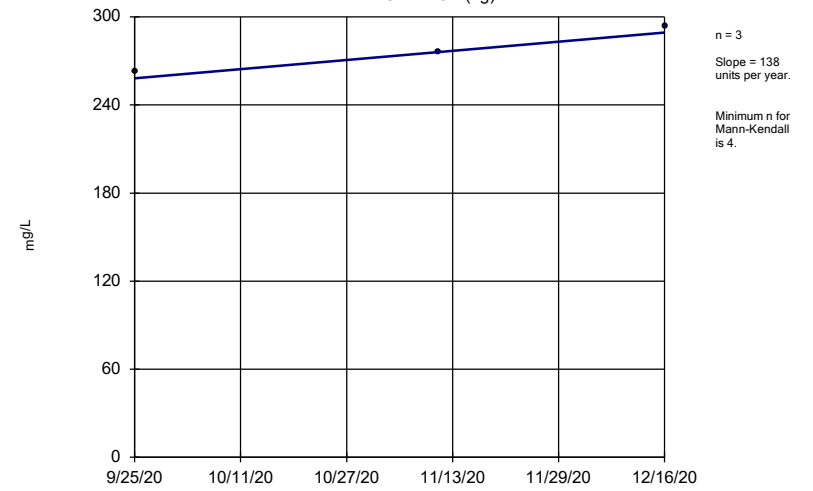
HGWA-44D (bg)



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

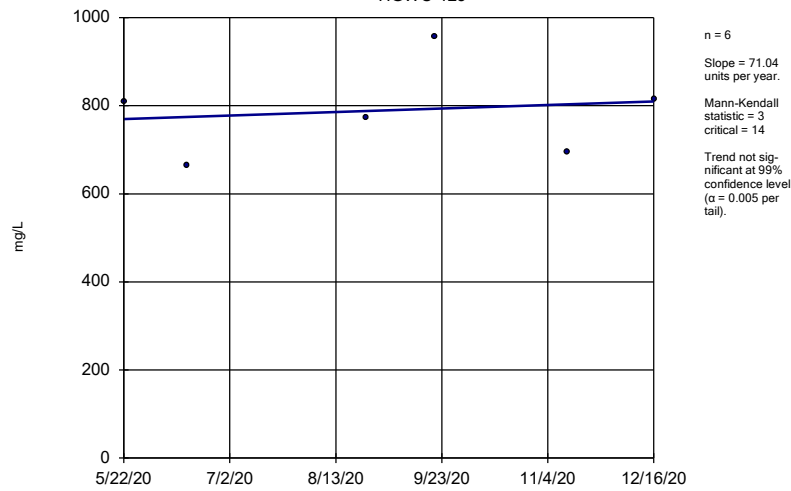
HGWA-45D (bg)



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

HGWC-125



Constituent: Total Dissolved Solids Analysis Run 2/16/2021 12:43 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

FIGURE F.

Interwell Tolerance Limits Summary

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 12:55 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Bg N</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	n/a	0.003	68	n/a	n/a	86.76	n/a	n/a	0.03056	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	70	n/a	n/a	71.43	n/a	n/a	0.02758	NP Inter(normality)
Barium (mg/L)	n/a	0.52	76	n/a	n/a	0	n/a	n/a	0.02028	NP Inter(normality)
Beryllium (mg/L)	n/a	0.003	68	n/a	n/a	80.88	n/a	n/a	0.03056	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0025	70	n/a	n/a	90	n/a	n/a	0.02758	NP Inter(NDs)
Chromium (mg/L)	n/a	0.01	70	n/a	n/a	74.29	n/a	n/a	0.02758	NP Inter(normality)
Cobalt (mg/L)	n/a	0.038	76	n/a	n/a	75	n/a	n/a	0.02028	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	n/a	4.36	76	n/a	n/a	0	n/a	n/a	0.02028	NP Inter(normality)
Fluoride (mg/L)	n/a	0.67	83	n/a	n/a	27.71	n/a	n/a	0.01416	NP Inter(normality)
Lead (mg/L)	n/a	0.005	70	n/a	n/a	61.43	n/a	n/a	0.02758	NP Inter(normality)
Lithium (mg/L)	n/a	0.03	76	n/a	n/a	38.16	n/a	n/a	0.02028	NP Inter(normality)
Mercury (mg/L)	n/a	0.0005	55	n/a	n/a	90.91	n/a	n/a	0.05954	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	78	n/a	n/a	73.08	n/a	n/a	0.0183	NP Inter(normality)
Selenium (mg/L)	n/a	0.01	70	n/a	n/a	98.57	n/a	n/a	0.02758	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	70	n/a	n/a	98.57	n/a	n/a	0.02758	NP Inter(NDs)

FIGURE G.

PLANT HAMMOND AP-3 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		0.52	2
Beryllium, Total (mg/L)	0.004		0.003	0.004
Cadmium, Total (mg/L)	0.005		0.0025	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.67	4
Lead, Total (mg/L)	n/a	0.015	0.005	0.015
Lithium, Total (mg/L)	n/a	0.04	0.03	0.04
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.1
Selenium, Total (mg/L)	0.05		0.01	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

FIGURE H.

PLANT HAMMOND AP-3 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		0.52	2
Beryllium, Total (mg/L)	0.004		0.003	0.004
Cadmium, Total (mg/L)	0.005		0.0025	0.005
Chromium, Total (mg/L)	0.1		0.01	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.67	4
Lead, Total (mg/L)	n/a	0.015	0.005	0.005
Lithium, Total (mg/L)	n/a	0.04	0.03	0.03
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.01
Selenium, Total (mg/L)	0.05		0.01	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

FIGURE I.

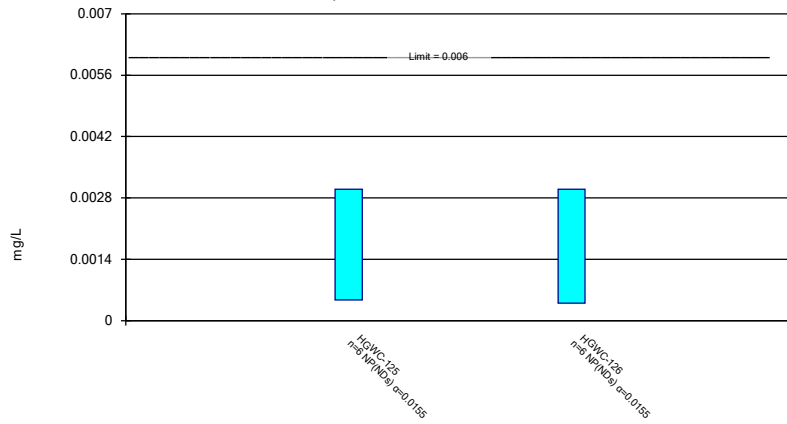
Federal Confidence Interval Summary Table - All Results (No Significant)

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 1:04 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-125	0.003	0.00047	0.006	No 6	0.002578	0.001033	83.33	None	No	0.0155	NP (NDs)
Antimony (mg/L)	HGWC-126	0.003	0.0004	0.006	No 6	0.002567	0.001061	83.33	None	No	0.0155	NP (NDs)
Barium (mg/L)	HGWC-120	0.05206	0.04548	2	No 13	0.04877	0.004422	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-121A	0.08505	0.06703	2	No 13	0.07604	0.01211	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-124	0.07376	0.06659	2	No 13	0.07018	0.004822	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-125	0.04916	0.03984	2	No 6	0.0445	0.003391	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-126	0.24	0.21	2	No 6	0.2317	0.01169	0	None	No	0.0155	NP (normality)
Chromium (mg/L)	HGWC-120	0.01	0.00072	0.1	No 13	0.007913	0.00397	76.92	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-121A	0.01	0.0005	0.1	No 13	0.009269	0.002635	92.31	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-124	0.01	0.00051	0.1	No 13	0.008536	0.003573	84.62	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-125	0.01	0.00052	0.1	No 6	0.00685	0.00488	66.67	None	No	0.0155	NP (normality)
Chromium (mg/L)	HGWC-126	0.01	0.00096	0.1	No 6	0.008493	0.003691	83.33	None	No	0.0155	NP (NDs)
Cobalt (mg/L)	HGWC-120	0.003987	0.002859	0.038	No 13	0.003423	0.0007585	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-121A	0.005	0.0005	0.038	No 13	0.003931	0.002032	76.92	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-125	0.01296	0.006308	0.038	No 6	0.009633	0.00242	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-120	1.121	0.5734	5	No 13	0.8474	0.3685	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-121A	1.279	0.5176	5	No 13	0.8985	0.5123	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-124	0.9537	0.6046	5	No 13	0.7792	0.2348	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-125	1.774	0.6055	5	No 6	1.158	0.4637	16.67	Kaplan-Meier	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-126	1.82	0.837	5	No 6	1.4	0.4854	0	None	No	0.0155	NP (normality)
Fluoride (mg/L)	HGWC-120	0.8531	0.4277	4	No 16	0.6925	0.3863	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	HGWC-121A	0.23	0.14	4	No 14	0.2682	0.2942	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-124	0.15	0.05	4	No 14	0.1091	0.08582	28.57	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-125	0.1869	0.08305	4	No 6	0.135	0.03782	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-126	0.5116	0.4184	4	No 6	0.465	0.03391	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-32	0.3721	0.3079	4	No 4	0.34	0.01414	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-120	0.005	0.00009	0.015	No 13	0.003875	0.002139	76.92	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-121A	0.005	0.00036	0.015	No 13	0.004264	0.001798	84.62	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-124	0.005	0.000075	0.015	No 13	0.003104	0.002497	61.54	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-125	0.005	0.000047	0.015	No 6	0.002553	0.002681	50	None	No	0.0155	NP (normality)
Lead (mg/L)	HGWC-126	0.005	0.000042	0.015	No 6	0.003348	0.00256	66.67	None	No	0.0155	NP (normality)
Lithium (mg/L)	HGWC-120	0.03385	0.0279	0.04	No 13	0.03058	0.004517	0	None	x^3	0.01	Param.
Lithium (mg/L)	HGWC-121A	0.009335	0.007773	0.04	No 13	0.008554	0.00105	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-124	0.025	0.0011	0.04	No 13	0.0103	0.0121	38.46	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-125	0.0055	0.0037	0.04	No 6	0.00455	0.0008643	0	None	No	0.0155	NP (normality)
Lithium (mg/L)	HGWC-126	0.00468	0.002787	0.04	No 6	0.003733	0.000689	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-120	0.03897	0.02407	0.1	No 13	0.03152	0.01002	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-124	0.01	0.00091	0.1	No 13	0.004532	0.004503	38.46	None	No	0.01	NP (normality)
Molybdenum (mg/L)	HGWC-125	0.009948	-0.00304	0.1	No 6	0.007782	0.005226	50	Kaplan-Meier	No	0.01	Param.
Molybdenum (mg/L)	MW-32	0.06546	0.05774	0.1	No 5	0.0616	0.002302	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-39	0.064	0.012	0.1	No 4	0.05	0.02535	0	None	No	0.0625	NP (normality)

Non-Parametric Confidence Interval

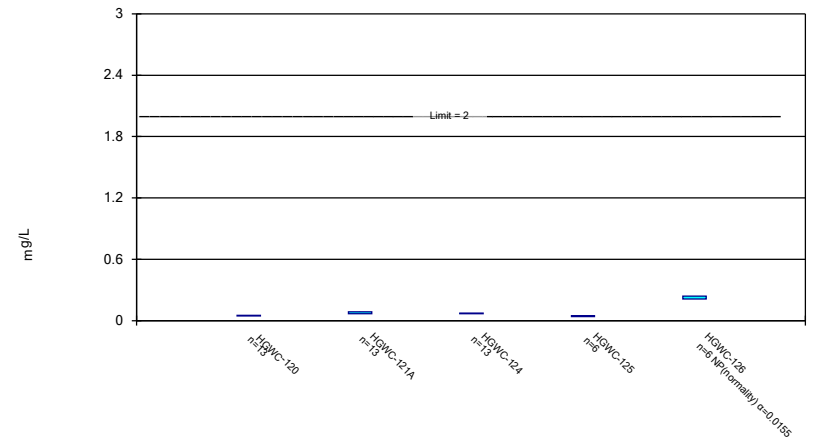
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

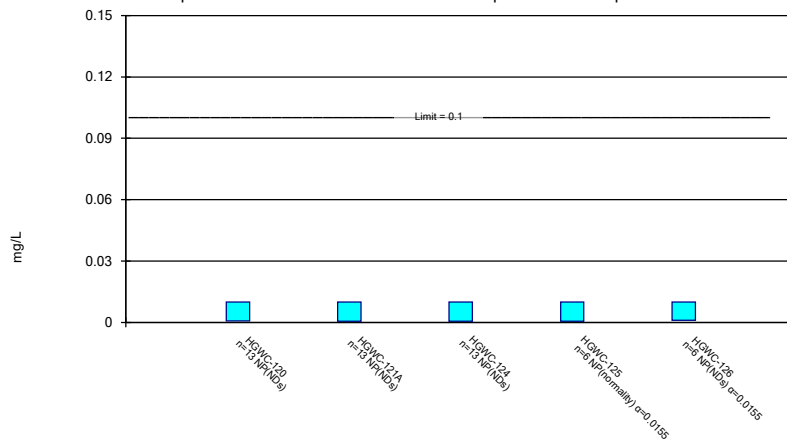
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

Non-Parametric Confidence Interval

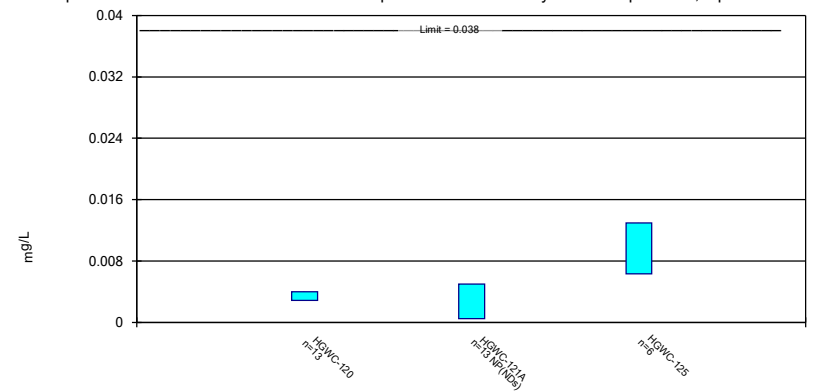
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

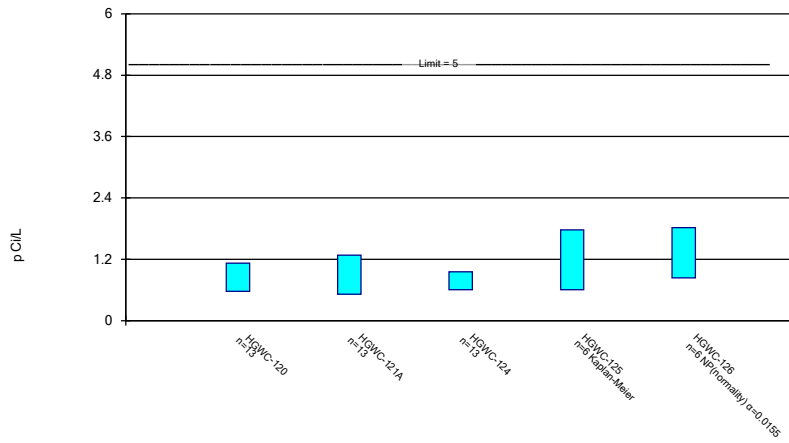
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

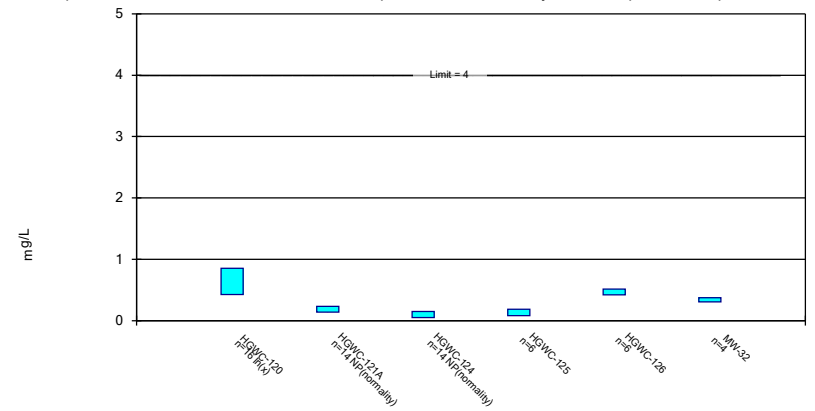
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

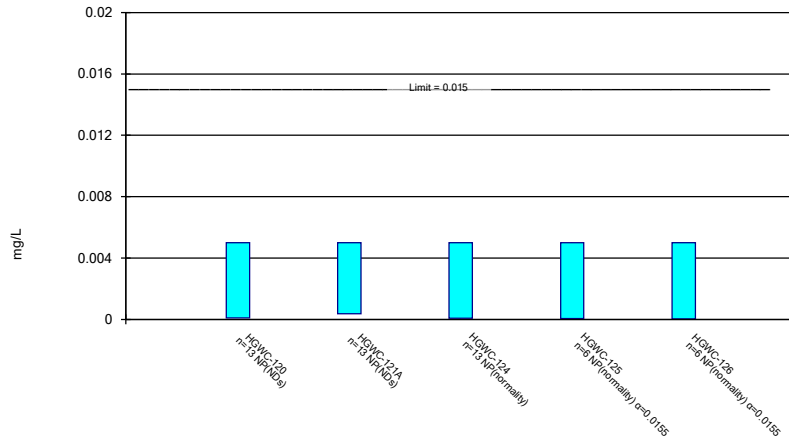
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

Non-Parametric Confidence Interval

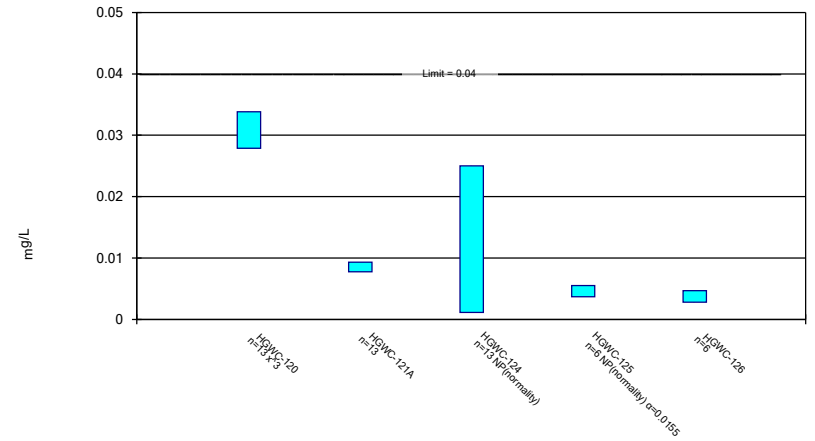
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Lead Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

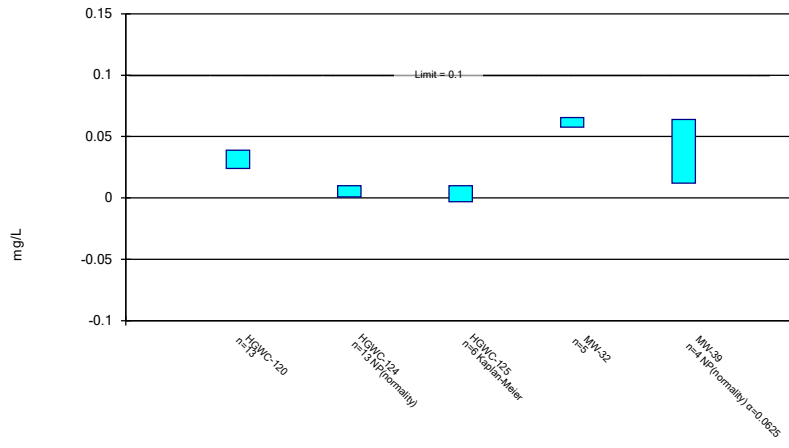
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

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



Constituent: Molybdenum Analysis Run 2/16/2021 1:03 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

FIGURE J.

State Confidence Interval Summary Table - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 1:07 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	HGWC-120	0.03897	0.02407	0.01	Yes 13	0.03152	0.01002	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-32	0.06546	0.05774	0.01	Yes 5	0.0616	0.002302	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-39	0.064	0.012	0.01	Yes 4	0.05	0.02535	0	None	No	0.0625	NP (normality)

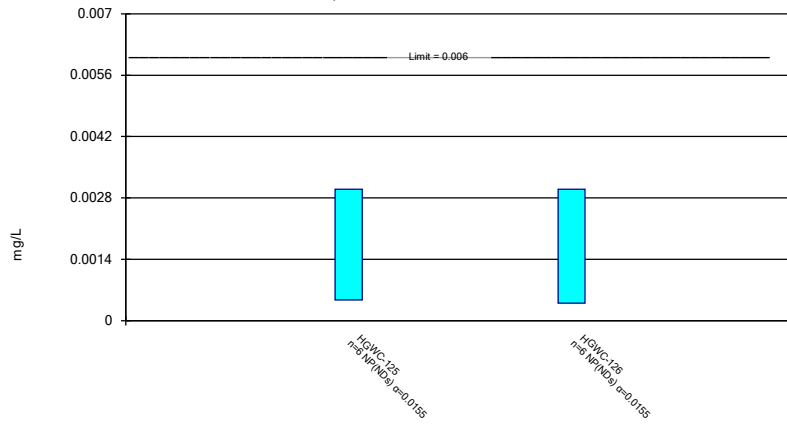
State Confidence Interval Summary Table - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 2/16/2021, 1:07 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig. N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-125	0.003	0.00047	0.006	No 6	0.002578	0.001033	83.33	None	No	0.0155	NP (NDs)
Antimony (mg/L)	HGWC-126	0.003	0.0004	0.006	No 6	0.002567	0.001061	83.33	None	No	0.0155	NP (NDs)
Barium (mg/L)	HGWC-120	0.05206	0.04548	2	No 13	0.04877	0.004422	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-121A	0.08505	0.06703	2	No 13	0.07604	0.01211	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-124	0.07376	0.06659	2	No 13	0.07018	0.004822	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-125	0.04916	0.03984	2	No 6	0.0445	0.003391	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-126	0.24	0.21	2	No 6	0.2317	0.01169	0	None	No	0.0155	NP (normality)
Chromium (mg/L)	HGWC-120	0.01	0.00072	0.1	No 13	0.007913	0.00397	76.92	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-121A	0.01	0.0005	0.1	No 13	0.009269	0.002635	92.31	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-124	0.01	0.00051	0.1	No 13	0.008536	0.003573	84.62	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-125	0.01	0.00052	0.1	No 6	0.00685	0.00488	66.67	None	No	0.0155	NP (normality)
Chromium (mg/L)	HGWC-126	0.01	0.00096	0.1	No 6	0.008493	0.003691	83.33	None	No	0.0155	NP (NDs)
Cobalt (mg/L)	HGWC-120	0.003987	0.002859	0.038	No 13	0.003423	0.0007585	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-121A	0.005	0.0005	0.038	No 13	0.003931	0.002032	76.92	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-125	0.01296	0.006308	0.038	No 6	0.009633	0.00242	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-120	1.121	0.5734	5	No 13	0.8474	0.3685	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-121A	1.279	0.5176	5	No 13	0.8985	0.5123	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-124	0.9537	0.6046	5	No 13	0.7792	0.2348	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-125	1.774	0.6055	5	No 6	1.158	0.4637	16.67	Kaplan-Meier	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-126	1.82	0.837	5	No 6	1.4	0.4854	0	None	No	0.0155	NP (normality)
Fluoride (mg/L)	HGWC-120	0.8531	0.4277	4	No 16	0.6925	0.3863	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	HGWC-121A	0.23	0.14	4	No 14	0.2682	0.2942	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-124	0.15	0.05	4	No 14	0.1091	0.08582	28.57	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-125	0.1869	0.08305	4	No 6	0.135	0.03782	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-126	0.5116	0.4184	4	No 6	0.465	0.03391	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-32	0.3721	0.3079	4	No 4	0.34	0.01414	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-120	0.005	0.00009	0.005	No 13	0.003875	0.002139	76.92	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-121A	0.005	0.00036	0.005	No 13	0.004264	0.001798	84.62	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-124	0.005	0.000075	0.005	No 13	0.003104	0.002497	61.54	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-125	0.005	0.000047	0.005	No 6	0.002553	0.002681	50	None	No	0.0155	NP (normality)
Lead (mg/L)	HGWC-126	0.005	0.000042	0.005	No 6	0.003348	0.00256	66.67	None	No	0.0155	NP (normality)
Lithium (mg/L)	HGWC-120	0.03385	0.0279	0.03	No 13	0.03058	0.004517	0	None	x^3	0.01	Param.
Lithium (mg/L)	HGWC-121A	0.009335	0.007773	0.03	No 13	0.008554	0.00105	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-124	0.025	0.0011	0.03	No 13	0.0103	0.0121	38.46	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-125	0.0055	0.0037	0.03	No 6	0.00455	0.0008643	0	None	No	0.0155	NP (normality)
Lithium (mg/L)	HGWC-126	0.00468	0.002787	0.03	No 6	0.003733	0.000689	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-120	0.03897	0.02407	0.01	Yes 13	0.03152	0.01002	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-124	0.01	0.00091	0.01	No 13	0.004532	0.004503	38.46	None	No	0.01	NP (normality)
Molybdenum (mg/L)	HGWC-125	0.009948	-0.00304	0.01	No 6	0.007782	0.005226	50	Kaplan-Meier	No	0.01	Param.
Molybdenum (mg/L)	MW-32	0.06546	0.05774	0.01	Yes 5	0.0616	0.002302	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-39	0.064	0.012	0.01	Yes 4	0.05	0.02535	0	None	No	0.0625	NP (normality)

Non-Parametric Confidence Interval

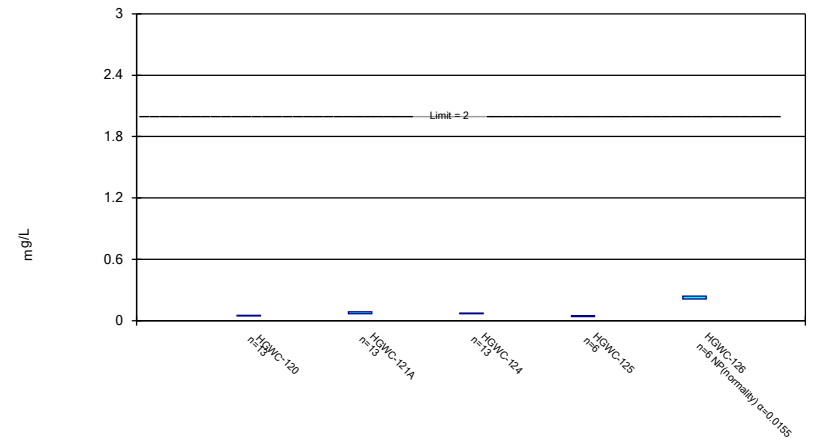
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

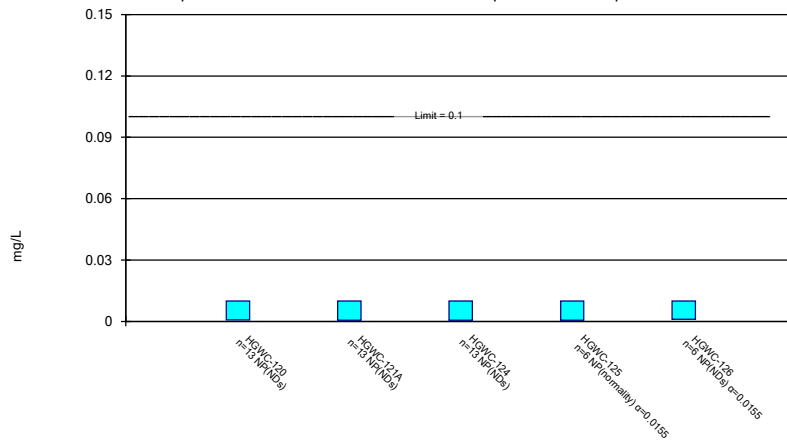
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

Non-Parametric Confidence Interval

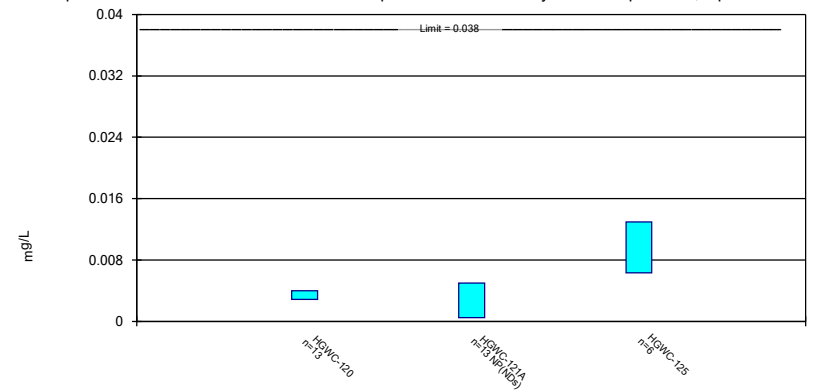
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

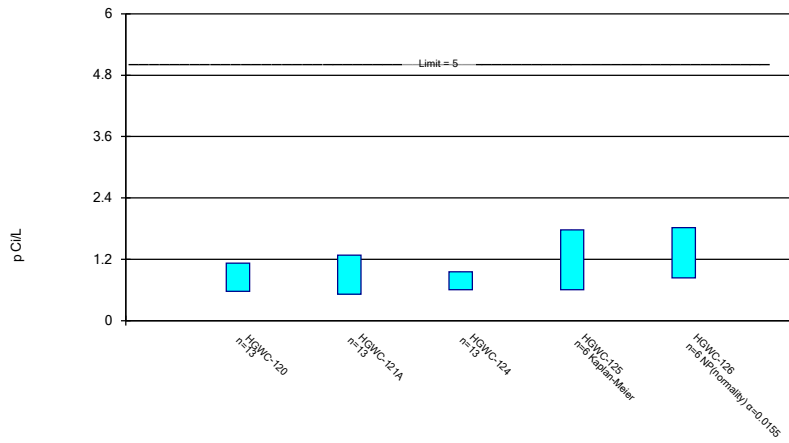
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

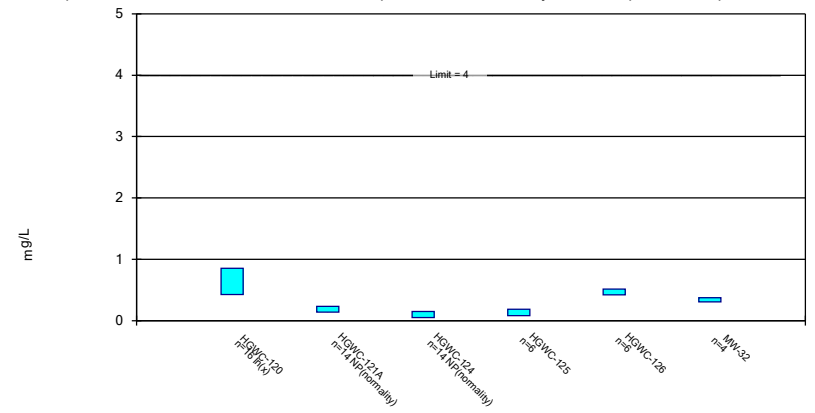
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

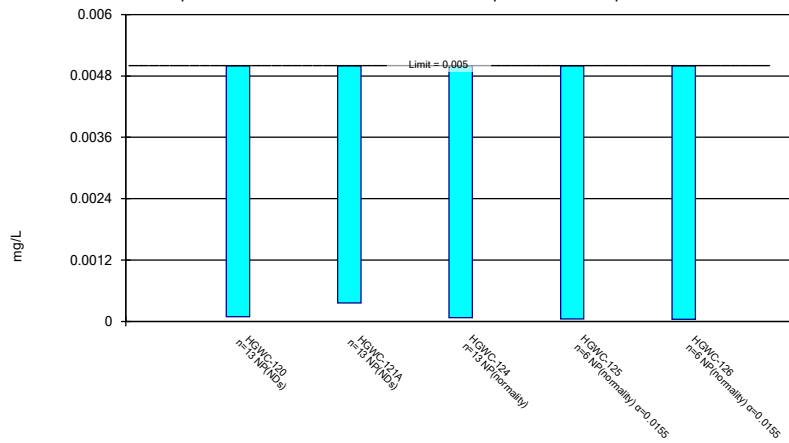
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

Non-Parametric Confidence Interval

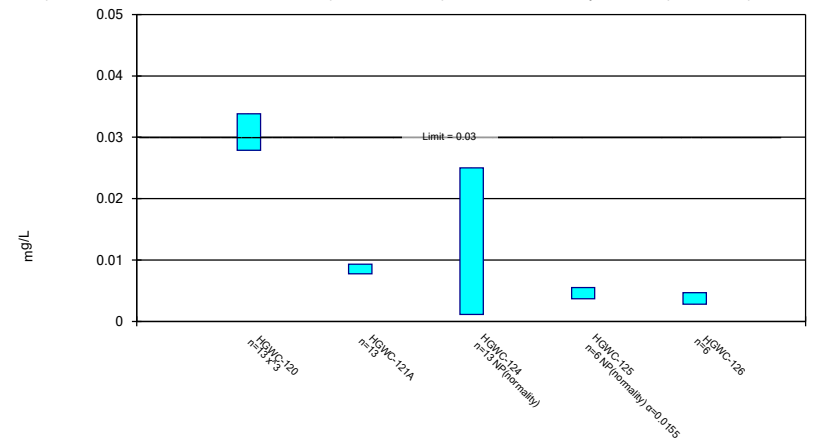
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Lead Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

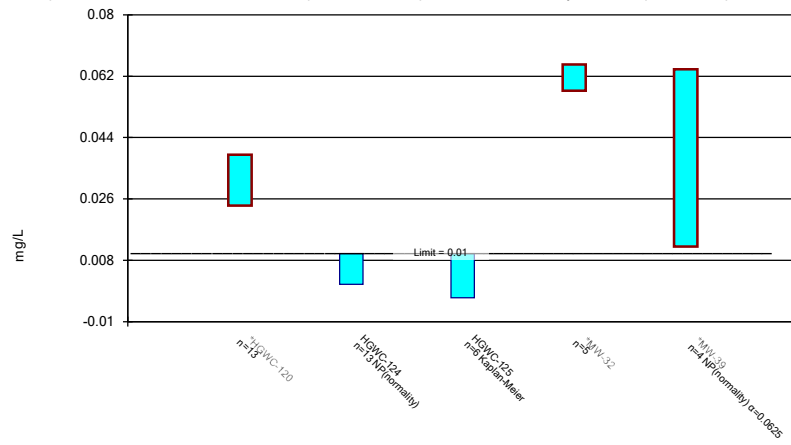
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

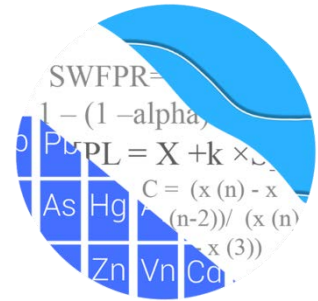
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 2/16/2021 1:06 PM View: Confidence Intervals
Plant Hammond Client: Southern Company Data: Hammond AP-3

March 2021

GROUNDWATER STATS CONSULTING



July 27, 2021

Southern Company Services
Attn: Ms. Kristen Jurinko
241 Ralph McGill Blvd. NE, Bin 10160
Atlanta, Georgia 30308

Re: Plant Hammond Ash Pond 3 (AP-3)
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 analysis of groundwater data for Georgia Power Company's Plant Hammond AP-3. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015), the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began for the CCR program in 2016, and at least 8 background samples have been collected at each of the groundwater monitoring wells, except for those discussed below. The monitoring well network, as provided by Southern Company Services, consists of the following:

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

Upgradient wells HGWA-1, HGWA-2, and HGWA-3, are shared among Plant Hammond units AP-1, AP-2, and AP-3. Since AP-3 is a Phase II unit, the sampling schedule differs from AP-1 and AP-2 Phase I units; therefore, the February 2021 Scan event samples that

occurred for these wells at AP-1 and AP-2 are not included in this report. Data included in this analysis from upgradient wells HGWA-1, HGWA-2, and HGWA-3 are consistent with the sample events performed for AP-3.

New upgradient wells HGWA-43D, HGWA-44D, and HGWA-45D were first sampled in September 2020 and have been sampled a maximum of 5 times through March 2021. As requested by Southern Company Services, upgradient wells with 2 or more samples will be incorporated into the statistical analyses. Sampling began at new downgradient wells HGWC-125 and HGWC-126 in May 2020 and have had 8 rounds of background sampling through March 2021.

Additionally, sampling at the following delineation wells and piezometer listed below started during 2020:

- **Delineation wells:** MW-32, MW-41, and MW-46D
- **Piezometer:** MW-39

When a minimum of 4 samples is available, data at these wells are evaluated using confidence intervals for the Appendix IV constituents. Note that delineation wells MW-32, MW-41, and MW-46D and piezometer MW-39 were sampled during the March 2021 sampling event. A subset of constituents for delineation wells MW-32 and MW-41 and piezometer MW-39 have been sampled at least 4 times. Well MW-46D, currently, has not been sampled at least 4 times, and was not evaluated using confidence intervals in this analysis.

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

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

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

When no detections are present in downgradient wells for a given constituent, statistical analyses are not required. A summary of downgradient and delineation Appendix IV well/constituent pairs with 100% non-detects follows this letter. Additionally, when

Appendix IV constituents are not detected during a scheduled Scan event, no statistical analyses are required during the semi-annual sample event. During the annual Scan event conducted in August 2020, arsenic, cadmium, mercury, selenium, and thallium were not detected and, therefore, were not required to be sampled during subsequent sampling events. These constituents were included in the time series and box plots, but no formal statistics were required.

For all constituents, a substitution of the most recent reporting limit is used for non-detect data. In the case of lithium, the reporting limit of 0.03 mg/L was substituted across all wells which is the most recent reporting limit provided by the laboratory.

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

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

Statistical Methods – Appendix III Parameters:

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

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate

associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits.

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Note that values shown on data pages reflect raw data and any non-detects that have been substituted with one-half of the reporting limit (for data sets containing <15% non-detects as described above) are shown as the original reporting limit.

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

Summary of Background Screening Conducted in March 2019

Outlier and Trend Testing

Time series plots were used to identify suspected outliers, or extreme values that would result in limits that are not representative of the current background data population.

Suspected outliers at all wells for Appendix III and Appendix IV parameters were formally tested using Tukey's box plot method and, when identified, flagged in the computer database with "o" and deselected prior to construction of statistical limits.

Using the Tukey box plot method, two outliers were identified. Those findings were submitted with that report. While this was not present in any of the data screened in this report, when the most recent value is identified as an outlier, values are not flagged in the database at this time as they may represent a possible trend. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values exist in the data sets and appear on the graphs as possible low outliers relative to the laboratory's Practical Quantitation Limit. However, these values are observed trace values (i.e. measurements reported by the laboratory between the Method Detection Limit and the Practical Quantitation Limit) and, therefore, were not flagged as outliers.

Of the outliers identified by Tukey's method, only one outlier was flagged for TDS in upgradient well HGWA-122. All other values are similar to remaining measurements within a given well or neighboring wells or were reported non-detects. The outlier summary follows this report (Figure C).

Additionally, when any values are flagged in the database as outliers, they are plotted in a disconnected and lighter symbol on the time series graph. The accompanying data pages display the flagged value in a lighter font as well. A substitution of the most recent reporting limit was applied when varying detection limits existed in data.

No obvious seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

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

truncated for the reasons above, a summary report will be provided to show the date ranges used in construction of the statistical limits.

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

Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) is typically used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. However, interwell methods are currently implemented in accordance with the Georgia EPD regulations and are used to evaluate compliance samples in downgradient wells.

Statistical Evaluation of Appendix III Parameters – 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. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. No new values were flagged and a summary of previously flagged outliers follows this report (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 and, therefore, no further action is necessary. If no resample is collected, the initial exceedance is automatically confirmed. For Appendix III parameters, several

prediction limit exceedances were identified. A summary table of the interwell prediction limits follows this letter. Exceedances were identified for the following well/constituent pairs:

- Boron: HGWC-120, HGWC-121A, HGWC-124, and HGWC-125
- Calcium: HGWC-120, HGWC-121A, HGWC-125, and HGWC-126
- Sulfate: HGWC-120, HGWC-121A, and HGWC-125
- TDS: HGWC-125

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. When trends are present in upgradient wells it is an indication of natural variability in groundwater quality unrelated to practices at the site. Trend tests require a minimum of 6 samples; therefore, the new upgradient wells HGWA-43D, HGWA-44D, and HGWA-45D did not yet have sufficient samples and were not included. 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)
- Sulfate: HGWA-2 (upgradient) and HGWA-3 (upgradient)

Decreasing trends:

- Boron: HGWA-122 (upgradient) and HGWC-121A
- Sulfate: HGWA-122 (upgradient), HGWC-120, and HGWC-121A

Statistical Methods – Appendix IV Parameters

Appendix IV parameters are evaluated by statistically comparing the mean or median of each downgradient well/constituent pair against corresponding Groundwater Protection Standards (GWPS). The GWPS may be either regulatory (MCL or CCR rule-specified limits) or site-specific limits that are based on upgradient background groundwater quality. Site-specific background limits are determined using tolerance limits, and the comparison of downgradient means or medians to GWPS is performed using confidence intervals. The methods are described below.

Statistical Evaluation of Appendix IV Parameters – March 2021

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

First, interwell upper tolerance limits were used to calculate site-specific background limits from all available pooled upgradient well data through March 2021 for Appendix IV constituents (Figure F). As mentioned above, a reporting limit of 0.03 mg/L was substituted across all wells for lithium. Parametric tolerance limits are 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).

As described in 40 CFR §257.95(h) (1-3), the Federal 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 State 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 Georgia EPD Rule requirements and the Federal CCR requirements, Federal and State GWPS were established for statistical comparison of Appendix IV constituents for the March 2021 sample event in downgradient wells (Figures G and H). Delineation wells were included in the confidence intervals when a minimum of 4 samples were available. At this time, MW-46D did not have enough samples to be evaluated using confidence intervals. Note that a GWPS is established for arsenic, cadmium, mercury, selenium, and thallium. However, since these constituents were not sampled during the March 2021 sampling event, no statistical comparison with confidence intervals was required. Additionally, since there are 100% non-detects for beryllium in downgradient and delineation wells, no confidence intervals were required for this constituent.

To complete the statistical comparison of downgradient well data to GWPS, confidence intervals were constructed for the Appendix IV constituents in each downgradient well. The Sanitas software was used to calculate both the tolerance limits and the confidence intervals. For Federal requirements, confidence intervals were compared to the GWPS prepared according to the CCR Rule (Figure I). For the State requirements, confidence intervals were compared to the GWPS established using the Georgia EPD Rules 391-3-4-.10(6)(a) (Figure J). 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 that reporting limits decreased for the following constituents during this analysis:

- 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 <0.005 mg/L
- Lead from <0.005 mg/L to <0.001 mg/L
- Selenium from <0.01 mg/L to <0.005 mg/L

As a result, background limits were lower for these constituents. However, in all cases for Federal confidence intervals, except for lead which uses the background limit as the GWPS, the established MCL was higher than the background limits. Therefore, the 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 both the Federal and State confidence intervals follow this letter and exceedances were identified for the following well/constituent pairs:

Federal

- No exceedances

State

- Molybdenum: HGWC-120, MW-32, MW-39, and MW-41

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Hammond AP-3. If you have any questions or comments, please feel free to contact me.

For Groundwater Stats Consulting,



Abdul Diane
Groundwater Analyst



Andrew Collins
Project Manager

100% Non-Detects: Appendix IV Downgradient and Delineation Wells

Analysis Run 5/17/2021 10:59 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-3

Antimony (mg/L)

HGWC-121A, HGWC-124, MW-39, MW-41

Arsenic (mg/L)

MW-32, MW-39, MW-41

Beryllium (mg/L)

HGWC-120, HGWC-121A, HGWC-124, HGWC-125, HGWC-126, MW-32, MW-39, MW-41, MW-46D

Cadmium (mg/L)

HGWC-120, HGWC-121A, HGWC-124, HGWC-125, HGWC-126, MW-32, MW-39, MW-41

Chromium (mg/L)

MW-39

Cobalt (mg/L)

HGWC-124, HGWC-126

Lead (mg/L)

MW-32, MW-39, MW-41

Mercury (mg/L)

HGWC-121A, HGWC-125, HGWC-126, MW-32, MW-39, MW-41

Molybdenum (mg/L)

HGWC-121A, HGWC-126

Selenium (mg/L)

HGWC-125, HGWC-126, MW-32, MW-39, MW-41

Thallium (mg/L)

HGWC-120, HGWC-121A, HGWC-124, HGWC-125, HGWC-126, MW-32, MW-39, MW-41

Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 5/17/2021, 10:35 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-120	0.39	n/a	3/12/2021	1.1	Yes	79	n/a	n/a	3.797	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-121A	0.39	n/a	3/15/2021	1.9	Yes	79	n/a	n/a	3.797	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-124	0.39	n/a	3/15/2021	0.4	Yes	79	n/a	n/a	3.797	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-125	0.39	n/a	3/12/2021	1.5	Yes	79	n/a	n/a	3.797	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-120	125.9	n/a	3/12/2021	174	Yes	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-121A	125.9	n/a	3/15/2021	167	Yes	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-125	125.9	n/a	3/12/2021	165	Yes	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-126	125.9	n/a	3/12/2021	138	Yes	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Sulfate (mg/L)	HGWC-120	88.2	n/a	3/12/2021	210	Yes	79	n/a	n/a	1.266	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-121A	88.2	n/a	3/15/2021	177	Yes	79	n/a	n/a	1.266	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-125	88.2	n/a	3/12/2021	293	Yes	79	n/a	n/a	1.266	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-125	632	n/a	3/12/2021	664	Yes	78	n/a	n/a	0	n/a	n/a	0.000317	NP Inter (normality) 1 of 2

Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 5/17/2021, 10:35 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-120	0.39	n/a	3/12/2021	1.1	Yes	79	n/a	n/a	3.797	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-121A	0.39	n/a	3/15/2021	1.9	Yes	79	n/a	n/a	3.797	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-124	0.39	n/a	3/15/2021	0.4	Yes	79	n/a	n/a	3.797	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-125	0.39	n/a	3/12/2021	1.5	Yes	79	n/a	n/a	3.797	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-126	0.39	n/a	3/12/2021	0.016J	No	79	n/a	n/a	3.797	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-120	125.9	n/a	3/12/2021	174	Yes	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-121A	125.9	n/a	3/15/2021	167	Yes	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-124	125.9	n/a	3/15/2021	103	No	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-125	125.9	n/a	3/12/2021	165	Yes	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-126	125.9	n/a	3/12/2021	138	Yes	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Chloride (mg/L)	HGWC-120	41.1	n/a	3/12/2021	2.4	No	79	n/a	n/a	0	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-121A	41.1	n/a	3/15/2021	21.8	No	79	n/a	n/a	0	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-124	41.1	n/a	3/15/2021	2.9	No	79	n/a	n/a	0	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-125	41.1	n/a	3/12/2021	10.8	No	79	n/a	n/a	0	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-126	41.1	n/a	3/12/2021	8.5	No	79	n/a	n/a	0	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-120	0.74	n/a	3/12/2021	0.42	No	93	n/a	n/a	25.81	n/a	n/a	0.0002244	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-121A	0.74	n/a	3/15/2021	0.16	No	93	n/a	n/a	25.81	n/a	n/a	0.0002244	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-124	0.74	n/a	3/15/2021	0.1ND	No	93	n/a	n/a	25.81	n/a	n/a	0.0002244	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-125	0.74	n/a	3/12/2021	0.12	No	93	n/a	n/a	25.81	n/a	n/a	0.0002244	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-126	0.74	n/a	3/12/2021	0.46	No	93	n/a	n/a	25.81	n/a	n/a	0.0002244	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-120	7.92	4.9	3/12/2021	6.95	No	92	n/a	n/a	0	n/a	n/a	0.0004576	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-121A	7.92	4.9	3/15/2021	6.87	No	92	n/a	n/a	0	n/a	n/a	0.0004576	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-124	7.92	4.9	3/15/2021	7.22	No	92	n/a	n/a	0	n/a	n/a	0.0004576	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-125	7.92	4.9	3/12/2021	6.18	No	92	n/a	n/a	0	n/a	n/a	0.0004576	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-126	7.92	4.9	3/12/2021	7.05	No	92	n/a	n/a	0	n/a	n/a	0.0004576	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-120	88.2	n/a	3/12/2021	210	Yes	79	n/a	n/a	1.266	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-121A	88.2	n/a	3/15/2021	177	Yes	79	n/a	n/a	1.266	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-124	88.2	n/a	3/15/2021	74	No	79	n/a	n/a	1.266	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-125	88.2	n/a	3/12/2021	293	Yes	79	n/a	n/a	1.266	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-126	88.2	n/a	3/12/2021	69.7	No	79	n/a	n/a	1.266	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-120	632	n/a	3/12/2021	584	No	78	n/a	n/a	0	n/a	n/a	0.000317	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-121A	632	n/a	3/15/2021	614	No	78	n/a	n/a	0	n/a	n/a	0.000317	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-124	632	n/a	3/15/2021	340	No	78	n/a	n/a	0	n/a	n/a	0.000317	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-125	632	n/a	3/12/2021	664	Yes	78	n/a	n/a	0	n/a	n/a	0.000317	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-126	632	n/a	3/12/2021	474	No	78	n/a	n/a	0	n/a	n/a	0.000317	NP Inter (normality) 1 of 2

Trend Test Summary - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 5/17/2021, 10:41 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-122 (bg)	-0.02581	-50	-48	Yes	14	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)	HGWC-121A	-0.2534	-60	-48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-122 (bg)	-1.832	-55	-48	Yes	14	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)	1.515	77	63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-120	-17.94	-64	-53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-121A	-25.46	-61	-48	Yes	14	0	n/a	n/a	0.01	NP

Trend Test Summary - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 5/17/2021, 10:41 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-1 (bg)	-0.00003204	-3	-63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-122 (bg)	-0.02581	-50	-48	Yes	14	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)	-0.0002616	-15	-63	No	17	11.76	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-120	-0.04548	-43	-53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-121A	-0.2534	-60	-48	Yes	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-124	-0.02177	-48	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-125	0	3	21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-1 (bg)	4.579	52	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-122 (bg)	-1.907	-9	-48	No	14	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)	2.895	58	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-120	2.955	27	53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-121A	-5.103	-31	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-125	28.44	5	21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-126	14.88	15	21	No	8	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-1 (bg)	4.851	51	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-122 (bg)	-1.832	-55	-48	Yes	14	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)	1.515	77	63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-120	-17.94	-64	-53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-121A	-25.46	-61	-48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-125	-46.69	-12	-21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	10.91	22	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-122 (bg)	-5.15	-14	-43	No	13	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)	0.6748	7	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-125	-119.1	-6	-21	No	8	0	n/a	n/a	0.01	NP

Upper Tolerance Limits

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 4/19/2021, 6:57 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	81	81.48	n/a	0.01569	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	82	73.17	n/a	0.01491	NP Inter(normality)
Barium (mg/L)	n/a	0.54	n/a	n/a	n/a	89	1.124	n/a	0.01041	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0005	n/a	n/a	n/a	81	81.48	n/a	0.01569	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0005	n/a	n/a	n/a	82	89.02	n/a	0.01491	NP Inter(NDs)
Chromium (mg/L)	n/a	0.0079	n/a	n/a	n/a	83	75.9	n/a	0.01416	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.038	n/a	n/a	n/a	89	76.4	n/a	0.01041	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	4.36	n/a	n/a	n/a	89	0	n/a	0.01041	NP Inter(normality)
Fluoride (mg/L)	n/a	0.74	n/a	n/a	n/a	96	26.04	n/a	0.007269	NP Inter(normality)
Lead (mg/L)	n/a	0.001	n/a	n/a	n/a	83	57.83	n/a	0.01416	NP Inter(normality)
Lithium (mg/L)	n/a	0.03	n/a	n/a	n/a	89	34.83	n/a	0.01041	NP Inter(normality)
Mercury (mg/L)	n/a	0.0005	n/a	n/a	n/a	61	91.8	n/a	0.04377	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	n/a	n/a	91	70.33	n/a	0.009394	NP Inter(normality)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	82	97.56	n/a	0.01491	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	82	98.78	n/a	0.01491	NP Inter(NDs)

PLANT HAMMOND AP-3 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		0.54	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0079	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	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	0.03	0.04
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

PLANT HAMMOND AP-3 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		0.54	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0079	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	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	0.03	0.03
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.01
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

Federal Confidence Intervals - All Results (No Significant)

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 5/17/2021, 11:08 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-120	0.003	0.0018	0.006	No	12	0.0029	0.0003464	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-125	0.003	0.00047	0.006	No	8	0.002385	0.001139	75	None	No	0.004	NP (NDs)
Antimony (mg/L)	HGWC-126	0.003	0.0004	0.006	No	8	0.002354	0.001197	75	None	No	0.004	NP (NDs)
Barium (mg/L)	HGWC-120	0.05167	0.04562	2	No	14	0.04864	0.004274	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-121A	0.08367	0.06597	2	No	14	0.07482	0.0125	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-124	0.07352	0.06695	2	No	14	0.07024	0.004638	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-125	0.04747	0.04128	2	No	8	0.04438	0.002925	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-126	0.2571	0.2204	2	No	8	0.2388	0.01727	0	None	No	0.01	Param.
Barium (mg/L)	MW-32	0.06552	0.04798	2	No	4	0.05675	0.003862	0	None	No	0.01	Param.
Barium (mg/L)	MW-41	0.0797	0.0573	2	No	4	0.0685	0.004933	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-120	0.005	0.0015	0.1	No	14	0.004134	0.001732	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-121A	0.005	0.0005	0.1	No	14	0.004679	0.001203	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-124	0.005	0.00051	0.1	No	14	0.004355	0.00164	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-125	0.005	0.00052	0.1	No	8	0.003364	0.00226	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	HGWC-126	0.005	0.00096	0.1	No	8	0.004495	0.001428	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-32	0.005	0.00058	0.1	No	4	0.003895	0.00221	75	None	No	0.0625	NP (NDs)
Chromium (mg/L)	MW-41	0.005	0.0009	0.1	No	4	0.003975	0.00205	75	None	No	0.0625	NP (NDs)
Cobalt (mg/L)	HGWC-120	0.003905	0.002837	0.038	No	14	0.003371	0.0007539	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-121A	0.005	0.0005	0.038	No	14	0.004007	0.001973	78.57	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-125	0.01326	0.007691	0.038	No	8	0.01048	0.002627	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-32	0.006033	0.002467	0.038	No	4	0.00425	0.0007853	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-41	0.001482	0.0002772	0.038	No	4	0.0007775	0.0002857	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-120	1.121	0.5734	5	No	13	0.8474	0.3685	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-121A	1.279	0.5176	5	No	13	0.8985	0.5123	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-124	0.9537	0.6046	5	No	13	0.7792	0.2348	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-125	1.656	0.7096	5	No	7	1.183	0.3985	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-126	1.82	0.837	5	No	7	1.34	0.47	0	None	No	0.008	NP (normality)
Fluoride (mg/L)	HGWC-120	1.2	0.37	4	No	17	0.6765	0.3798	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-121A	0.23	0.14	4	No	15	0.261	0.2849	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-124	0.15	0.05	4	No	15	0.1052	0.0841	33.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-125	0.1653	0.1006	4	No	8	0.1325	0.0324	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-126	0.493	0.4295	4	No	8	0.4613	0.02997	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-32	0.3683	0.2957	4	No	5	0.332	0.02168	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-39	0.3573	0.2729	4	No	4	0.3175	0.01893	0	None	x^2	0.01	Param.
Fluoride (mg/L)	MW-41	0.289	0.191	4	No	4	0.24	0.0216	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-120	0.001	0.0002	0.015	No	14	0.0008121	0.0003742	78.57	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-121A	0.001	0.00036	0.015	No	14	0.0008271	0.0003485	78.57	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-124	0.001	0.000075	0.015	No	14	0.0006676	0.0004629	64.29	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-125	0.001	0.000044	0.015	No	8	0.0004316	0.0004719	37.5	None	No	0.004	NP (normality)
Lead (mg/L)	HGWC-126	0.001	0.000042	0.015	No	8	0.0006416	0.0004946	62.5	None	No	0.004	NP (NDs)
Lithium (mg/L)	HGWC-120	0.0335	0.02767	0.04	No	14	0.03004	0.004789	0	None	x^4	0.01	Param.
Lithium (mg/L)	HGWC-121A	0.009226	0.00776	0.04	No	14	0.008493	0.001034	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-124	0.015	0.001	0.04	No	14	0.006065	0.006912	35.71	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-125	0.0055	0.0037	0.04	No	8	0.004475	0.0007667	0	None	No	0.004	NP (normality)
Lithium (mg/L)	HGWC-126	0.004368	0.003132	0.04	No	8	0.00375	0.0005831	0	None	No	0.01	Param.
Lithium (mg/L)	MW-32	0.03543	0.02957	0.04	No	4	0.0325	0.001291	0	None	No	0.01	Param.
Lithium (mg/L)	MW-39	0.03501	0.02819	0.04	No	4	0.028	0.008756	25	Kaplan-Meier	x^2	0.01	Param.
Lithium (mg/L)	MW-41	0.03111	0.02539	0.04	No	4	0.02825	0.001258	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-120	0.03845	0.02481	0.1	No	14	0.03163	0.009633	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-124	0.005	0.00091	0.1	No	14	0.002488	0.00195	35.71	None	No	0.01	NP (normality)
Molybdenum (mg/L)	HGWC-125	0.005097	0.0004784	0.1	No	8	0.004274	0.004341	37.5	Kaplan-Meier	x^(1/3)	0.01	Param.
Molybdenum (mg/L)	MW-32	0.06435	0.05865	0.1	No	6	0.0615	0.002074	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-39	0.064	0.012	0.1	No	5	0.0524	0.0226	0	None	No	0.031	NP (normality)
Molybdenum (mg/L)	MW-41	0.05028	0.02772	0.1	No	4	0.039	0.004967	0	None	No	0.01	Param.

State Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 5/17/2021, 11:13 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	HGWC-120	0.03845	0.02481	0.01	Yes	14	0.03163	0.009633	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-32	0.06435	0.05865	0.01	Yes	6	0.0615	0.002074	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-39	0.064	0.012	0.01	Yes	5	0.0524	0.0226	0	None	No	0.031	NP (normality)
Molybdenum (mg/L)	MW-41	0.05028	0.02772	0.01	Yes	4	0.039	0.004967	0	None	No	0.01	Param.

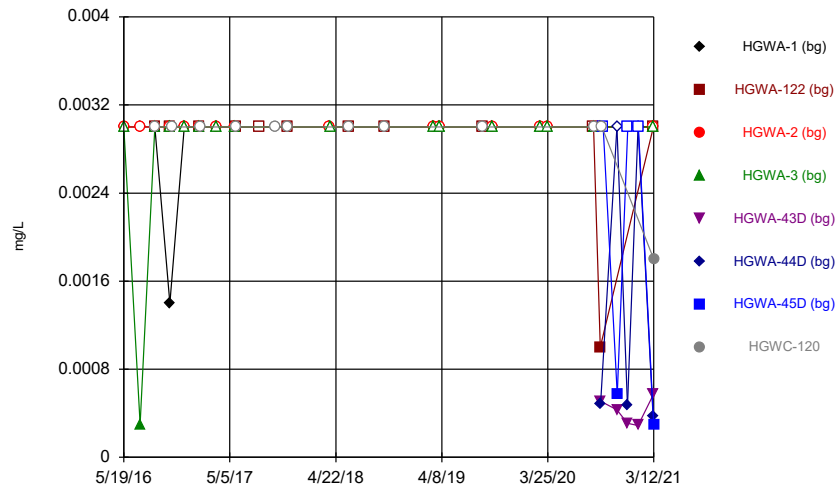
State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 5/17/2021, 11:13 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-120	0.003	0.0018	0.006	No	12	0.0029	0.0003464	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-125	0.003	0.00047	0.006	No	8	0.002385	0.001139	75	None	No	0.004	NP (NDs)
Antimony (mg/L)	HGWC-126	0.003	0.0004	0.006	No	8	0.002354	0.001197	75	None	No	0.004	NP (NDs)
Barium (mg/L)	HGWC-120	0.05167	0.04562	2	No	14	0.04864	0.004274	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-121A	0.08367	0.06597	2	No	14	0.07482	0.0125	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-124	0.07352	0.06695	2	No	14	0.07024	0.004638	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-125	0.04747	0.04128	2	No	8	0.04438	0.002925	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-126	0.2571	0.2204	2	No	8	0.2388	0.01727	0	None	No	0.01	Param.
Barium (mg/L)	MW-32	0.06552	0.04798	2	No	4	0.05675	0.003862	0	None	No	0.01	Param.
Barium (mg/L)	MW-41	0.0797	0.0573	2	No	4	0.0685	0.004933	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-120	0.005	0.0015	0.1	No	14	0.004134	0.001732	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-121A	0.005	0.0005	0.1	No	14	0.004679	0.001203	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-124	0.005	0.00051	0.1	No	14	0.004355	0.00164	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-125	0.005	0.00052	0.1	No	8	0.003364	0.00226	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	HGWC-126	0.005	0.00096	0.1	No	8	0.004495	0.001428	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-32	0.005	0.00058	0.1	No	4	0.003895	0.00221	75	None	No	0.0625	NP (NDs)
Chromium (mg/L)	MW-41	0.005	0.0009	0.1	No	4	0.003975	0.00205	75	None	No	0.0625	NP (NDs)
Cobalt (mg/L)	HGWC-120	0.003905	0.002837	0.038	No	14	0.003371	0.0007539	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-121A	0.005	0.0005	0.038	No	14	0.004007	0.001973	78.57	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-125	0.01326	0.007691	0.038	No	8	0.01048	0.002627	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-32	0.006033	0.002467	0.038	No	4	0.00425	0.0007853	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-41	0.001482	0.0002772	0.038	No	4	0.0007775	0.0002857	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-120	1.121	0.5734	5	No	13	0.8474	0.3685	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-121A	1.279	0.5176	5	No	13	0.8985	0.5123	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-124	0.9537	0.6046	5	No	13	0.7792	0.2348	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-125	1.656	0.7096	5	No	7	1.183	0.3985	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-126	1.82	0.837	5	No	7	1.34	0.47	0	None	No	0.008	NP (normality)
Fluoride (mg/L)	HGWC-120	1.2	0.37	4	No	17	0.6765	0.3798	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-121A	0.23	0.14	4	No	15	0.261	0.2849	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-124	0.15	0.05	4	No	15	0.1052	0.0841	33.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-125	0.1653	0.1006	4	No	8	0.1325	0.0324	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-126	0.493	0.4295	4	No	8	0.4613	0.02997	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-32	0.3683	0.2957	4	No	5	0.332	0.02168	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-39	0.3573	0.2729	4	No	4	0.3175	0.01893	0	None	x^2	0.01	Param.
Fluoride (mg/L)	MW-41	0.289	0.191	4	No	4	0.24	0.0216	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-120	0.001	0.0002	0.001	No	14	0.0008121	0.0003742	78.57	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-121A	0.001	0.00036	0.001	No	14	0.0008271	0.0003485	78.57	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-124	0.001	0.000075	0.001	No	14	0.0006676	0.0004629	64.29	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-125	0.001	0.000044	0.001	No	8	0.0004316	0.0004719	37.5	None	No	0.004	NP (normality)
Lead (mg/L)	HGWC-126	0.001	0.000042	0.001	No	8	0.0006416	0.0004946	62.5	None	No	0.004	NP (NDs)
Lithium (mg/L)	HGWC-120	0.0335	0.02767	0.03	No	14	0.03004	0.004789	0	None	x^4	0.01	Param.
Lithium (mg/L)	HGWC-121A	0.009226	0.00776	0.03	No	14	0.008493	0.001034	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-124	0.015	0.001	0.03	No	14	0.006065	0.006912	35.71	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-125	0.0055	0.0037	0.03	No	8	0.004475	0.0007667	0	None	No	0.004	NP (normality)
Lithium (mg/L)	HGWC-126	0.004368	0.003132	0.03	No	8	0.00375	0.0005831	0	None	No	0.01	Param.
Lithium (mg/L)	MW-32	0.03543	0.02957	0.03	No	4	0.0325	0.001291	0	None	No	0.01	Param.
Lithium (mg/L)	MW-39	0.03501	0.02819	0.03	No	4	0.028	0.008756	25	Kaplan-Meier	x^2	0.01	Param.
Lithium (mg/L)	MW-41	0.03111	0.02539	0.03	No	4	0.02825	0.001258	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-120	0.03845	0.02481	0.01	Yes	14	0.03163	0.009633	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-124	0.005	0.00091	0.01	No	14	0.002488	0.00195	35.71	None	No	0.01	NP (normality)
Molybdenum (mg/L)	HGWC-125	0.005097	0.0004784	0.01	No	8	0.004274	0.004341	37.5	Kaplan-Meier	x^(1/3)	0.01	Param.
Molybdenum (mg/L)	MW-32	0.06435	0.05865	0.01	Yes	6	0.0615	0.002074	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-39	0.064	0.012	0.01	Yes	5	0.0524	0.0226	0	None	No	0.031	NP (normality)
Molybdenum (mg/L)	MW-41	0.05028	0.02772	0.01	Yes	4	0.039	0.004967	0	None	No	0.01	Param.

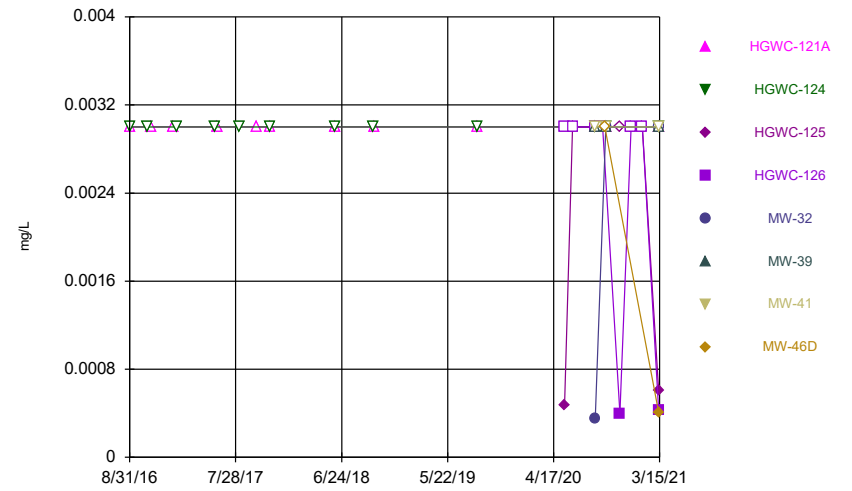
FIGURE A.

Time Series



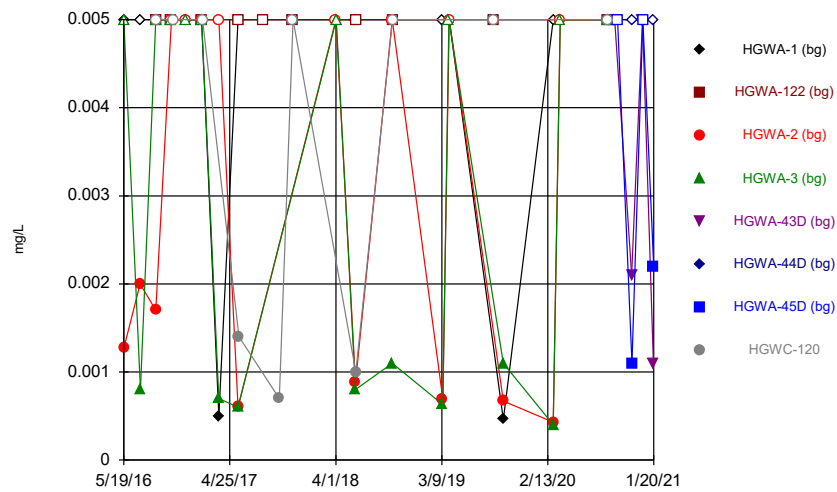
Constituent: Antimony Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



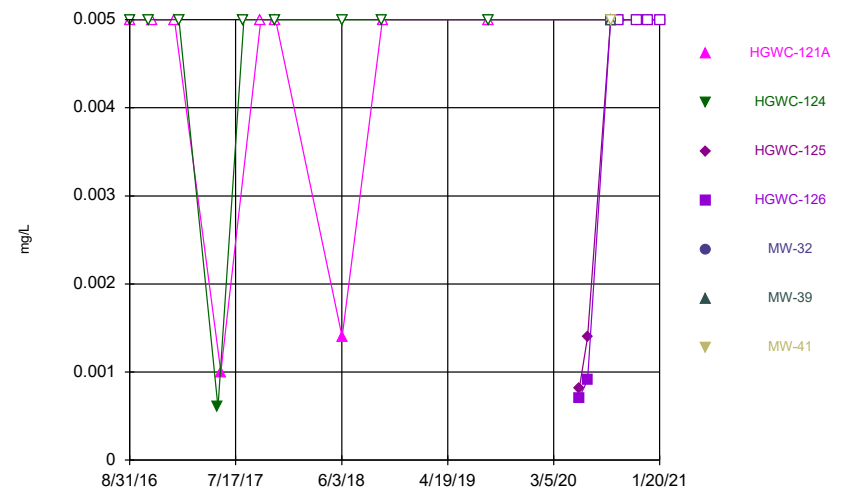
Constituent: Antimony Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



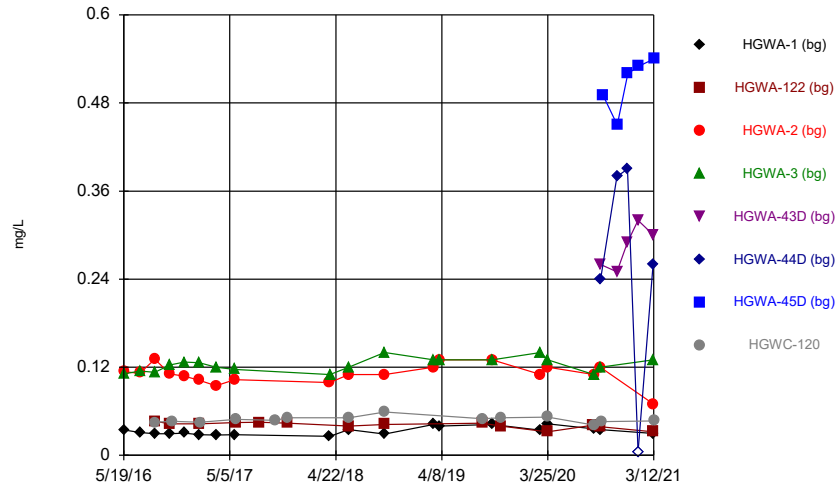
Constituent: Arsenic Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



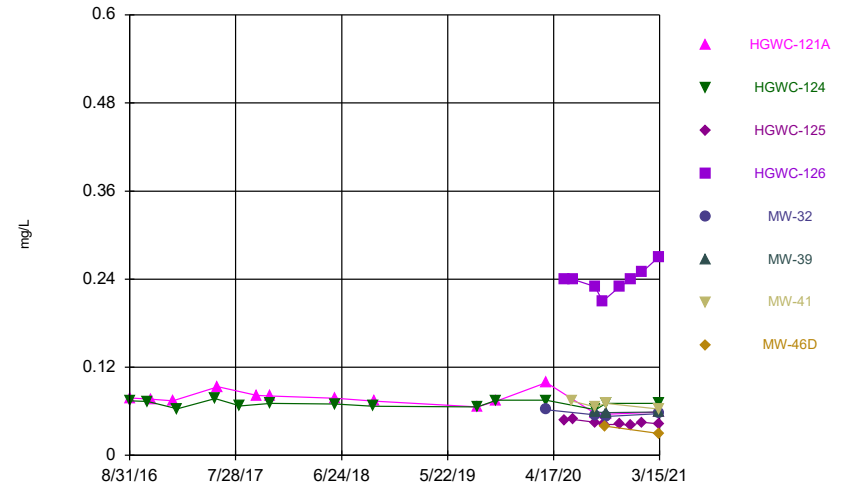
Constituent: Arsenic Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



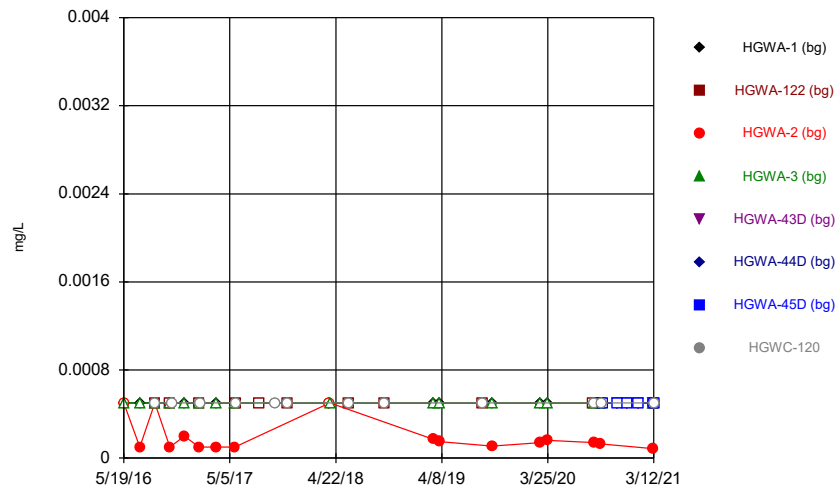
Constituent: Barium Analysis Run 5/14/2021 7:54 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



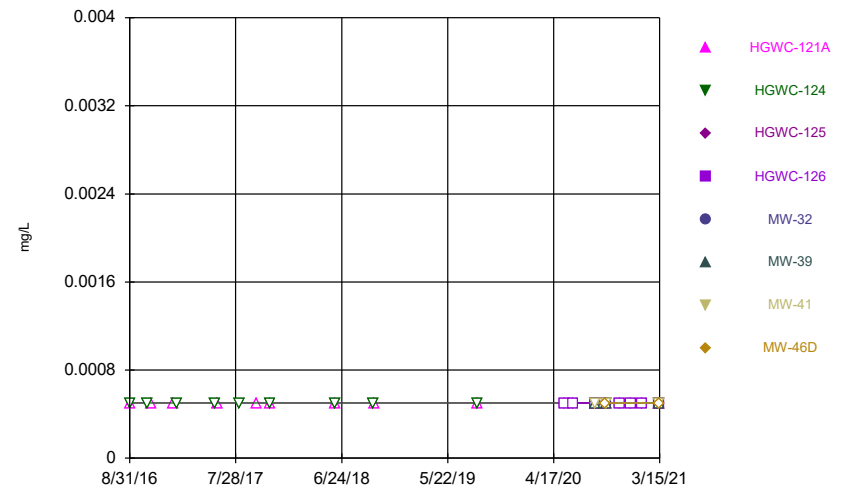
Constituent: Barium Analysis Run 5/14/2021 7:54 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



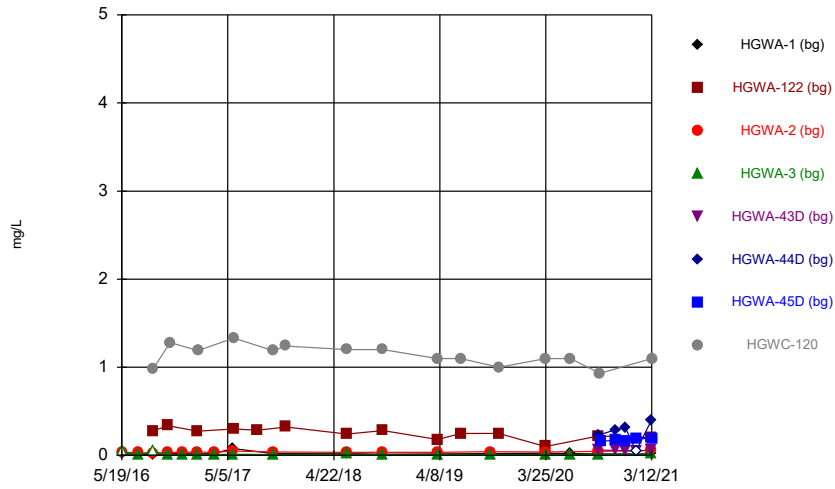
Constituent: Beryllium Analysis Run 5/14/2021 7:54 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



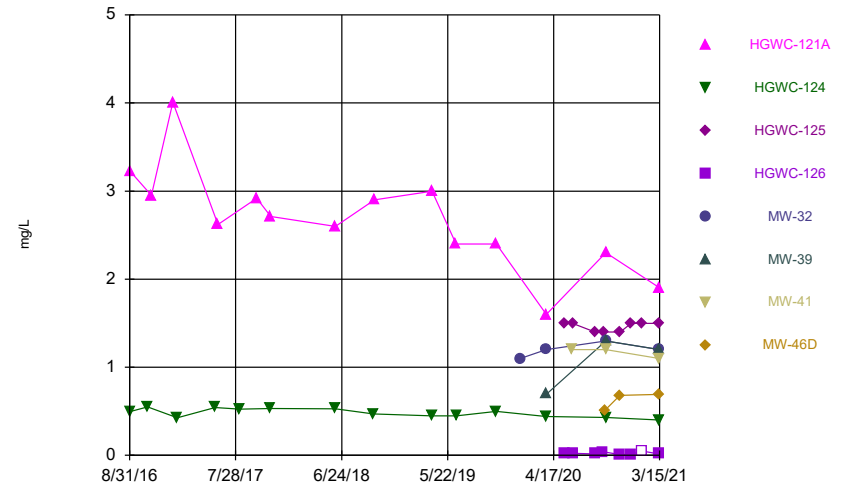
Constituent: Beryllium Analysis Run 5/14/2021 7:54 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



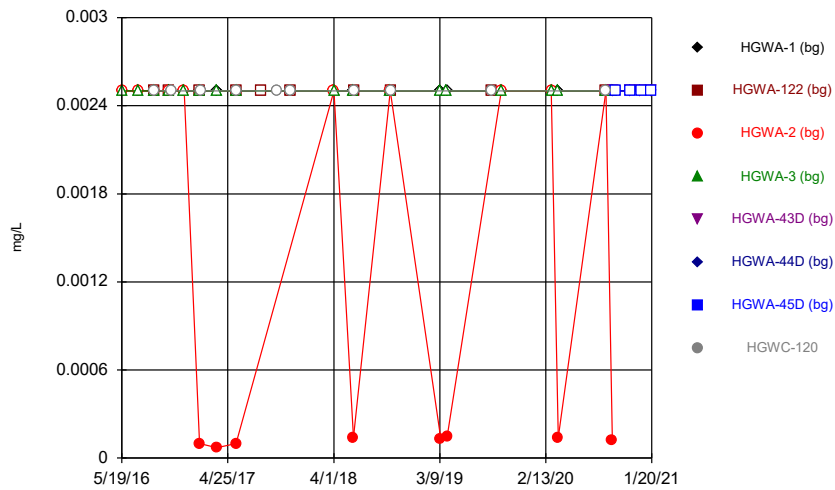
Constituent: Boron Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



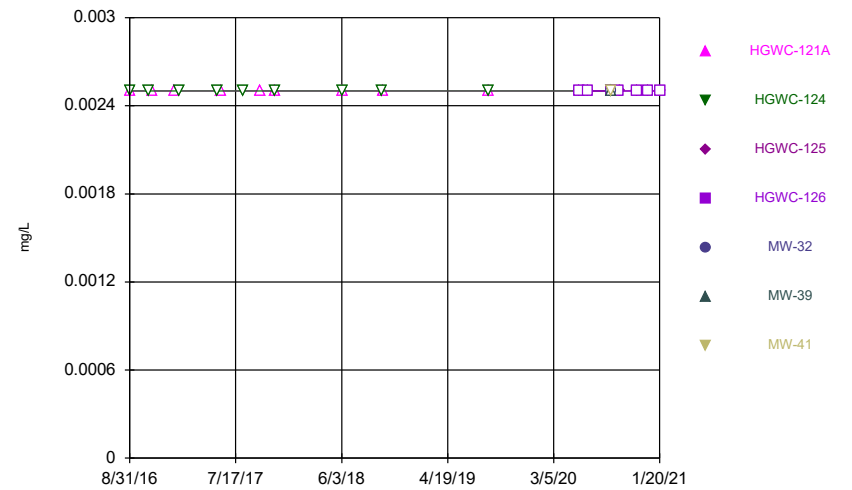
Constituent: Boron Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



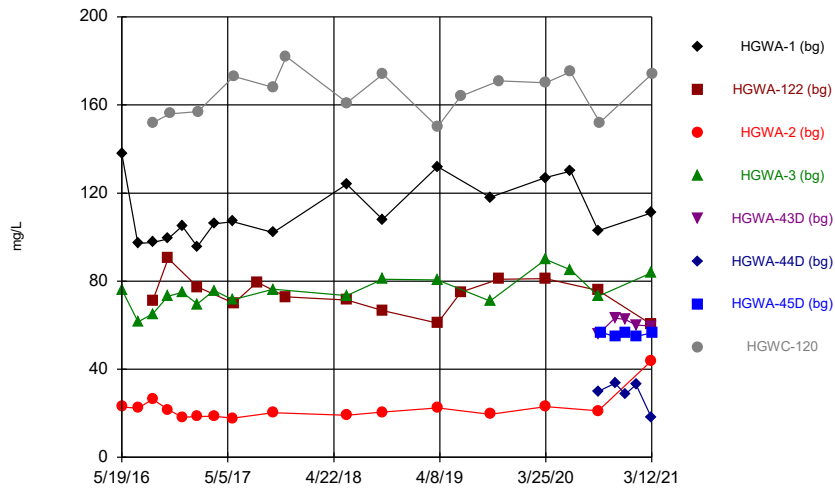
Constituent: Cadmium Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



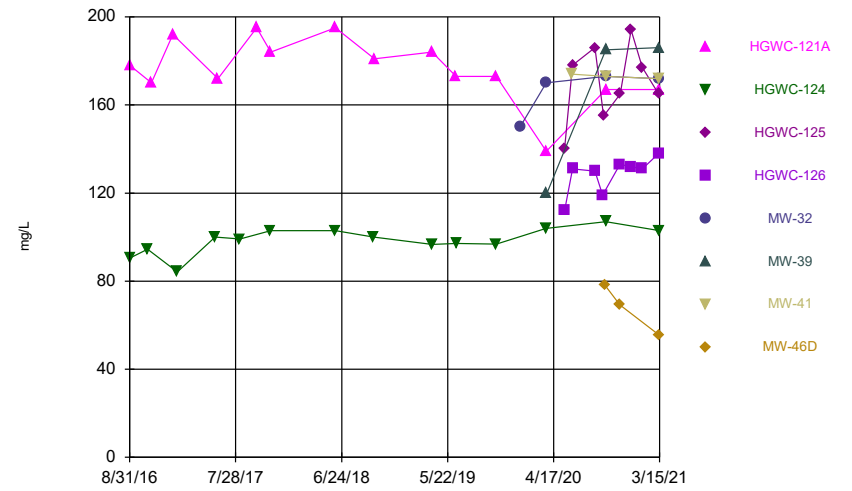
Constituent: Cadmium Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



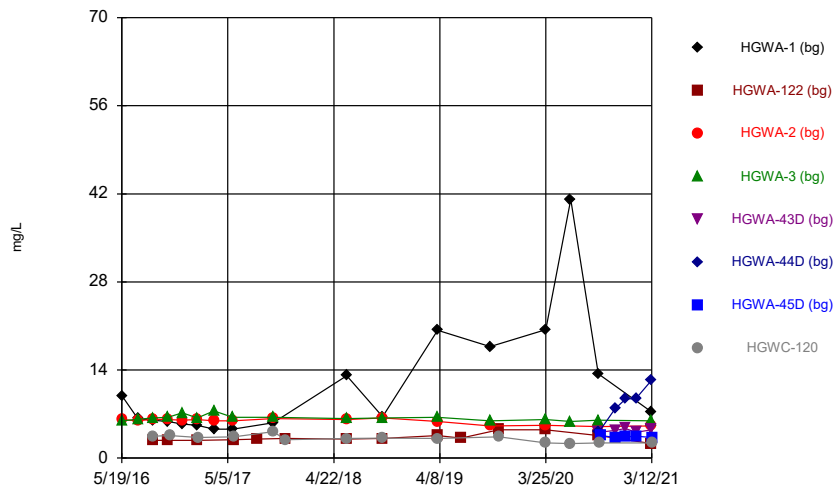
Constituent: Calcium Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



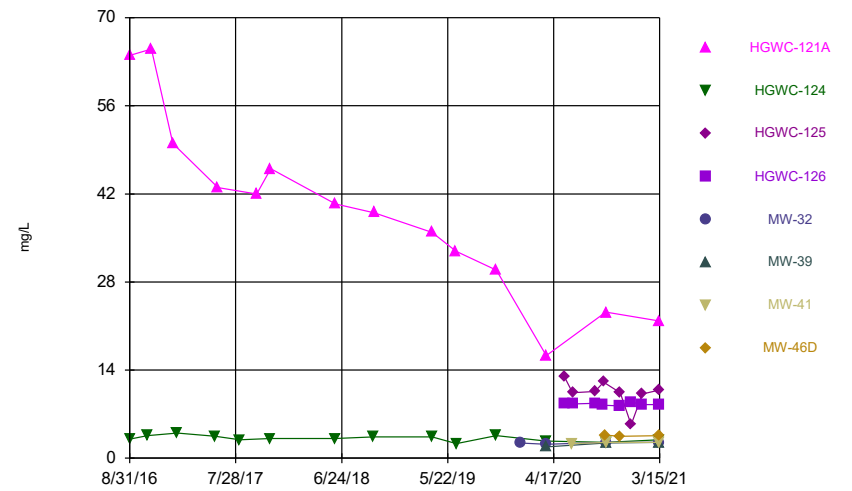
Constituent: Calcium Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



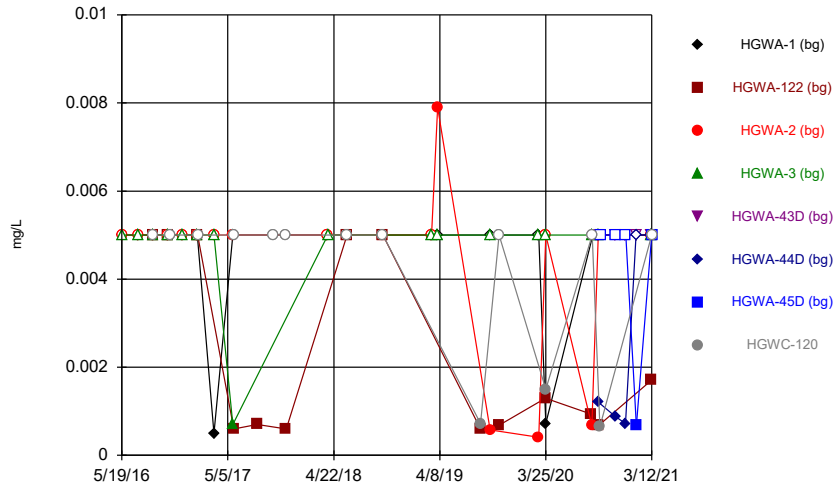
Constituent: Chloride Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



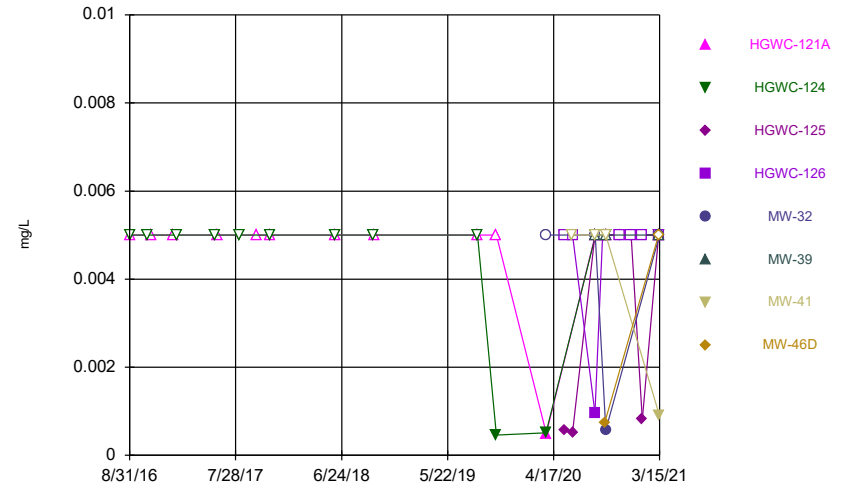
Constituent: Chloride Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



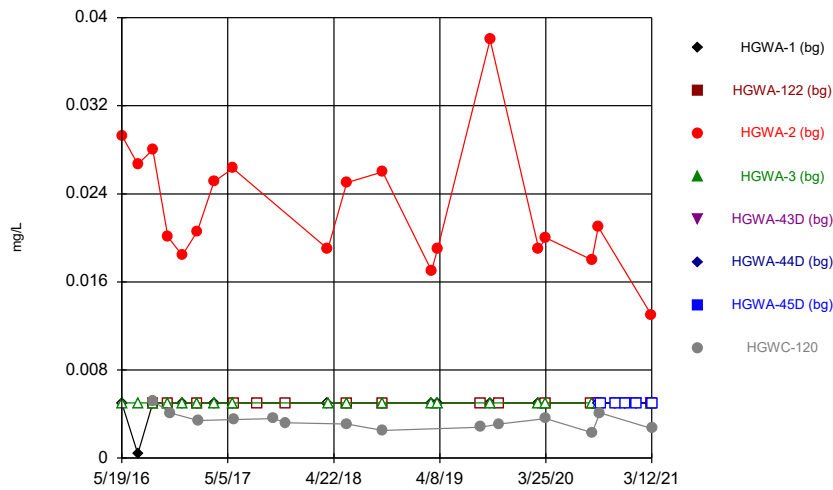
Constituent: Chromium Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



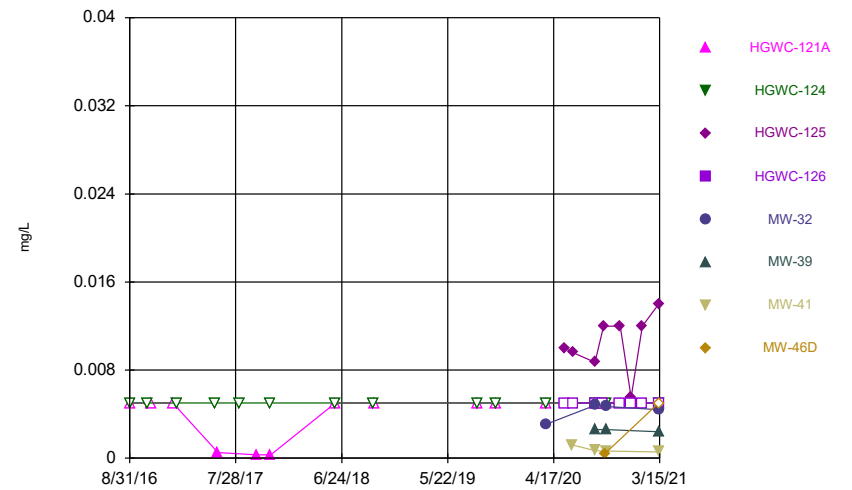
Constituent: Chromium Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



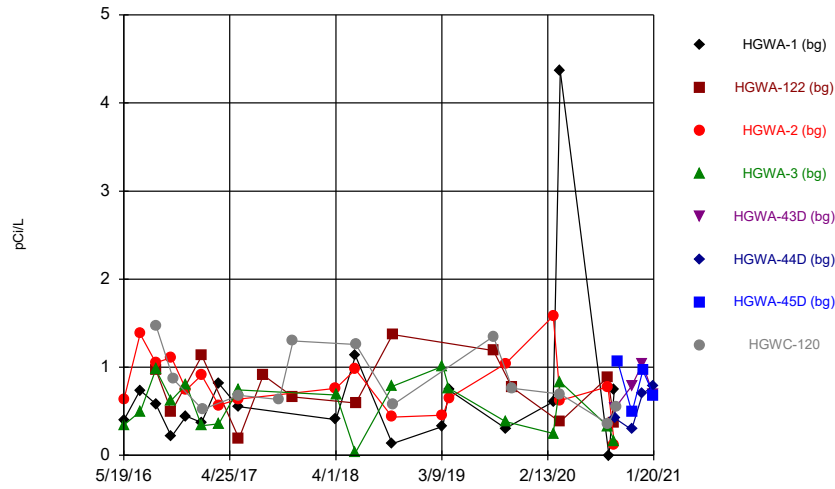
Constituent: Cobalt Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



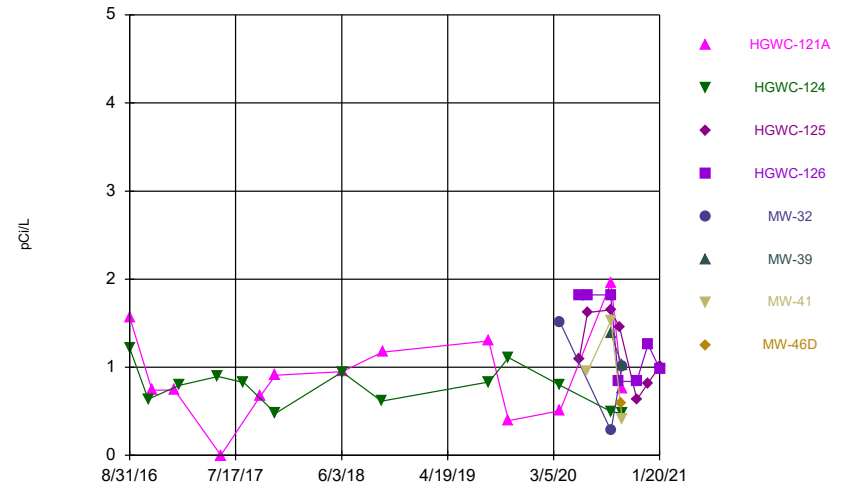
Constituent: Cobalt Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



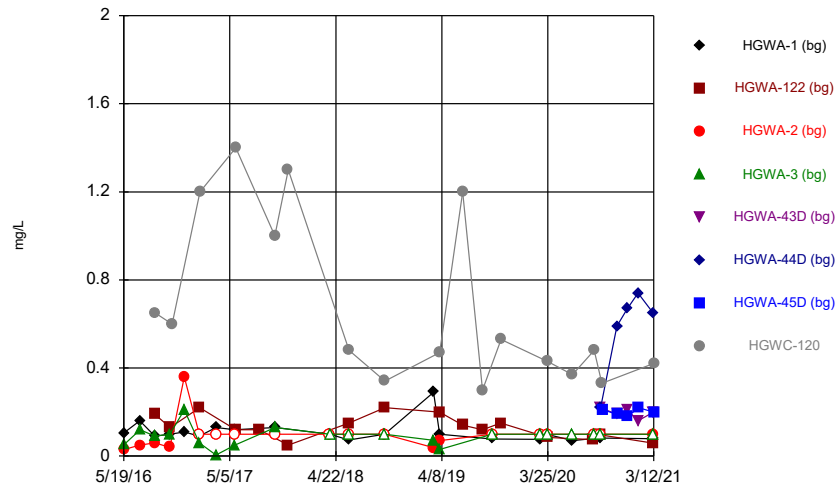
Constituent: Combined Radium 226 + 228 Analysis Run 5/14/2021 7:54 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



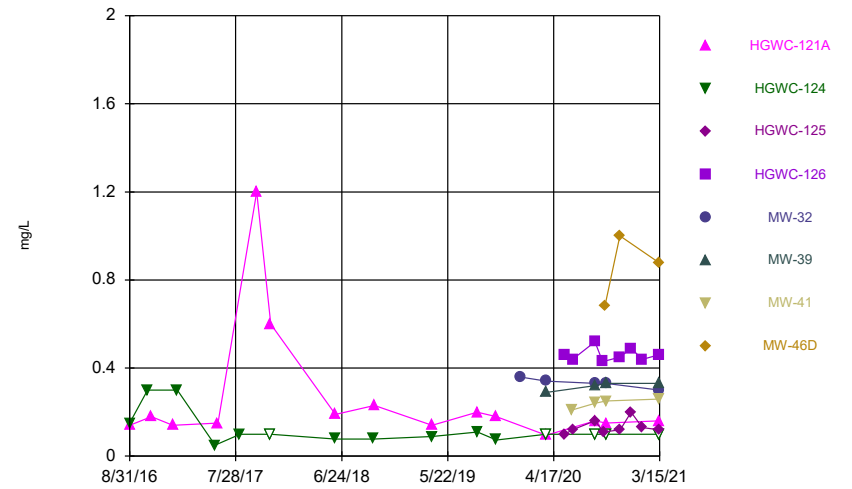
Constituent: Combined Radium 226 + 228 Analysis Run 5/14/2021 7:54 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



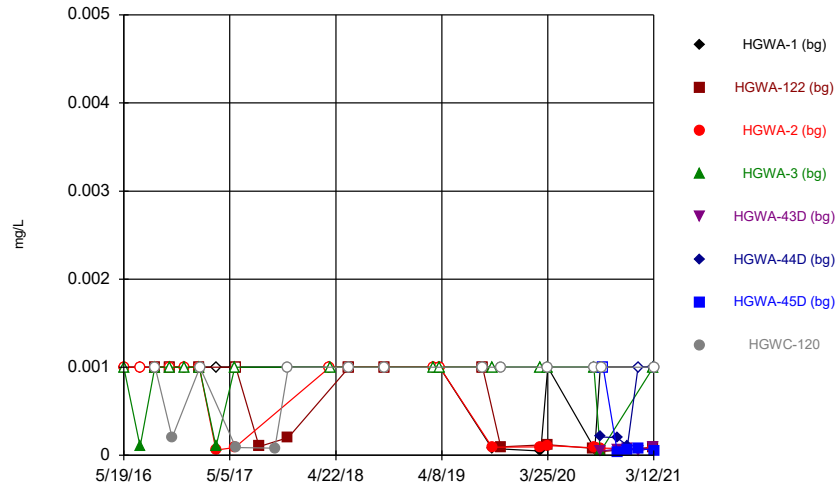
Constituent: Fluoride Analysis Run 5/14/2021 7:54 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



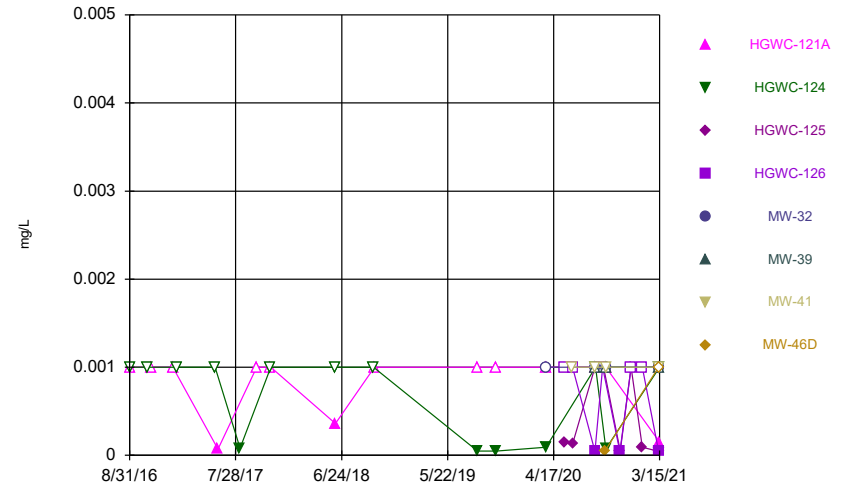
Constituent: Fluoride Analysis Run 5/14/2021 7:54 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



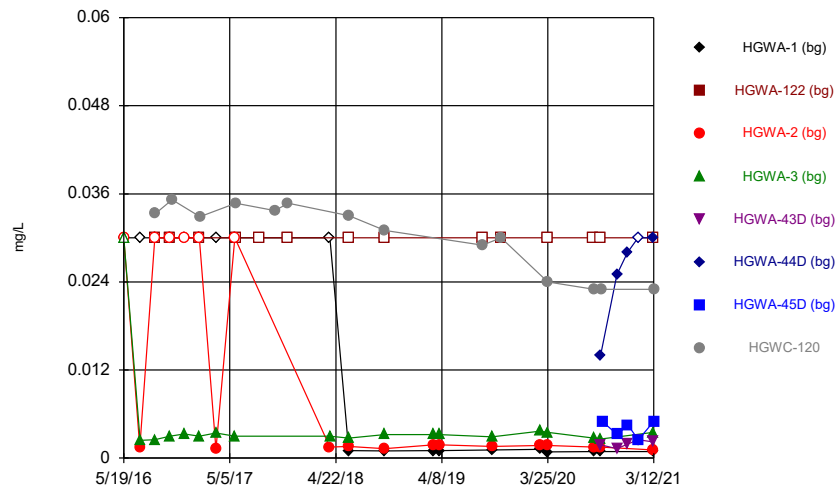
Constituent: Lead Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



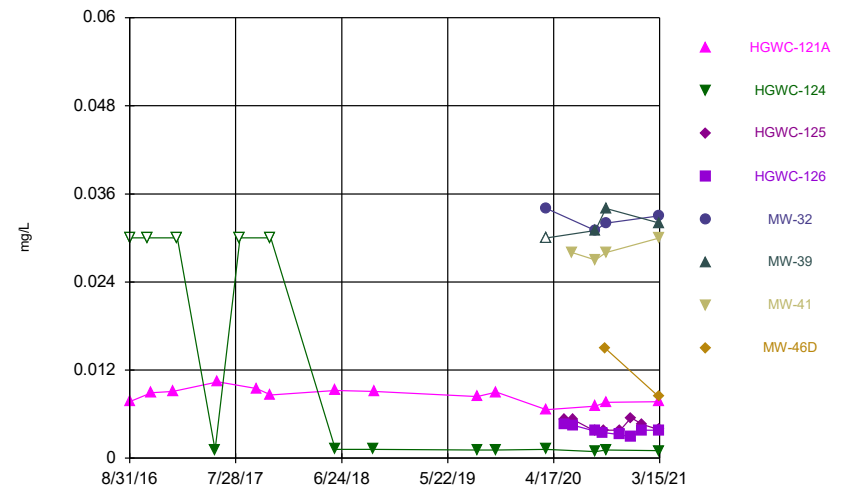
Constituent: Lead Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



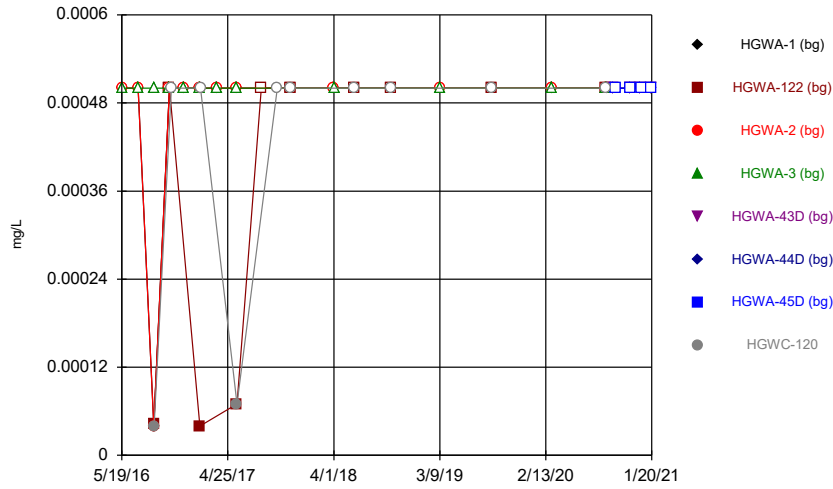
Constituent: Lithium Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



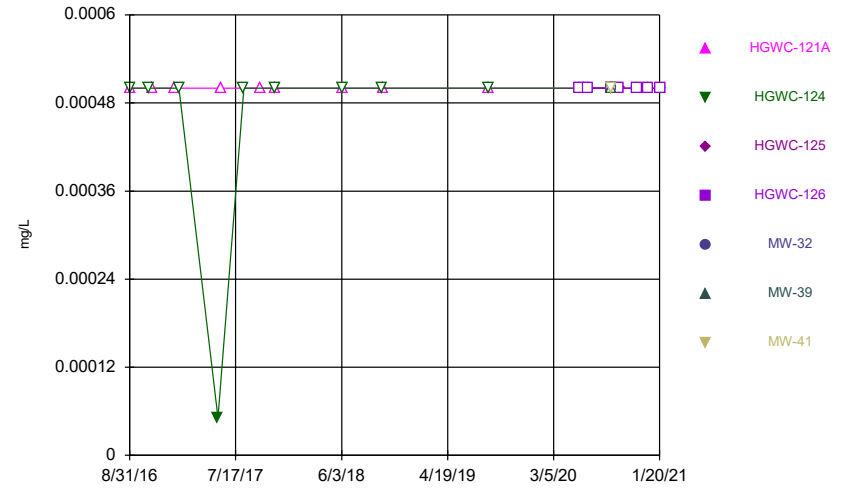
Constituent: Lithium Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



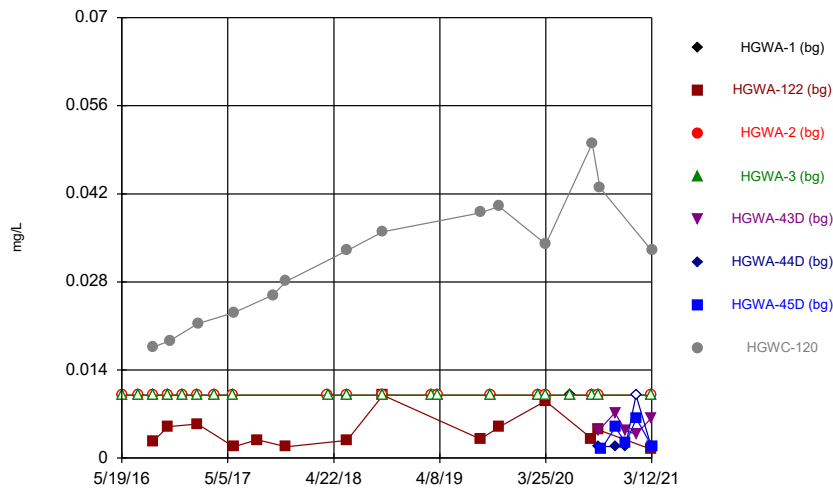
Constituent: Mercury Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



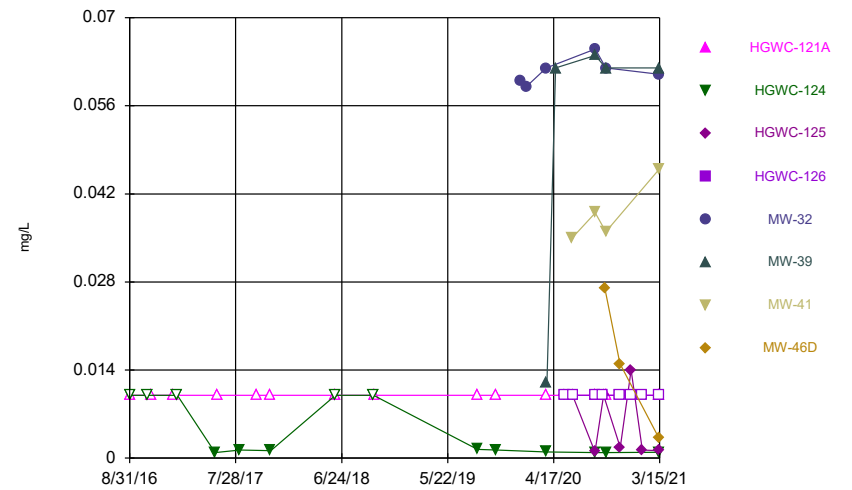
Constituent: Mercury Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



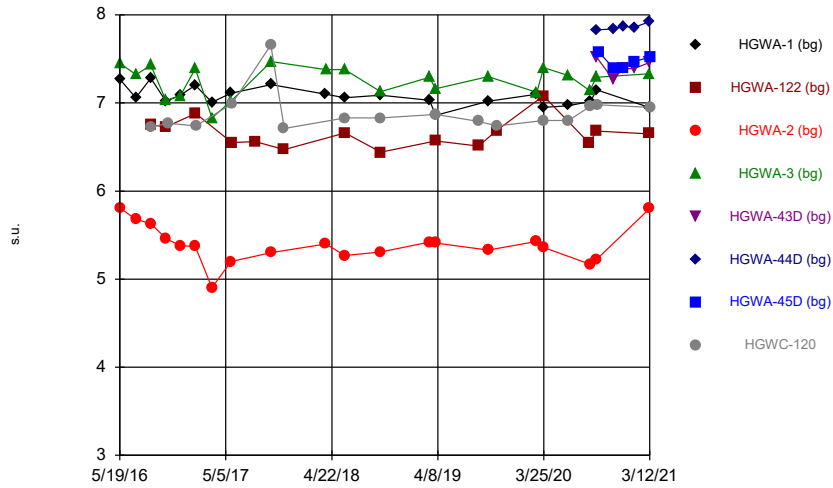
Constituent: Molybdenum Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



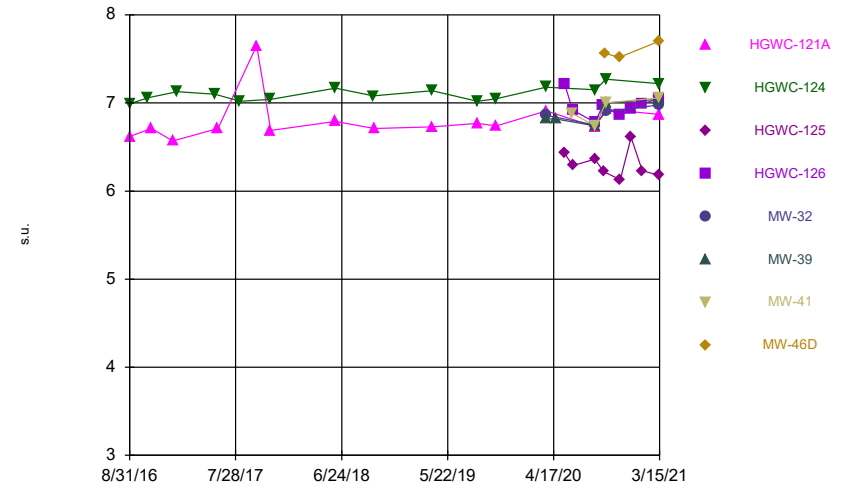
Constituent: Molybdenum Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



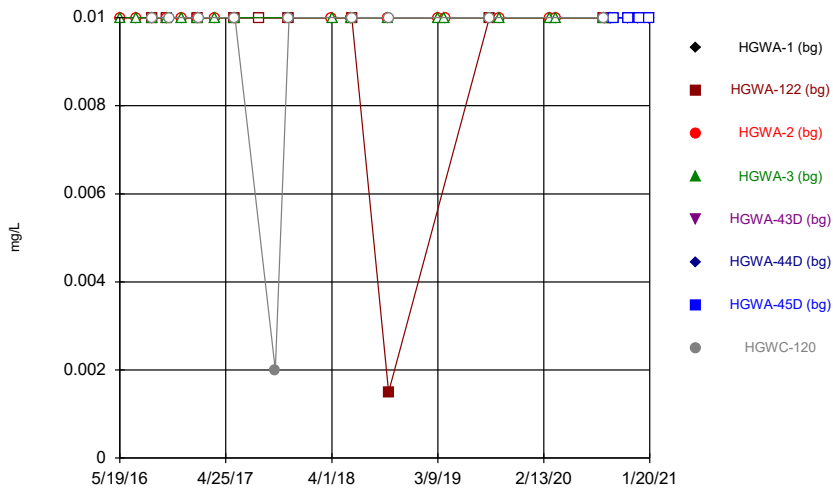
Constituent: pH Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



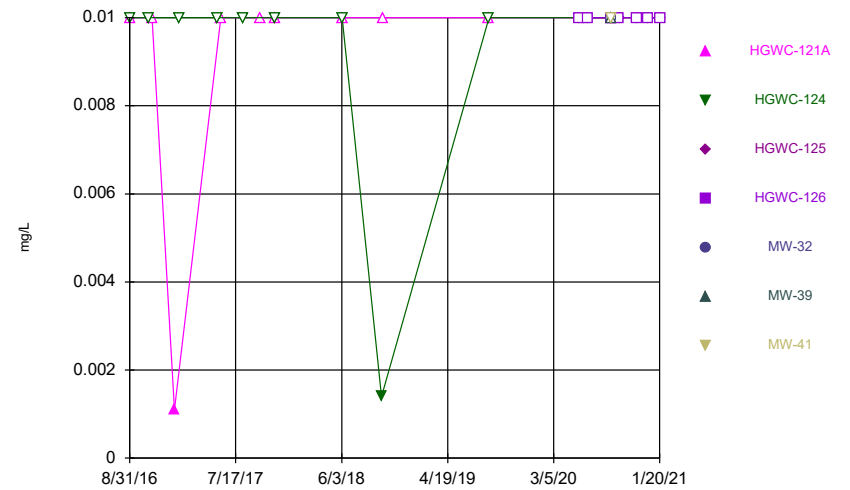
Constituent: pH Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



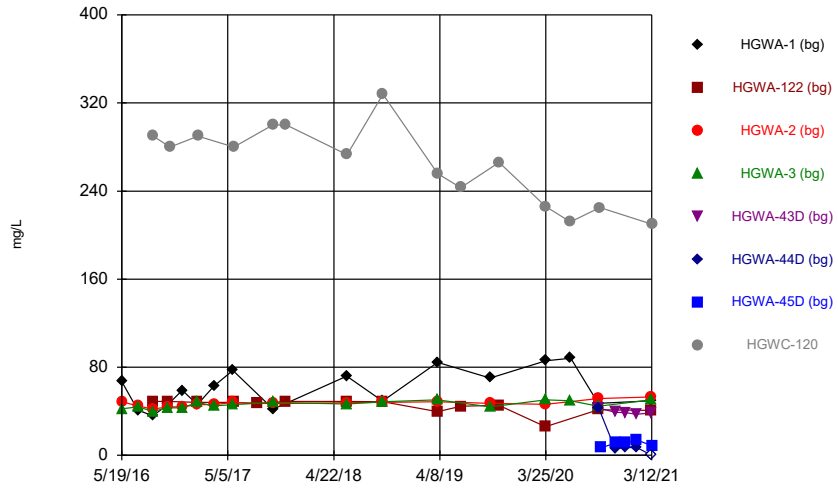
Constituent: Selenium Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



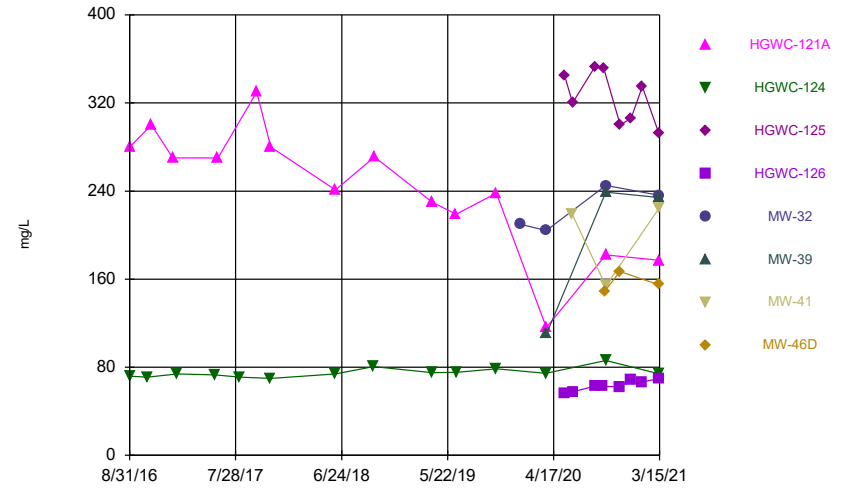
Constituent: Selenium Analysis Run 5/14/2021 7:54 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



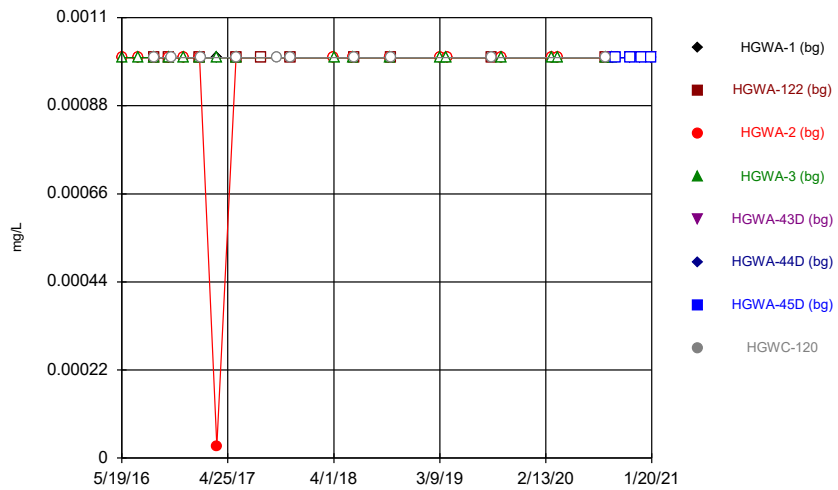
Constituent: Sulfate Analysis Run 5/14/2021 7:54 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



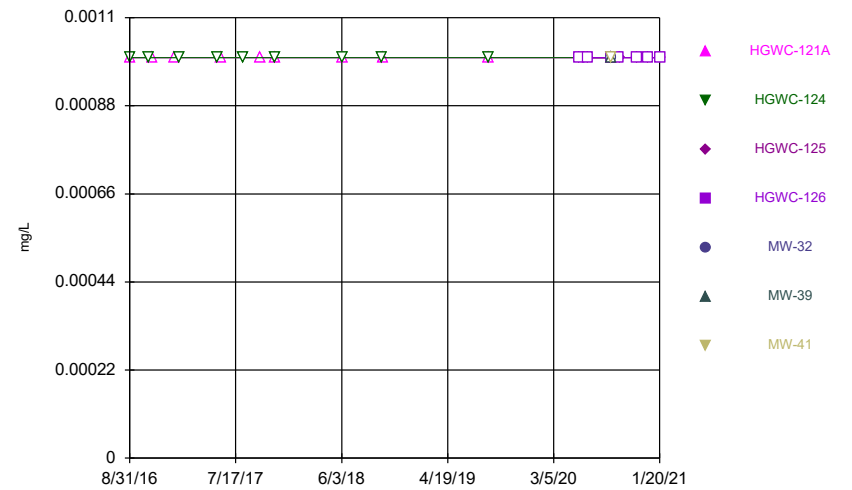
Constituent: Sulfate Analysis Run 5/14/2021 7:54 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



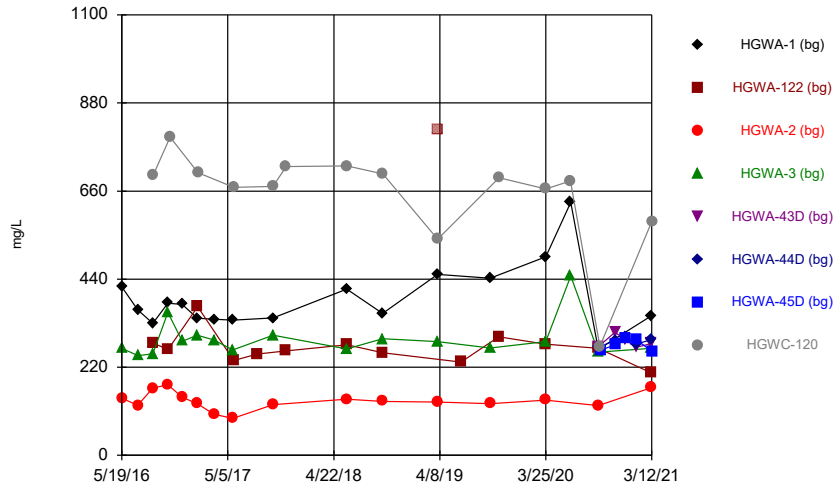
Constituent: Thallium Analysis Run 5/14/2021 7:54 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



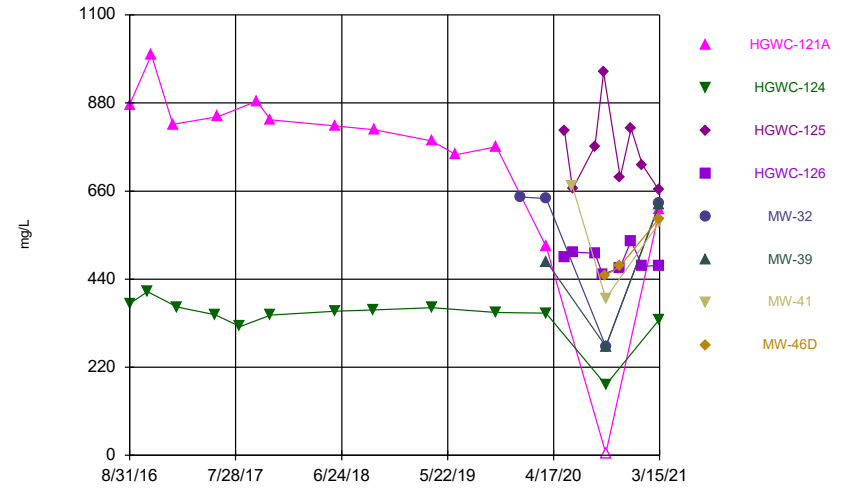
Constituent: Thallium Analysis Run 5/14/2021 7:54 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



Constituent: Total Dissolved Solids Analysis Run 5/14/2021 7:54 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series



Constituent: Total Dissolved Solids Analysis Run 5/14/2021 7:54 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Time Series

Constituent: Antimony (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.003		<0.003	<0.003				
7/11/2016	<0.003		<0.003					
7/12/2016				0.0003 (J)				
8/30/2016	<0.003	<0.003	<0.003	<0.003				
8/31/2016								<0.003
10/19/2016	0.0014 (J)		<0.003	<0.003				
10/20/2016		<0.003						
10/26/2016								<0.003
12/6/2016	<0.003		<0.003	<0.003				
1/24/2017	<0.003		<0.003	<0.003				
1/25/2017		<0.003						
1/27/2017								<0.003
3/21/2017	<0.003		<0.003	<0.003				
5/22/2017	<0.003		<0.003	<0.003				
5/25/2017		<0.003						<0.003
8/11/2017		<0.003						
10/2/2017								<0.003
11/15/2017		<0.003						<0.003
4/2/2018	<0.003		<0.003					
4/3/2018				<0.003				
6/5/2018		<0.003						<0.003
10/2/2018		<0.003						<0.003
3/12/2019	<0.003		<0.003	<0.003				
4/1/2019				<0.003				
4/2/2019	<0.003		<0.003					
8/22/2019		<0.003						<0.003
9/23/2019	<0.003		<0.003	<0.003				
3/2/2020	<0.003		<0.003	<0.003				
3/25/2020	<0.003		<0.003	<0.003				
8/24/2020		<0.003						
8/25/2020			<0.003	<0.003				
8/26/2020								<0.003
8/28/2020	<0.003							
9/15/2020	<0.003	0.001 (J)	<0.003	<0.003				
9/16/2020					0.00051 (J)	0.00049 (J)		
9/21/2020								<0.003
9/25/2020							<0.003	
11/10/2020					0.00043 (J)	<0.003		
11/11/2020							0.00057 (J)	
12/15/2020					0.00031 (J)	0.00047 (J)		
12/16/2020							<0.003	
1/19/2021					0.00029 (J)	<0.003		
1/20/2021							<0.003	
3/10/2021	<0.003					0.00037 (J)		
3/11/2021		<0.003	<0.003	<0.003	0.00057 (J)			
3/12/2021							0.0003 (J)	0.0018 (J)

Time Series

Constituent: Antimony (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	<0.003	<0.003						
10/26/2016		<0.003						
11/7/2016	<0.003							
1/13/2017	<0.003							
1/27/2017		<0.003						
5/25/2017		<0.003						
6/3/2017	<0.003							
8/11/2017		<0.003						
10/2/2017	<0.003							
11/15/2017	<0.003	<0.003						
6/5/2018	<0.003	<0.003						
10/2/2018		<0.003						
10/5/2018	<0.003							
8/22/2019	<0.003							
8/23/2019		<0.003						
5/22/2020			0.00047 (J)	<0.003				
6/16/2020			<0.003	<0.003				
8/25/2020			<0.003	<0.003				
8/26/2020	<0.003				0.00035 (J)	<0.003	<0.003	
8/27/2020		<0.003						
9/18/2020				<0.003				
9/21/2020			<0.003					
9/25/2020								<0.003
9/28/2020	<0.003	<0.003			<0.003	<0.003	<0.003	
11/11/2020				0.0004 (J)				
11/12/2020			<0.003					
12/16/2020			<0.003	<0.003				
1/20/2021			<0.003	<0.003				
3/12/2021			0.00061 (J)	0.00043 (J)				0.00041 (J)
3/15/2021	<0.003	<0.003			<0.003	<0.003	<0.003	

Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.005		0.00127 (J)	<0.005				
7/11/2016	<0.005		0.002 (J)					
7/12/2016				0.0008 (J)				
8/30/2016	<0.005	<0.005	0.0017 (J)	<0.005				
8/31/2016								<0.005
10/19/2016	<0.005		<0.005	<0.005				
10/20/2016		<0.005						
10/26/2016								<0.005
12/6/2016	<0.005		<0.005	<0.005				
1/24/2017	<0.005		<0.005	<0.005				
1/25/2017		<0.005						
1/27/2017								<0.005
3/21/2017	0.0005 (J)		<0.005	0.0007 (J)				
5/22/2017	<0.005		0.0006 (J)	0.0006 (J)				
5/25/2017		<0.005						0.0014 (J)
8/11/2017		<0.005						
10/2/2017								0.0007 (J)
11/15/2017		<0.005						<0.005
4/2/2018	<0.005		<0.005					
4/3/2018				<0.005				
6/4/2018	<0.005		0.00088 (J)	0.0008 (J)				
6/5/2018		<0.005						0.001 (J)
10/1/2018	<0.005		<0.005	0.0011 (J)				
10/2/2018		<0.005						<0.005
3/12/2019	<0.005		0.00069 (J)	0.00063 (J)				
4/1/2019				<0.005				
4/2/2019	<0.005		<0.005					
8/22/2019		<0.005						<0.005
9/23/2019	0.00046 (J)		0.00067 (J)	0.0011 (J)				
3/2/2020	<0.005		0.00043 (J)	0.0004 (J)				
3/25/2020	<0.005		<0.005	<0.005				
8/24/2020		<0.005						
8/25/2020			<0.005	<0.005				
8/26/2020								<0.005
8/28/2020	<0.005							
9/15/2020	<0.005		<0.005	<0.005				
9/16/2020					<0.005	<0.005		
9/25/2020							<0.005	
11/10/2020					0.0021 (J)	<0.005		
11/11/2020							0.0011 (J)	
12/15/2020					<0.005	<0.005		
12/16/2020							<0.005	
1/19/2021					0.0011 (J)	<0.005		
1/20/2021							0.0022 (J)	

Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/14/2021 7:55 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41
8/31/2016	<0.005	<0.005					
10/26/2016		<0.005					
11/7/2016	<0.005						
1/13/2017	<0.005						
1/27/2017		<0.005					
5/25/2017		0.0006 (J)					
6/3/2017	0.001 (J)						
8/11/2017		<0.005					
10/2/2017	<0.005						
11/15/2017	<0.005	<0.005					
6/5/2018	0.0014 (J)	<0.005					
10/2/2018		<0.005					
10/5/2018	<0.005						
8/22/2019	<0.005						
8/23/2019		<0.005					
5/22/2020			0.00081 (J)	0.00071 (J)			
6/16/2020			0.0014 (J)	0.00091 (J)			
8/25/2020			<0.005	<0.005			
8/26/2020	<0.005				<0.005	<0.005	<0.005
8/27/2020		<0.005					
9/18/2020				<0.005			
9/21/2020			<0.005				
11/11/2020				<0.005			
11/12/2020			<0.005				
12/16/2020			<0.005	<0.005			
1/20/2021			<0.005	<0.005			

Time Series

Constituent: Barium (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	0.0346		0.114	0.111				
7/11/2016	0.0311		0.112					
7/12/2016				0.115				
8/30/2016	0.0293	0.0463	0.131	0.113				
8/31/2016								0.045
10/19/2016	0.0293		0.111	0.123				
10/20/2016		0.0431						
10/26/2016								0.0462
12/6/2016	0.0304		0.108	0.127				
1/24/2017	0.028		0.102	0.126				
1/25/2017		0.0429						
1/27/2017								0.0451
3/21/2017	0.0275		0.095	0.12				
5/22/2017	0.0281		0.103	0.117				
5/25/2017		0.0447						0.0488
8/11/2017		0.0451						
10/2/2017								0.0479
11/15/2017		0.0439						0.051
4/2/2018	0.026		0.099					
4/3/2018				0.11				
6/4/2018	0.035		0.11	0.12				
6/5/2018		0.04						0.051
10/1/2018	0.029		0.11	0.14				
10/2/2018		0.042						0.059
3/12/2019	0.042		0.12	0.13				
4/1/2019				0.13				
4/2/2019	0.04		0.13					
8/22/2019		0.044						0.05
9/23/2019	0.042		0.13	0.13				
10/21/2019		0.04						
10/22/2019								0.051
3/2/2020	0.034		0.11	0.14				
3/24/2020		0.032						
3/25/2020	0.043		0.12	0.13				0.052
8/24/2020		0.041						
8/25/2020			0.11	0.11				
8/26/2020								0.041
8/28/2020	0.036							
9/15/2020	0.035	0.039	0.12	0.12				
9/16/2020					0.26	0.24		
9/21/2020								0.046
9/25/2020							0.49	
11/10/2020					0.25	0.38		
11/11/2020							0.45	
12/15/2020					0.29	0.39		
12/16/2020							0.52	
1/19/2021					0.32	<0.01		
1/20/2021							0.53	
3/10/2021	0.03					0.26		
3/11/2021		0.032	0.07	0.13	0.3			
3/12/2021							0.54	0.047

Time Series

Constituent: Barium (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	0.0782	0.0744						
10/26/2016		0.0735						
11/7/2016	0.0764							
1/13/2017	0.0744							
1/27/2017		0.0632						
5/25/2017		0.0773						
6/3/2017	0.0933							
8/11/2017		0.0672						
10/2/2017	0.0815							
11/15/2017	0.0807	0.0707						
6/5/2018	0.078	0.07						
10/2/2018		0.067						
10/5/2018	0.074							
8/22/2019	0.066							
8/23/2019		0.066						
10/21/2019	0.074	0.075						
3/24/2020		0.075						
3/25/2020	0.099				0.062			
5/22/2020			0.048	0.24				
6/15/2020							0.074	
6/16/2020			0.049	0.24				
8/25/2020			0.045	0.23				
8/26/2020	0.057				0.055	0.059	0.066	
8/27/2020		0.062						
9/18/2020				0.21				
9/21/2020			0.042					
9/25/2020								0.04
9/28/2020	0.056	0.071			0.053	0.058	0.071	
11/11/2020				0.23				
11/12/2020			0.042					
12/16/2020			0.041	0.24				
1/20/2021			0.045	0.25				
3/12/2021			0.043	0.27				0.03
3/15/2021	0.059	0.071			0.057	0.059	0.063	

Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.0005		<0.0005	<0.0005				
7/11/2016	<0.0005		0.0001 (J)					
7/12/2016				<0.0005				
8/30/2016	<0.0005	<0.0005	<0.0005	<0.0005				
8/31/2016								<0.0005
10/19/2016	<0.0005		0.0001 (J)	<0.0005				
10/20/2016		<0.0005						
10/26/2016								<0.0005
12/6/2016	<0.0005		0.0002 (J)	<0.0005				
1/24/2017	<0.0005		0.0001 (J)	<0.0005				
1/25/2017		<0.0005						
1/27/2017								<0.0005
3/21/2017	<0.0005		0.0001 (J)	<0.0005				
5/22/2017	<0.0005		0.0001 (J)	<0.0005				
5/25/2017		<0.0005						<0.0005
8/11/2017		<0.0005						
10/2/2017								<0.0005
11/15/2017		<0.0005						<0.0005
4/2/2018	<0.0005		<0.0005					
4/3/2018				<0.0005				
6/5/2018		<0.0005						<0.0005
10/2/2018		<0.0005						<0.0005
3/12/2019	<0.0005		0.00017 (J)	<0.0005				
4/1/2019				<0.0005				
4/2/2019	<0.0005		0.00015 (J)					
8/22/2019		<0.0005						<0.0005
9/23/2019	<0.0005		0.00011 (J)	<0.0005				
3/2/2020	<0.0005		0.00014 (J)	<0.0005				
3/25/2020	<0.0005		0.00016 (J)	<0.0005				
8/24/2020		<0.0005						
8/25/2020			0.00014 (J)	<0.0005				
8/26/2020								<0.0005
8/28/2020	<0.0005							
9/15/2020	<0.0005	<0.0005	0.00013 (J)	<0.0005				
9/16/2020					<0.0005	<0.0005		
9/21/2020								<0.0005
9/25/2020							<0.0005	
11/10/2020					<0.0005	<0.0005		
11/11/2020							<0.0005	
12/15/2020					<0.0005	<0.0005		
12/16/2020							<0.0005	
1/19/2021					<0.0005	<0.0005		
1/20/2021							<0.0005	
3/10/2021	<0.0005					<0.0005		
3/11/2021		<0.0005	8.6E-05 (J)	<0.0005	<0.0005			
3/12/2021							<0.0005	<0.0005

Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/14/2021 7:55 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	<0.0005	<0.0005						
10/26/2016		<0.0005						
11/7/2016	<0.0005							
1/13/2017	<0.0005							
1/27/2017		<0.0005						
5/25/2017		<0.0005						
6/3/2017	<0.0005							
8/11/2017		<0.0005						
10/2/2017	<0.0005							
11/15/2017	<0.0005	<0.0005						
6/5/2018	<0.0005	<0.0005						
10/2/2018		<0.0005						
10/5/2018	<0.0005							
8/22/2019	<0.0005							
8/23/2019		<0.0005						
5/22/2020			<0.0005	<0.0005				
6/16/2020			<0.0005	<0.0005				
8/25/2020			<0.0005	<0.0005				
8/26/2020	<0.0005				<0.0005	<0.0005	<0.0005	
8/27/2020		<0.0005						
9/18/2020				<0.0005				
9/21/2020			<0.0005					
9/25/2020								<0.0005
9/28/2020	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005	
11/11/2020				<0.0005				
11/12/2020			<0.0005					
12/16/2020			<0.0005	<0.0005				
1/20/2021			<0.0005	<0.0005				
3/12/2021			<0.0005	<0.0005				<0.0005
3/15/2021	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005	

Time Series

Constituent: Boron (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	0.0214 (J)		0.0321 (J)	<0.1				
7/11/2016	0.0142 (J)		0.0337 (J)					
7/12/2016				0.0074 (J)				
8/30/2016	0.0074 (J)	0.277	0.0173 (J)	<0.1				
8/31/2016								0.981
10/19/2016	0.0224 (J)		0.0341 (J)	0.0085 (J)				
10/20/2016		0.336						
10/26/2016								1.28
12/6/2016	0.0211 (J)		0.0326 (J)	0.0085 (J)				
1/24/2017	0.0165 (J)		0.0365 (J)	0.01 (J)				
1/25/2017		0.274						
1/27/2017								1.19
3/21/2017	0.0187 (J)		0.0349 (J)	0.0079 (J)				
5/22/2017	0.0782		0.0475	0.0131 (J)				
5/25/2017		0.298						1.33
8/11/2017		0.285						
10/2/2017								1.19
10/3/2017	0.0198 (J)		0.0386 (J)	0.0097 (J)				
11/15/2017		0.322						1.24
6/4/2018	0.02 (J)		0.036 (J)	0.017 (J)				
6/5/2018		0.24						1.2
10/1/2018	0.013 (J)		0.035 (J)	0.0061 (J)				
10/2/2018		0.28						1.2
4/1/2019				0.0066 (J)				
4/2/2019	0.016 (J)	0.18	0.034 (J)					1.1
6/17/2019								1.1
6/18/2019		0.25						
9/23/2019	0.021 (J)		0.04 (J)	0.0081 (J)				
10/21/2019		0.25						
10/22/2019								1
3/24/2020		0.1						
3/25/2020	0.025 (J)		0.039 (J)	0.0096 (J)				1.1
6/15/2020								1.1
6/16/2020	0.021 (J)			0.01 (J)				
9/15/2020	0.017 (J)	0.22	0.044 (J)	0.0071 (J)				
9/16/2020					0.061 (J)	0.23		
9/21/2020								0.93
9/25/2020							0.16	
11/10/2020					0.057 (J)	0.29		
11/11/2020							0.17	
12/15/2020					0.052 (J)	0.31		
12/16/2020							0.16	
1/19/2021					0.049 (J)	<0.1		
1/20/2021							0.19	
3/10/2021	0.015 (J)					0.39		
3/11/2021		0.2	0.056	0.015 (J)	0.06			
3/12/2021							0.19	1.1

Time Series

Constituent: Boron (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	3.23	0.494						
10/26/2016		0.55						
11/7/2016	2.95							
1/13/2017	4.01							
1/27/2017		0.428						
5/25/2017		0.544						
6/3/2017	2.62							
8/11/2017		0.524						
10/2/2017	2.92							
11/15/2017	2.71	0.531						
6/5/2018	2.6	0.53						
10/2/2018		0.47						
10/5/2018	2.9							
4/3/2019	3	0.45						
6/17/2019	2.4							
6/18/2019		0.45						
10/21/2019	2.4	0.5						
1/3/2020					1.1			
3/24/2020		0.44						
3/25/2020	1.6				1.2			
3/27/2020						0.7		
5/22/2020			1.5	0.026 (J)				
6/15/2020							1.2	
6/16/2020			1.5	0.023 (J)				
8/25/2020			1.4	0.016 (J)				
9/18/2020				0.041 (J)				
9/21/2020			1.4					
9/25/2020								0.51
9/28/2020	2.3	0.43			1.3	1.3	1.2	
11/11/2020				0.009 (J)				0.68
11/12/2020			1.4					
12/16/2020			1.5	0.011 (J)				
1/20/2021			1.5	<0.1				
3/12/2021			1.5	0.016 (J)				0.69
3/15/2021	1.9	0.4			1.2	1.2	1.1	

Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/14/2021 7:55 AM

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.0025		<0.0025	<0.0025				
7/11/2016	<0.0025		<0.0025					
7/12/2016				<0.0025				
8/30/2016	<0.0025	<0.0025	<0.0025	<0.0025				
8/31/2016								<0.0025
10/19/2016	<0.0025		<0.0025	<0.0025				
10/20/2016		<0.0025						
10/26/2016								<0.0025
12/6/2016	<0.0025		<0.0025	<0.0025				
1/24/2017	<0.0025		0.0001 (J)	<0.0025				
1/25/2017		<0.0025						
1/27/2017								<0.0025
3/21/2017	<0.0025		7E-05 (J)	<0.0025				
5/22/2017	<0.0025		0.0001 (J)	<0.0025				
5/25/2017		<0.0025						<0.0025
8/11/2017		<0.0025						
10/2/2017								<0.0025
11/15/2017		<0.0025						<0.0025
4/2/2018	<0.0025		<0.0025					
4/3/2018				<0.0025				
6/4/2018	<0.0025		0.00014 (J)	<0.0025				
6/5/2018		<0.0025						<0.0025
10/1/2018	<0.0025		<0.0025	<0.0025				
10/2/2018		<0.0025						<0.0025
3/12/2019	<0.0025		0.00013 (J)	<0.0025				
4/1/2019				<0.0025				
4/2/2019	<0.0025		0.00015 (J)					
8/22/2019		<0.0025						<0.0025
9/23/2019	<0.0025		<0.0025	<0.0025				
3/2/2020	<0.0025		<0.0025	<0.0025				
3/25/2020	<0.0025		0.00014 (J)	<0.0025				
8/24/2020		<0.0025						
8/25/2020			<0.0025	<0.0025				
8/26/2020								<0.0025
8/28/2020	<0.0025							
9/15/2020	<0.0025		0.00012 (J)	<0.0025				
9/16/2020					<0.0025	<0.0025		
9/25/2020							<0.0025	
11/10/2020					<0.0025	<0.0025		
11/11/2020							<0.0025	
12/15/2020					<0.0025	<0.0025		
12/16/2020							<0.0025	
1/19/2021					<0.0025	<0.0025		
1/20/2021							<0.0025	

Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/14/2021 7:55 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41
8/31/2016	<0.0025	<0.0025					
10/26/2016		<0.0025					
11/7/2016	<0.0025						
1/13/2017	<0.0025						
1/27/2017		<0.0025					
5/25/2017		<0.0025					
6/3/2017	<0.0025						
8/11/2017		<0.0025					
10/2/2017	<0.0025						
11/15/2017	<0.0025	<0.0025					
6/5/2018	<0.0025	<0.0025					
10/2/2018		<0.0025					
10/5/2018	<0.0025						
8/22/2019	<0.0025						
8/23/2019		<0.0025					
5/22/2020			<0.0025	<0.0025			
6/16/2020			<0.0025	<0.0025			
8/25/2020			<0.0025	<0.0025			
8/26/2020	<0.0025				<0.0025	<0.0025	<0.0025
8/27/2020		<0.0025					
9/18/2020				<0.0025			
9/21/2020			<0.0025				
11/11/2020				<0.0025			
11/12/2020			<0.0025				
12/16/2020			<0.0025	<0.0025			
1/20/2021			<0.0025	<0.0025			

Time Series

Constituent: Calcium (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	138		22.9	76.2				
7/11/2016	97.2		22.3					
7/12/2016				61.5				
8/30/2016	97.5	71.3	26.4	65.1				
8/31/2016								152
10/19/2016	99.2		21.7	73.2				
10/20/2016		90.3						
10/26/2016								156
12/6/2016	105		18.2	74.9				
1/24/2017	95.7		18.5	69.6				
1/25/2017		77.3						
1/27/2017								157
3/21/2017	106		18.6	75.7				
5/22/2017	107		17.8	71.5				
5/25/2017		69.9						173
8/11/2017		79.5						
10/2/2017								168
10/3/2017	102		20.2	76.3				
11/15/2017		72.8						182
6/4/2018	124		19.1	73.4				
6/5/2018		71.4						161
10/1/2018	108		20.5 (J)	80.9				
10/2/2018		66.6						174
4/1/2019				80.5				
4/2/2019	132	60.9	22.5 (J)					150
6/17/2019								164
6/18/2019		75						
9/23/2019	118		19.5	71				
10/21/2019		80.8						
10/22/2019								171
3/24/2020		81.2						
3/25/2020	127		23	89.8				170
6/15/2020								175
6/16/2020	130			85.1				
9/15/2020	103	75.8	21.1	73.1				
9/16/2020					56	30		
9/21/2020								152
9/25/2020							56.8	
11/10/2020					63.3	33.6		
11/11/2020							54.9	
12/15/2020					62.6	28.7		
12/16/2020							56.4	
1/19/2021					60.1	33		
1/20/2021							55	
3/10/2021	111					18.3		
3/11/2021		60.4 (M1)	43.8	83.8	59.6			
3/12/2021							56.5	174

Time Series

Constituent: Calcium (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	178	90.4						
10/26/2016		94.5						
11/7/2016	170							
1/13/2017	192							
1/27/2017		84.2						
5/25/2017		100						
6/3/2017	172							
8/11/2017		99.1						
10/2/2017	195							
11/15/2017	184	103						
6/5/2018	195	103						
10/2/2018		100						
10/5/2018	181							
4/3/2019	184	96.7						
6/17/2019	173							
6/18/2019		97.1						
10/21/2019	173	96.9						
1/3/2020					150			
3/24/2020		104						
3/25/2020	139				170			
3/27/2020						120		
5/22/2020			140	112				
6/15/2020							174	
6/16/2020			178	131				
8/25/2020			186	130				
9/18/2020				119				
9/21/2020			155					
9/25/2020								78.3
9/28/2020	167	107			173	185	173	
11/11/2020				133				69.3
11/12/2020			165					
12/16/2020			194	132				
1/20/2021			177 (M1)	131				
3/12/2021			165	138				55.7
3/15/2021	167	103			172	186	172	

Time Series

Constituent: Chloride (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	64	3						
10/26/2016		3.6						
11/7/2016	65							
1/13/2017	50							
1/27/2017		4						
5/25/2017		3.5						
6/3/2017	43							
8/11/2017		2.9						
10/2/2017	42							
11/15/2017	46	3.1						
6/5/2018	40.4	3.1						
10/2/2018		3.4						
10/5/2018	39							
4/3/2019	35.9	3.4						
6/17/2019	32.9							
6/18/2019		2.3 (J)						
10/21/2019	29.9	3.6						
1/3/2020					2.4			
3/24/2020		2.7						
3/25/2020	16.3				2.2			
3/27/2020						1.8		
5/22/2020			12.9	8.6				
6/15/2020							2.3	
6/16/2020			10.4	8.6				
8/25/2020			10.6	8.7				
9/18/2020				8.4				
9/21/2020			12.1					
9/25/2020								3.7
9/28/2020	23.2	2.5			2.5	2.4	2.5	
11/11/2020				8.3				3.5
11/12/2020			10.4					
12/16/2020			5.3	8.9				
1/20/2021			10.2	8.5				
3/12/2021			10.8	8.5				3.6
3/15/2021	21.8	2.9			2.5	2.5	2.5	

Time Series

Constituent: Chromium (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.005		<0.005	<0.005				
7/11/2016	<0.005		<0.005					
7/12/2016				<0.005				
8/30/2016	<0.005	<0.005	<0.005	<0.005				
8/31/2016								<0.005
10/19/2016	<0.005		<0.005	<0.005				
10/20/2016		<0.005						
10/26/2016								<0.005
12/6/2016	<0.005		<0.005	<0.005				
1/24/2017	<0.005		<0.005	<0.005				
1/25/2017		<0.005						
1/27/2017								<0.005
3/21/2017	0.0005 (J)		<0.005	<0.005				
5/22/2017	<0.005		<0.005	0.0007 (J)				
5/25/2017		0.0006 (J)						<0.005
8/11/2017		0.0007 (J)						
10/2/2017								<0.005
11/15/2017		0.0006 (J)						<0.005
4/2/2018	<0.005		<0.005					
4/3/2018				<0.005				
6/5/2018		<0.005						<0.005
10/2/2018		<0.005						<0.005
3/12/2019	<0.005		<0.005	<0.005				
4/1/2019				<0.005				
4/2/2019	<0.005		0.0079 (J)					
8/22/2019		0.0006 (J)						0.00072 (J)
9/23/2019	<0.005		0.00058 (J)	<0.005				
10/21/2019		0.00068 (J)						
10/22/2019								<0.005
3/2/2020	<0.005		0.00041 (J)	<0.005				
3/24/2020		0.0013 (J)						
3/25/2020	0.00072 (J)		<0.005	<0.005				0.0015 (J)
8/24/2020		0.00093 (J)						
8/25/2020			0.00067 (J)	<0.005				
8/26/2020								<0.005
8/28/2020	<0.005							
9/15/2020	<0.005	0.00067 (J)	<0.005	<0.005				
9/16/2020					<0.005	0.0012 (J)		
9/21/2020								0.00065 (J)
9/25/2020							<0.005	
11/10/2020					<0.005	0.00089 (J)		
11/11/2020							<0.005	
12/15/2020					<0.005	0.00072 (J)		
12/16/2020							<0.005	
1/19/2021					<0.005	<0.005		
1/20/2021							0.00067 (J)	
3/10/2021	<0.005					<0.005		
3/11/2021		0.0017 (J)	<0.005	<0.005	<0.005			
3/12/2021							<0.005	<0.005

Time Series

Constituent: Chromium (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	<0.005	<0.005						
10/26/2016		<0.005						
11/7/2016	<0.005							
1/13/2017	<0.005							
1/27/2017		<0.005						
5/25/2017		<0.005						
6/3/2017	<0.005							
8/11/2017		<0.005						
10/2/2017	<0.005							
11/15/2017	<0.005	<0.005						
6/5/2018	<0.005	<0.005						
10/2/2018		<0.005						
10/5/2018	<0.005							
8/22/2019	<0.005							
8/23/2019		<0.005						
10/21/2019	<0.005	0.00046 (J)						
3/24/2020		0.00051 (J)						
3/25/2020	0.0005 (J)				<0.005			
5/22/2020			0.00058 (J)	<0.005				
6/15/2020							<0.005	
6/16/2020			0.00052 (J)	<0.005				
8/25/2020			<0.005	0.00096 (J)				
8/26/2020	<0.005				<0.005	<0.005	<0.005	
8/27/2020		<0.005						
9/18/2020				<0.005				
9/21/2020			<0.005					
9/25/2020								0.00075 (J)
9/28/2020	<0.005	<0.005			0.00058 (J)	<0.005	<0.005	
11/11/2020				<0.005				
11/12/2020			<0.005					
12/16/2020			<0.005	<0.005				
1/20/2021			0.00081 (J)	<0.005				
3/12/2021			<0.005	<0.005				<0.005
3/15/2021	<0.005	<0.005			<0.005	<0.005	0.0009 (J)	

Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.005		0.0293	<0.005				
7/11/2016	0.0004 (J)		0.0267					
7/12/2016				<0.005				
8/30/2016	<0.005	<0.005	0.028	<0.005				
8/31/2016								0.0052 (J)
10/19/2016	<0.005		0.0201	<0.005				
10/20/2016		<0.005						
10/26/2016								0.0041 (J)
12/6/2016	<0.005		0.0184	<0.005				
1/24/2017	<0.005		0.0206	<0.005				
1/25/2017		<0.005						
1/27/2017								0.0034 (J)
3/21/2017	<0.005		0.0251	<0.005				
5/22/2017	<0.005		0.0263	<0.005				
5/25/2017		<0.005						0.0035 (J)
8/11/2017		<0.005						
10/2/2017								0.0036 (J)
11/15/2017		<0.005						0.0032 (J)
4/2/2018	<0.005		0.019					
4/3/2018				<0.005				
6/4/2018	<0.005		0.025	<0.005				
6/5/2018		<0.005						0.0031 (J)
10/1/2018	<0.005		0.026	<0.005				
10/2/2018		<0.005						0.0025 (J)
3/12/2019	<0.005		0.017	<0.005				
4/1/2019				<0.005				
4/2/2019	<0.005		0.019					
8/22/2019		<0.005						0.0028 (J)
9/23/2019	<0.005		0.038	<0.005				
10/21/2019		<0.005						
10/22/2019								0.0031 (J)
3/2/2020	<0.005		0.019	<0.005				
3/24/2020		<0.005						
3/25/2020	<0.005		0.02	<0.005				0.0036 (J)
8/24/2020		<0.005						
8/25/2020			0.018	<0.005				
8/26/2020								0.0023 (J)
8/28/2020	<0.005							
9/15/2020	<0.005	<0.005	0.021	<0.005				
9/16/2020					<0.005	<0.005		
9/21/2020								0.0041 (J)
9/25/2020							<0.005	
11/10/2020					<0.005	<0.005		
11/11/2020							<0.005	
12/15/2020					<0.005	<0.005		
12/16/2020							<0.005	
1/19/2021					<0.005	<0.005		
1/20/2021							<0.005	
3/10/2021	<0.005					<0.005		
3/11/2021		<0.005	0.013	<0.005	<0.005			
3/12/2021							<0.005	0.0027 (J)

Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	<0.005	<0.005						
10/26/2016		<0.005						
11/7/2016	<0.005							
1/13/2017	<0.005							
1/27/2017		<0.005						
5/25/2017		<0.005						
6/3/2017	0.0005 (J)							
8/11/2017		<0.005						
10/2/2017	0.0003 (J)							
11/15/2017	0.0003 (J)	<0.005						
6/5/2018	<0.005	<0.005						
10/2/2018		<0.005						
10/5/2018	<0.005							
8/22/2019	<0.005							
8/23/2019		<0.005						
10/21/2019	<0.005	<0.005						
3/24/2020		<0.005						
3/25/2020	<0.005				0.0031 (J)			
5/22/2020			0.01	<0.005				
6/15/2020							0.0012 (J)	
6/16/2020			0.0096	<0.005				
8/25/2020			0.0087	<0.005				
8/26/2020	<0.005				0.0048 (J)	0.0026 (J)	0.00068 (J)	
8/27/2020		<0.005						
9/18/2020				<0.005				
9/21/2020			0.012					
9/25/2020								0.00041 (J)
9/28/2020	<0.005	<0.005			0.0047 (J)	0.0026 (J)	0.00066 (J)	
11/11/2020				<0.005				
11/12/2020			0.012					
12/16/2020			0.0055	<0.005				
1/20/2021			0.012	<0.005				
3/12/2021			0.014	<0.005				<0.005
3/15/2021	<0.005	<0.005			0.0044 (J)	0.0024 (J)	0.00057 (J)	

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/14/2021 7:55 AM

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	0.397 (U)		0.627 (U)	0.342 (U)				
7/11/2016	0.738 (U)		1.38					
7/12/2016				0.499 (U)				
8/30/2016	0.581 (U)	0.972 (U)	1.05 (U)	0.976 (U)				
8/31/2016								1.47
10/19/2016	0.213 (U)		1.11 (U)	0.626 (U)				
10/20/2016		0.496 (U)						
10/26/2016								0.864 (U)
12/6/2016	0.444 (U)		0.741 (U)	0.805 (U)				
1/24/2017	0.373 (U)		0.908 (U)	0.336 (U)				
1/25/2017		1.13 (U)						
1/27/2017								0.521 (U)
3/21/2017	0.816 (U)		0.567 (U)	0.358 (U)				
5/22/2017	0.554 (U)		0.638 (U)	0.744 (U)				
5/25/2017		0.192 (U)						0.681 (U)
8/11/2017		0.908 (U)						
10/2/2017								0.632 (U)
11/15/2017		0.662 (U)						1.3
4/2/2018	0.405 (U)		0.761 (U)					
4/3/2018				0.684 (U)				
6/4/2018	1.13 (U)		0.975 (U)	0.0291 (U)				
6/5/2018		0.593 (U)						1.26 (U)
10/1/2018	0.132 (U)		0.434 (U)	0.781 (U)				
10/2/2018		1.37						0.572 (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)					
8/22/2019		1.19 (U)						1.35
9/30/2019	0.306 (U)		1.04 (U)	0.384 (U)				
10/21/2019		0.772 (U)						
10/22/2019								0.76 (U)
3/2/2020	0.61 (U)		1.58	0.249 (U)				
3/24/2020		0.379 (U)						
3/25/2020	4.36		0.621 (U)	0.833 (U)				0.696 (U)
8/24/2020		0.883 (U)						
8/25/2020			0.778 (U)	0.33 (U)				
8/26/2020								0.357 (U)
8/28/2020	0 (U)							
9/15/2020	0.748 (U)	0.375 (U)	0.124 (U)	0.161 (U)				
9/16/2020					0.531 (U)	0.422 (U)		
9/21/2020								0.553 (U)
9/25/2020							1.07 (U)	
11/10/2020					0.788 (U)	0.293 (U)		
11/11/2020							0.49 (U)	
12/15/2020					1.04 (U)	0.7 (U)		
12/16/2020							0.963 (U)	
1/19/2021					0.685 (U)	0.79 (U)		
1/20/2021							0.682 (U)	

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/14/2021 7:55 AM

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	1.57	1.22						
10/26/2016		0.637 (U)						
11/7/2016	0.739 (U)							
1/13/2017	0.744 (U)							
1/27/2017		0.795 (U)						
5/25/2017		0.896 (U)						
6/3/2017	0 (U)							
8/11/2017		0.828 (U)						
10/2/2017	0.68 (U)							
11/15/2017	0.911 (U)	0.478 (U)						
6/5/2018	0.948 (U)	0.947 (U)						
10/2/2018		0.617 (U)						
10/5/2018	1.17 (U)							
8/22/2019	1.3							
8/23/2019		0.834						
10/21/2019	0.393 (U)	1.11 (U)						
3/24/2020		0.796 (U)						
3/25/2020	0.505 (U)				1.51			
5/22/2020			1.1 (U)	1.82				
6/15/2020							0.948 (U)	
6/16/2020			1.62	1.82				
8/25/2020			1.65	1.82				
8/26/2020	1.96				0.281 (U)	1.38	1.53	
8/27/2020		0.494 (U)						
9/18/2020				0.841 (U)				
9/21/2020			1.45					
9/25/2020								0.594 (U)
9/28/2020	0.761 (U)	0.477 (U)			1.01 (U)	1.02 (U)	0.409 (U)	
11/11/2020				0.837 (U)				
11/12/2020			0.633 (U)					
12/16/2020			0.818 (U)	1.26 (U)				
1/20/2021			1.01 (U)	0.985 (U)				

Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	0.105 (J)		0.0303 (J)	0.0513 (J)				
7/11/2016	0.16 (J)		0.05 (J)					
7/12/2016				0.12 (J)				
8/30/2016	0.09 (J)	0.19 (J)	0.06 (J)	0.09 (J)				
8/31/2016								0.65
10/19/2016	0.1 (J)		0.04 (J)	0.1 (J)				
10/20/2016		0.13 (J)						
10/26/2016								0.6
12/6/2016	0.11 (J)		0.36	0.21 (J)				
1/24/2017	0.09 (J)		<0.1	0.06 (J)				
1/25/2017		0.22 (J)						
1/27/2017								1.2
3/21/2017	0.13 (J)		<0.1	0.005 (J)				
5/22/2017	0.12 (J)		<0.1	0.05 (J)				
5/25/2017		0.12 (J)						1.4
8/11/2017		0.12 (J)						
10/2/2017								1
10/3/2017	0.13 (J)		<0.1	0.13 (J)				
11/15/2017		0.05 (J)						1.3
4/2/2018	<0.1		<0.1					
4/3/2018				<0.1				
6/4/2018	0.074 (J)		<0.1	<0.1				
6/5/2018		0.15 (J)						0.48
10/1/2018	<0.1		<0.1	<0.1				
10/2/2018		0.22 (J)						0.34
3/12/2019	0.29 (J)		0.038 (J)	0.072 (J)				
4/1/2019				0.029 (J)				
4/2/2019	0.1 (J)	0.2 (J)	0.071 (J)					0.47
6/17/2019								1.2
6/18/2019		0.14 (J)						
8/22/2019		0.12 (J)						0.3 (J)
9/23/2019	0.078 (J)		<0.1	<0.1				
10/21/2019		0.15 (J)						
10/22/2019								0.53
3/2/2020	0.076 (J)		<0.1	<0.1				
3/24/2020		0.085 (J)						
3/25/2020	0.098 (J)		<0.1	<0.1				0.43
6/15/2020								0.37
6/16/2020	0.071 (J)			<0.1				
8/24/2020		0.075 (J)						
8/25/2020			<0.1	<0.1				
8/26/2020								0.48
8/28/2020	0.08 (J)							
9/15/2020	0.082 (J)	0.096 (J)	<0.1	<0.1				
9/16/2020					0.22	0.22		
9/21/2020								0.33
9/25/2020							0.21	
11/10/2020					0.19	0.59		
11/11/2020							0.19	
12/15/2020					0.21	0.67		
12/16/2020							0.18	
1/19/2021					0.16	0.74		

Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	0.14 (J)	0.15 (J)						
10/26/2016		0.3						
11/7/2016	0.18 (J)							
1/13/2017	0.14 (J)							
1/27/2017		0.3						
5/25/2017		0.05 (J)						
6/3/2017	0.15 (J)							
8/11/2017		0.1 (J)						
10/2/2017	1.2							
11/15/2017	0.6	<0.1						
6/5/2018	0.19 (J)	0.078 (J)						
10/2/2018		0.078 (J)						
10/5/2018	0.23 (J)							
4/3/2019	0.14 (J)	0.089 (J)						
8/22/2019	0.2 (J)							
8/23/2019		0.11 (J)						
10/21/2019	0.18 (J)	0.073 (J)						
1/3/2020					0.36			
3/24/2020		<0.1						
3/25/2020	0.095 (J)				0.34			
3/27/2020						0.29		
5/22/2020			0.1 (J)	0.46				
6/15/2020							0.21	
6/16/2020			0.12	0.44				
8/25/2020			0.16	0.52				
8/26/2020	0.16				0.33	0.32	0.24	
8/27/2020		<0.1						
9/18/2020				0.43				
9/21/2020			0.11					
9/25/2020								0.68
9/28/2020	0.15	<0.1			0.33	0.33	0.25	
11/11/2020				0.45				1
11/12/2020			0.12					
12/16/2020			0.2	0.49				
1/20/2021			0.13	0.44				
3/12/2021			0.12	0.46				0.88
3/15/2021	0.16	<0.1			0.3	0.33	0.26	

Time Series

Constituent: Lead (mg/L) Analysis Run 5/14/2021 7:55 AM

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.001		<0.001	<0.001				
7/11/2016	<0.001		<0.001					
7/12/2016				0.0001 (J)				
8/30/2016	<0.001	<0.001	<0.001	<0.001				
8/31/2016								<0.001
10/19/2016	<0.001		<0.001	<0.001				
10/20/2016		<0.001						
10/26/2016								0.0002 (J)
12/6/2016	<0.001		<0.001	<0.001				
1/24/2017	<0.001		<0.001	<0.001				
1/25/2017		<0.001						
1/27/2017								<0.001
3/21/2017	<0.001		6E-05 (J)	0.0001 (J)				
5/22/2017	<0.001		9E-05 (J)	<0.001				
5/25/2017		<0.001						9E-05 (J)
8/11/2017		0.0001 (J)						
10/2/2017								8E-05 (J)
11/15/2017		0.0002 (J)						<0.001
4/2/2018	<0.001		<0.001					
4/3/2018				<0.001				
6/5/2018		<0.001						<0.001
10/2/2018		<0.001						<0.001
3/12/2019	<0.001		<0.001	<0.001				
4/1/2019				<0.001				
4/2/2019	<0.001		<0.001					
8/22/2019		<0.001						<0.001
9/23/2019	7.8E-05 (J)		9.2E-05 (J)	<0.001				
10/21/2019		9.7E-05 (J)						
10/22/2019								<0.001
3/2/2020	4.8E-05 (J)		9.5E-05 (J)	<0.001				
3/24/2020		0.00012 (J)						
3/25/2020	<0.001		0.00011 (J)	<0.001				<0.001
8/24/2020		7.7E-05 (J)						
8/25/2020			8.5E-05 (J)	<0.001				
8/26/2020								<0.001
8/28/2020	7E-05 (J)							
9/15/2020	<0.001	4.3E-05 (J)	8E-05 (J)	4.2E-05 (J)				
9/16/2020					5E-05 (J)	0.00021 (J)		
9/21/2020								<0.001
9/25/2020							<0.001	
11/10/2020					6.9E-05 (J)	0.0002 (J)		
11/11/2020							4E-05 (J)	
12/15/2020					8.2E-05 (J)	0.00011 (J)		
12/16/2020							5.8E-05 (J)	
1/19/2021					4.4E-05 (J)	<0.001		
1/20/2021							8.2E-05 (J)	
3/10/2021	<0.001					<0.001		
3/11/2021		9.3E-05 (J)	7.6E-05 (J)	<0.001	9.4E-05 (J)			
3/12/2021							5.5E-05 (J)	<0.001

Time Series

Constituent: Lead (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	<0.001	<0.001						
10/26/2016		<0.001						
11/7/2016	<0.001							
1/13/2017	<0.001							
1/27/2017		<0.001						
5/25/2017		<0.001						
6/3/2017	7E-05 (J)							
8/11/2017		8E-05 (J)						
10/2/2017	<0.001							
11/15/2017	<0.001	<0.001						
6/5/2018	0.00036 (J)	<0.001						
10/2/2018		<0.001						
10/5/2018	<0.001							
8/22/2019	<0.001							
8/23/2019		4.9E-05 (J)						
10/21/2019	<0.001	4.9E-05 (J)						
3/24/2020		9.4E-05 (J)						
3/25/2020	<0.001				<0.001			
5/22/2020			0.00014 (J)	<0.001				
6/15/2020							<0.001	
6/16/2020			0.00013 (J)	<0.001				
8/25/2020			<0.001	4.5E-05 (J)				
8/26/2020	<0.001				<0.001	<0.001	<0.001	
8/27/2020		<0.001						
9/18/2020				<0.001				
9/21/2020			<0.001					
9/25/2020								4.8E-05 (J)
9/28/2020	<0.001	7.5E-05 (J)			<0.001	<0.001	<0.001	
11/11/2020				4.2E-05 (J)				
11/12/2020			4.7E-05 (J)					
12/16/2020			<0.001	<0.001				
1/20/2021			9.2E-05 (J)	<0.001				
3/12/2021			4.4E-05 (J)	4.6E-05 (J)				<0.001
3/15/2021	0.00015 (J)	<0.001			<0.001	<0.001	<0.001	

Time Series

Constituent: Lithium (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.03		<0.03	<0.03				
7/11/2016	<0.03		0.0014 (J)					
7/12/2016				0.0024 (J)				
8/30/2016	<0.03	<0.03	<0.03	0.0025 (J)				
8/31/2016								0.0333 (J)
10/19/2016	<0.03		<0.03	0.003 (J)				
10/20/2016		<0.03						
10/26/2016								0.0352 (J)
12/6/2016	<0.03		<0.03	0.0033 (J)				
1/24/2017	<0.03		<0.03	0.003 (J)				
1/25/2017		<0.03						
1/27/2017								0.0329 (J)
3/21/2017	<0.03		0.0012 (J)	0.0034 (J)				
5/22/2017	<0.03		<0.03	0.003 (J)				
5/25/2017		<0.03						0.0347 (J)
8/11/2017		<0.03						
10/2/2017								0.0337 (J)
11/15/2017		<0.03						0.0347 (J)
4/2/2018	<0.03		0.0015 (J)					
4/3/2018				0.003 (J)				
6/4/2018	0.001 (J)		0.0016 (J)	0.0027 (J)				
6/5/2018		<0.03						0.033 (J)
10/1/2018	0.00099 (J)		0.0013 (J)	0.0032 (J)				
10/2/2018		<0.03						0.031 (J)
3/12/2019	0.001 (J)		0.0018 (J)	0.0032 (J)				
4/1/2019				0.0032 (J)				
4/2/2019	0.001 (J)		0.0018 (J)					
8/22/2019		<0.03						0.029 (J)
9/23/2019	0.0011 (J)		0.0016 (J)	0.0029 (J)				
10/21/2019		<0.03						
10/22/2019								0.03 (J)
3/2/2020	0.0012 (J)		0.0017 (J)	0.0037 (J)				
3/24/2020		<0.03						
3/25/2020	0.00083 (J)		0.0017 (J)	0.0035 (J)				0.024 (J)
8/24/2020		<0.03						
8/25/2020			0.0015 (J)	0.0027 (J)				
8/26/2020								0.023 (J)
8/28/2020	0.00087 (J)							
9/15/2020	0.00087 (J)	<0.03	0.0015 (J)	0.0026 (J)				
9/16/2020					0.0018 (J)	0.014 (J)		
9/21/2020								0.023 (J)
9/25/2020							0.0049 (J)	
11/10/2020					0.0013 (J)	0.025 (J)		
11/11/2020							0.0032 (J)	
12/15/2020					0.0019 (J)	0.028 (J)		
12/16/2020							0.0045 (J)	
1/19/2021					0.0025 (J)	<0.03		
1/20/2021							0.0025 (J)	
3/10/2021	0.0009 (J)					0.03		
3/11/2021		<0.03	0.0011 (J)	0.0035 (J)	0.0022 (J)			
3/12/2021							0.005 (J)	0.023 (J)

Time Series

Constituent: Lithium (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	0.0077 (J)	<0.03						
10/26/2016		<0.03						
11/7/2016	0.0089 (J)							
1/13/2017	0.0091 (J)							
1/27/2017		<0.03						
5/25/2017		0.0011 (J)						
6/3/2017	0.0104 (J)							
8/11/2017		<0.03						
10/2/2017	0.0095 (J)							
11/15/2017	0.0086 (J)	<0.03						
6/5/2018	0.0092 (J)	0.0012 (J)						
10/2/2018		0.0012 (J)						
10/5/2018	0.0091 (J)							
8/22/2019	0.0084 (J)							
8/23/2019		0.0011 (J)						
10/21/2019	0.009 (J)	0.0011 (J)						
3/24/2020		0.0012 (J)						
3/25/2020	0.0066 (J)				0.034			
3/27/2020						<0.03		
5/22/2020			0.0052 (J)	0.0046 (J)				
6/15/2020							0.028 (J)	
6/16/2020			0.0053 (J)	0.0045 (J)				
8/25/2020			0.0037 (J)	0.0037 (J)				
8/26/2020	0.0071 (J)				0.031	0.031	0.027 (J)	
8/27/2020		0.00091 (J)						
9/18/2020				0.0035 (J)				
9/21/2020			0.0038 (J)					
9/25/2020								0.015 (J)
9/28/2020	0.0076 (J)	0.0011 (J)			0.032	0.034	0.028 (J)	
11/11/2020				0.0032 (J)				
11/12/2020			0.0038 (J)					
12/16/2020			0.0055 (J)	0.0029 (J)				
1/20/2021			0.0046 (J)	0.0038 (J)				
3/12/2021			0.0039 (J)	0.0038 (J)				0.0084 (J)
3/15/2021	0.0077 (J)	0.001 (J)			0.033	0.032	0.03 (J)	

Time Series

Constituent: Mercury (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.0005		<0.0005	<0.0005				
7/11/2016	<0.0005		<0.0005					
7/12/2016				<0.0005				
8/30/2016	4E-05 (J)	4.3E-05 (J)	4E-05 (J)	<0.0005				
8/31/2016								4E-05 (J)
10/19/2016	<0.0005		<0.0005	<0.0005				
10/20/2016		<0.0005						
10/26/2016								<0.0005
12/6/2016	<0.0005		<0.0005	<0.0005				
1/24/2017	<0.0005		<0.0005	<0.0005				
1/25/2017		4E-05 (J)						
1/27/2017								<0.0005
3/21/2017	<0.0005		<0.0005	<0.0005				
5/22/2017	<0.0005		<0.0005	<0.0005				
5/25/2017		7E-05 (J)						7E-05 (J)
8/11/2017		<0.0005						
10/2/2017								<0.0005
11/15/2017		<0.0005						<0.0005
4/2/2018	<0.0005		<0.0005					
4/3/2018				<0.0005				
6/5/2018		<0.0005						<0.0005
10/2/2018		<0.0005						<0.0005
3/12/2019	<0.0005		<0.0005	<0.0005				
8/22/2019		<0.0005						<0.0005
3/2/2020	<0.0005		<0.0005	<0.0005				
8/24/2020		<0.0005						
8/25/2020			<0.0005	<0.0005				
8/26/2020								<0.0005
8/28/2020	<0.0005							
9/16/2020					<0.0005	<0.0005		
9/25/2020							<0.0005	
11/10/2020					<0.0005	<0.0005		
11/11/2020							<0.0005	
12/15/2020					<0.0005	<0.0005		
12/16/2020							<0.0005	
1/19/2021					<0.0005	<0.0005		
1/20/2021							<0.0005	

Time Series

Constituent: Mercury (mg/L) Analysis Run 5/14/2021 7:55 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41
8/31/2016	<0.0005	<0.0005					
10/26/2016		<0.0005					
11/7/2016	<0.0005						
1/13/2017	<0.0005						
1/27/2017		<0.0005					
5/25/2017		5.1E-05 (J)					
6/3/2017	<0.0005						
8/11/2017		<0.0005					
10/2/2017	<0.0005						
11/15/2017	<0.0005	<0.0005					
6/5/2018	<0.0005	<0.0005					
10/2/2018		<0.0005					
10/5/2018	<0.0005						
8/22/2019	<0.0005						
8/23/2019		<0.0005					
5/22/2020			<0.0005	<0.0005			
6/16/2020			<0.0005	<0.0005			
8/25/2020			<0.0005	<0.0005			
8/26/2020	<0.0005				<0.0005	<0.0005	<0.0005
8/27/2020		<0.0005					
9/18/2020				<0.0005			
9/21/2020			<0.0005				
11/11/2020				<0.0005			
11/12/2020			<0.0005				
12/16/2020			<0.0005	<0.0005			
1/20/2021			<0.0005	<0.0005			

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/14/2021 7:55 AM

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.01		<0.01	<0.01				
7/11/2016	<0.01		<0.01					
7/12/2016				<0.01				
8/30/2016	<0.01	0.0026 (J)	<0.01	<0.01				
8/31/2016								0.0176
10/19/2016	<0.01		<0.01	<0.01				
10/20/2016		0.005 (J)						
10/26/2016								0.0187
12/6/2016	<0.01		<0.01	<0.01				
1/24/2017	<0.01		<0.01	<0.01				
1/25/2017		0.0054 (J)						
1/27/2017								0.0214
3/21/2017	<0.01		<0.01	<0.01				
5/22/2017	<0.01		<0.01	<0.01				
5/25/2017		0.0018 (J)						0.0231
8/11/2017		0.0029 (J)						
10/2/2017								0.0259
11/15/2017		0.0018 (J)						0.0281
4/2/2018	<0.01		<0.01					
4/3/2018				<0.01				
6/4/2018	<0.01		<0.01	<0.01				
6/5/2018		0.0028 (J)						0.033
10/1/2018	<0.01		<0.01	<0.01				
10/2/2018		<0.01						0.036
3/12/2019	<0.01		<0.01	<0.01				
4/1/2019				<0.01				
4/2/2019	<0.01		<0.01					
8/22/2019		0.003 (J)						0.039
9/23/2019	<0.01		<0.01	<0.01				
10/21/2019		0.0049 (J)						
10/22/2019								0.04
3/2/2020	<0.01		<0.01	<0.01				
3/24/2020		0.0091 (J)						
3/25/2020	<0.01		<0.01	<0.01				0.034
6/16/2020	<0.01			<0.01				
8/24/2020		0.0031 (J)						
8/25/2020			<0.01	<0.01				
8/26/2020								0.05
8/28/2020	<0.01							
9/15/2020	<0.01	0.0045 (J)	<0.01	<0.01				
9/16/2020					0.0044 (J)	0.0019 (J)		
9/21/2020								0.043
9/25/2020							0.0014 (J)	
11/10/2020					0.0072 (J)	0.0018 (J)		
11/11/2020							0.0049 (J)	
12/15/2020					0.0044 (J)	0.0019 (J)		
12/16/2020							0.0024 (J)	
1/19/2021					0.0038 (J)	<0.01		
1/20/2021							0.0063 (J)	
3/10/2021	<0.01					0.0019 (J)		
3/11/2021		0.0014 (J)	<0.01	<0.01	0.0064 (J)			
3/12/2021							0.0019 (J)	0.033

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/14/2021 7:55 AM

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	<0.01	<0.01						
10/26/2016		<0.01						
11/7/2016	<0.01							
1/13/2017	<0.01							
1/27/2017		<0.01						
5/25/2017		0.0009 (J)						
6/3/2017	<0.01							
8/11/2017		0.0013 (J)						
10/2/2017	<0.01							
11/15/2017	<0.01	0.0012 (J)						
6/5/2018	<0.01	<0.01						
10/2/2018		<0.01						
10/5/2018	<0.01							
8/22/2019	<0.01							
8/23/2019		0.0014 (J)						
10/21/2019	<0.01	0.0013 (J)						
1/3/2020					0.06			
1/22/2020					0.059			
3/24/2020		0.001 (J)						
3/25/2020	<0.01				0.062			
3/27/2020						0.012		
4/24/2020						0.062		
5/22/2020			<0.01	<0.01				
6/15/2020							0.035	
6/16/2020			<0.01	<0.01				
8/25/2020			0.00099 (J)	<0.01				
8/26/2020	<0.01				0.065	0.064	0.039	
8/27/2020		0.00091 (J)						
9/18/2020				<0.01				
9/21/2020			<0.01					
9/25/2020								0.027
9/28/2020	<0.01	0.0009 (J)			0.062	0.062	0.036	
11/11/2020				<0.01				0.015
11/12/2020			0.0017 (J)					
12/16/2020			0.014	<0.01				
1/20/2021			0.0013 (J)	<0.01				
3/12/2021			0.0012 (J)	<0.01				0.0033 (J)
3/15/2021	<0.01	0.00092 (J)			0.061	0.062	0.046	

Time Series

Constituent: pH (s.u.) Analysis Run 5/14/2021 7:55 AM

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	7.27		5.81	7.45				
7/11/2016	7.06		5.68					
7/12/2016				7.32				
8/30/2016	7.28	6.75	5.63	7.43				
8/31/2016								6.73
10/19/2016	7.02		5.46	7.03				
10/20/2016		6.73						
10/27/2016								6.77
12/6/2016	7.09		5.38	7.08				
1/24/2017	7.2		5.37	7.39				
1/25/2017		6.88						
1/27/2017								6.74
3/21/2017	7.01		4.9	6.83				
5/22/2017	7.11		5.2	7.02				
5/25/2017		6.55						6.99
8/11/2017		6.56						
10/2/2017								7.66
10/3/2017	7.21		5.3	7.47				
11/15/2017		6.47						6.71
4/2/2018	7.1		5.4					
4/3/2018				7.38				
6/4/2018	7.06		5.27	7.38				
6/5/2018		6.66						6.83
10/1/2018	7.09		5.31	7.13				
10/2/2018		6.44						6.83
3/12/2019	7.03		5.42	7.29				
4/1/2019				7.16				
4/2/2019	6.86	6.57	5.41					6.87
8/22/2019		6.51						6.79
9/23/2019	7.02		5.33	7.3				
10/21/2019		6.69						
10/22/2019								6.74
3/2/2020	7.1		5.43	7.12				
3/24/2020		7.08						
3/25/2020	6.95		5.36	7.4				6.8
6/15/2020								6.8
6/16/2020	6.97			7.31				
8/24/2020		6.54						
8/25/2020			5.17	7.14				
8/26/2020								6.96
8/28/2020	7.02							
9/15/2020	7.15	6.68	5.22	7.29				
9/16/2020					7.52	7.83		
9/21/2020								6.98
9/25/2020							7.57	
11/10/2020					7.27	7.84		
11/11/2020							7.4	
12/15/2020					7.39	7.87		
12/16/2020							7.39	
1/19/2021					7.39	7.86		
1/20/2021							7.47	
3/10/2021	6.95					7.92		

Time Series

Constituent: pH (s.u.) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	6.62	6.99						
10/27/2016		7.06						
11/7/2016	6.71							
1/13/2017	6.57							
1/27/2017		7.13						
5/25/2017		7.1						
6/3/2017	6.71							
8/11/2017		7.02						
10/2/2017	7.65							
11/15/2017	6.69	7.04						
6/5/2018	6.79	7.17						
10/2/2018		7.08						
10/5/2018	6.71							
4/3/2019	6.73	7.14						
8/22/2019	6.77							
8/23/2019		7.02						
10/21/2019	6.74	7.05						
3/24/2020		7.18						
3/25/2020	6.91				6.86			
3/27/2020						6.82		
4/24/2020						6.82		
5/22/2020			6.43	7.22				
6/15/2020							6.88	
6/16/2020			6.29	6.92				
8/25/2020			6.36	6.78				
8/26/2020	6.73				6.75	6.74	6.74	
8/27/2020		7.15						
9/18/2020				6.97				
9/21/2020			6.22					
9/25/2020								7.56
9/28/2020	6.93	7.27			6.9	7	7	
11/11/2020				6.86				7.52
11/12/2020			6.13					
12/16/2020			6.61	6.93				
1/20/2021			6.23	6.99				
3/12/2021			6.18	7.05				7.7
3/15/2021	6.87	7.22			6.98	7.04	7.06	

Time Series

Constituent: Selenium (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.01		<0.01	<0.01				
7/11/2016	<0.01		<0.01					
7/12/2016				<0.01				
8/30/2016	<0.01	<0.01	<0.01	<0.01				
8/31/2016								<0.01
10/19/2016	<0.01		<0.01	<0.01				
10/20/2016		<0.01						
10/26/2016								<0.01
12/6/2016	<0.01		<0.01	<0.01				
1/24/2017	<0.01		<0.01	<0.01				
1/25/2017		<0.01						
1/27/2017								<0.01
3/21/2017	<0.01		<0.01	<0.01				
5/22/2017	<0.01		<0.01	<0.01				
5/25/2017		<0.01						<0.01
8/11/2017		<0.01						
10/2/2017								0.002 (J)
11/15/2017		<0.01						<0.01
4/2/2018	<0.01		<0.01					
4/3/2018				<0.01				
6/4/2018	<0.01		<0.01	<0.01				
6/5/2018		<0.01						<0.01
10/1/2018	<0.01		<0.01	<0.01				
10/2/2018		0.0015 (J)						<0.01
3/12/2019	<0.01		<0.01	<0.01				
4/1/2019				<0.01				
4/2/2019	<0.01		<0.01					
8/22/2019		<0.01						<0.01
9/23/2019	<0.01		<0.01	<0.01				
3/2/2020	<0.01		<0.01	<0.01				
3/25/2020	<0.01		<0.01	<0.01				
8/24/2020		<0.01						
8/25/2020			<0.01	<0.01				
8/26/2020								<0.01
8/28/2020	<0.01							
9/15/2020	<0.01		<0.01	<0.01				
9/16/2020					<0.01	<0.01		
9/25/2020							<0.01	
11/10/2020					<0.01	<0.01		
11/11/2020							<0.01	
12/15/2020					<0.01	<0.01		
12/16/2020							<0.01	
1/19/2021					<0.01	<0.01		
1/20/2021							<0.01	

Time Series

Constituent: Selenium (mg/L) Analysis Run 5/14/2021 7:55 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41
8/31/2016	<0.01	<0.01					
10/26/2016		<0.01					
11/7/2016	<0.01						
1/13/2017	0.0011 (J)						
1/27/2017		<0.01					
5/25/2017		<0.01					
6/3/2017	<0.01						
8/11/2017		<0.01					
10/2/2017	<0.01						
11/15/2017	<0.01	<0.01					
6/5/2018	<0.01	<0.01					
10/2/2018		0.0014 (J)					
10/5/2018	<0.01						
8/22/2019	<0.01						
8/23/2019		<0.01					
5/22/2020			<0.01	<0.01			
6/16/2020			<0.01	<0.01			
8/25/2020			<0.01	<0.01			
8/26/2020	<0.01				<0.01	<0.01	<0.01
8/27/2020		<0.01					
9/18/2020				<0.01			
9/21/2020			<0.01				
11/11/2020				<0.01			
11/12/2020			<0.01				
12/16/2020			<0.01	<0.01			
1/20/2021			<0.01	<0.01			

Time Series

Constituent: Sulfate (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	280	72						
10/26/2016		71						
11/7/2016	300							
1/13/2017	270							
1/27/2017		74						
5/25/2017		73						
6/3/2017	270							
8/11/2017		71						
10/2/2017	330							
11/15/2017	280	70						
6/5/2018	241	74						
10/2/2018		80.7						
10/5/2018	271							
4/3/2019	230	75.2						
6/17/2019	219							
6/18/2019		75.3						
10/21/2019	238	78.5						
1/3/2020					210			
3/24/2020		74.6						
3/25/2020	116				204			
3/27/2020						111		
5/22/2020			345	56.1				
6/15/2020							219	
6/16/2020			320	57.6				
8/25/2020			353	62.8				
9/18/2020				62.7				
9/21/2020			352					
9/25/2020								149
9/28/2020	182	86.2			245	239	154	
11/11/2020				62.3				167
11/12/2020			300					
12/16/2020			306	68.1				
1/20/2021			335	66.6				
3/12/2021			293	69.7				155
3/15/2021	177	74			236	234	225	

Time Series

Constituent: Thallium (mg/L) Analysis Run 5/14/2021 7:55 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	<0.001		<0.001	<0.001				
7/11/2016	<0.001		<0.001					
7/12/2016				<0.001				
8/30/2016	<0.001	<0.001	<0.001	<0.001				
8/31/2016								<0.001
10/19/2016	<0.001		<0.001	<0.001				
10/20/2016		<0.001						
10/26/2016								<0.001
12/6/2016	<0.001		<0.001	<0.001				
1/24/2017	<0.001		<0.001	<0.001				
1/25/2017		<0.001						
1/27/2017								<0.001
3/21/2017	<0.001		3E-05 (J)	<0.001				
5/22/2017	<0.001		<0.001	<0.001				
5/25/2017		<0.001						<0.001
8/11/2017		<0.001						
10/2/2017								<0.001
11/15/2017		<0.001						<0.001
4/2/2018	<0.001		<0.001					
4/3/2018				<0.001				
6/4/2018	<0.001		<0.001	<0.001				
6/5/2018		<0.001						<0.001
10/1/2018	<0.001		<0.001	<0.001				
10/2/2018		<0.001						<0.001
3/12/2019	<0.001		<0.001	<0.001				
4/1/2019				<0.001				
4/2/2019	<0.001		<0.001					
8/22/2019		<0.001						<0.001
9/23/2019	<0.001		<0.001	<0.001				
3/2/2020	<0.001		<0.001	<0.001				
3/25/2020	<0.001		<0.001	<0.001				
8/24/2020		<0.001						
8/25/2020			<0.001	<0.001				
8/26/2020								<0.001
8/28/2020	<0.001							
9/15/2020	<0.001		<0.001	<0.001				
9/16/2020					<0.001	<0.001		
9/25/2020							<0.001	
11/10/2020					<0.001	<0.001		
11/11/2020							<0.001	
12/15/2020					<0.001	<0.001		
12/16/2020							<0.001	
1/19/2021					<0.001	<0.001		
1/20/2021							<0.001	

Time Series

Constituent: Thallium (mg/L) Analysis Run 5/14/2021 7:55 AM
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41
8/31/2016	<0.001	<0.001					
10/26/2016		<0.001					
11/7/2016	<0.001						
1/13/2017	<0.001						
1/27/2017		<0.001					
5/25/2017		<0.001					
6/3/2017	<0.001						
8/11/2017		<0.001					
10/2/2017	<0.001						
11/15/2017	<0.001	<0.001					
6/5/2018	<0.001	<0.001					
10/2/2018		<0.001					
10/5/2018	<0.001						
8/22/2019	<0.001						
8/23/2019		<0.001					
5/22/2020			<0.001	<0.001			
6/16/2020			<0.001	<0.001			
8/25/2020			<0.001	<0.001			
8/26/2020	<0.001				<0.001	<0.001	<0.001
8/27/2020		<0.001					
9/18/2020				<0.001			
9/21/2020			<0.001				
11/11/2020				<0.001			
11/12/2020			<0.001				
12/16/2020			<0.001	<0.001			
1/20/2021			<0.001	<0.001			

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/14/2021 7:55 AM

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

	HGWA-1 (bg)	HGWA-122 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)	HGWC-120
5/19/2016	421		143	267				
7/11/2016	363		125					
7/12/2016				249				
8/30/2016	330	280	168	254				
8/31/2016								700
10/19/2016	380		176	357				
10/20/2016		265						
10/26/2016								795
12/6/2016	377		145	285				
1/24/2017	342		129	300				
1/25/2017		371						
1/27/2017								706
3/21/2017	340		103	288				
5/22/2017	338		92	263				
5/25/2017		237						669
8/11/2017		253						
10/2/2017								672
10/3/2017	343		127	300				
11/15/2017		261						721
6/4/2018	415		140	266				
6/5/2018		276						723
10/1/2018	354		135	291				
10/2/2018		256						703
4/1/2019				284				
4/2/2019	452	814 (o)	133					540
6/18/2019		233						
9/23/2019	442		129	268				
10/21/2019		296						
10/22/2019								693
3/24/2020		278						
3/25/2020	496		138	284				665
6/15/2020								685
6/16/2020	632			448				
9/15/2020	265	267	124	258				
9/16/2020					272	270		
9/21/2020								272
9/25/2020							263	
11/10/2020					307	287		
11/11/2020							276	
12/15/2020					289	295		
12/16/2020							294	
1/19/2021					270	278		
1/20/2021							289	
3/10/2021	348					289		
3/11/2021		206	169	267	279			
3/12/2021							260	584

Time Series

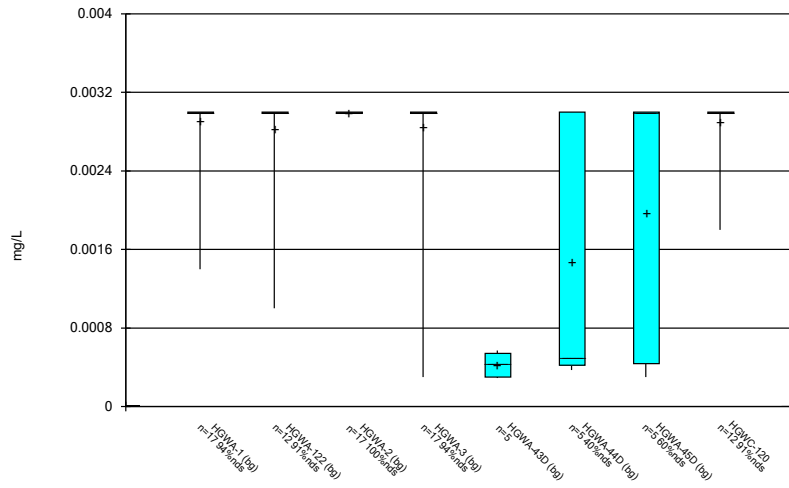
Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/14/2021 7:55 AM

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

	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41	MW-46D
8/31/2016	876	379						
10/26/2016		409						
11/7/2016	1000							
1/13/2017	827							
1/27/2017		370						
5/25/2017		351						
6/3/2017	846							
8/11/2017		322						
10/2/2017	884							
11/15/2017	838	350						
6/5/2018	823	360						
10/2/2018		363						
10/5/2018	813							
4/3/2019	785	369						
6/17/2019	751							
10/21/2019	771	357						
1/3/2020					645			
3/24/2020		355						
3/25/2020	521				641			
3/27/2020						482		
5/22/2020			809	496				
6/15/2020							674	
6/16/2020			665	508				
8/25/2020			772	505				
9/18/2020				452				
9/21/2020			956					
9/25/2020								449
9/28/2020	<10	176			272	272	392	
11/11/2020				468				472
11/12/2020			694					
12/16/2020			816	536				
1/20/2021			726	472				
3/12/2021			664	474				590
3/15/2021	614	340			630	628	582	

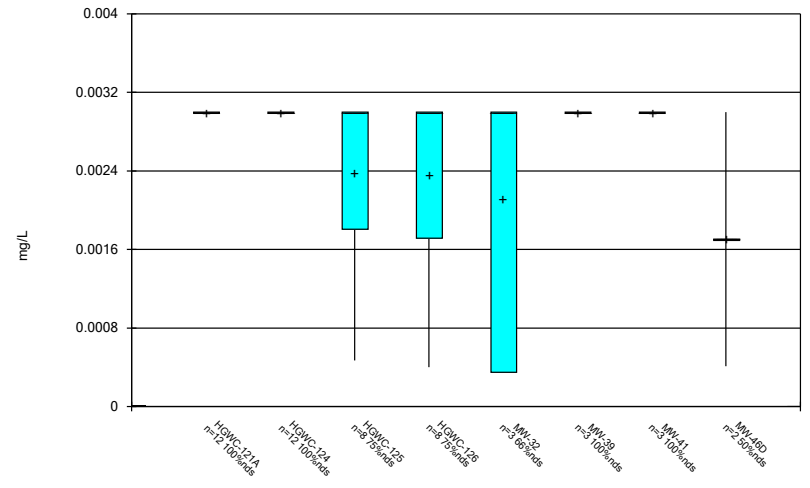
FIGURE B.

Box & Whiskers Plot



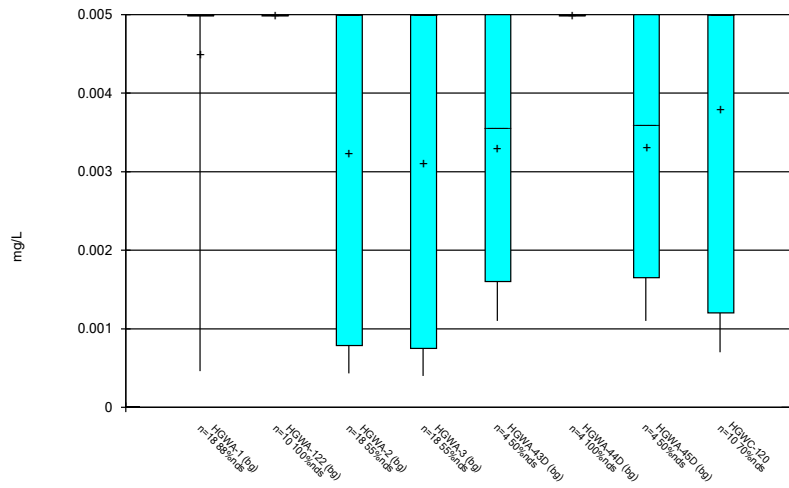
Constituent: Antimony Analysis Run 5/14/2021 7:58 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



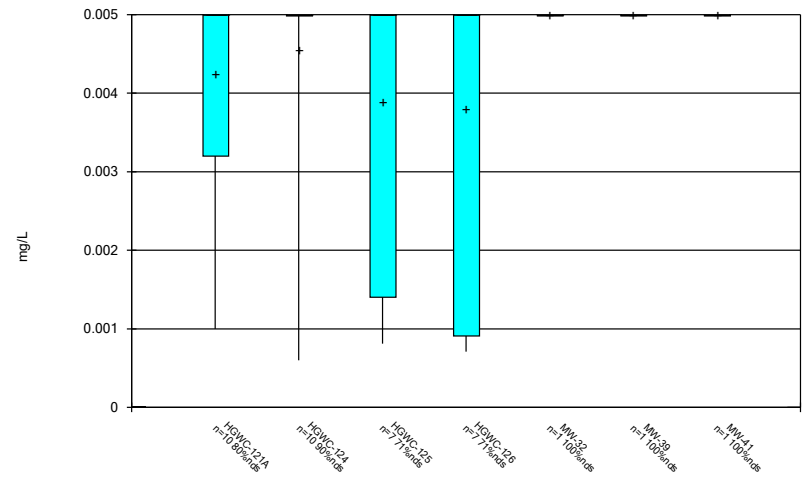
Constituent: Antimony Analysis Run 5/14/2021 7:58 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



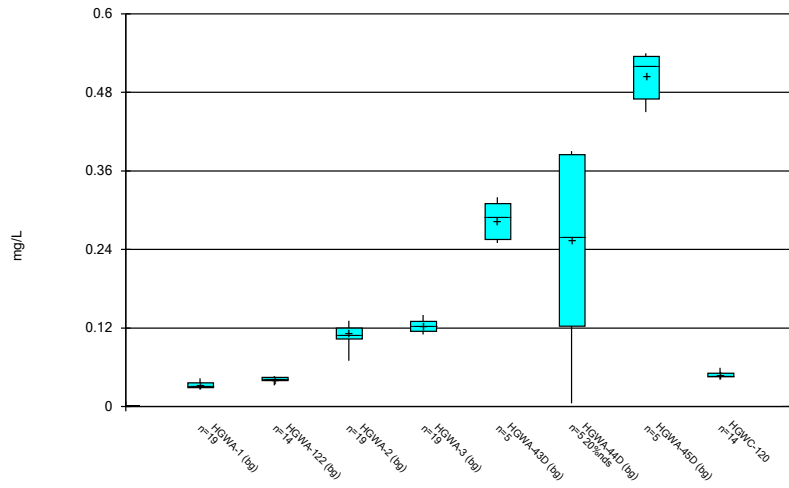
Constituent: Arsenic Analysis Run 5/14/2021 7:58 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



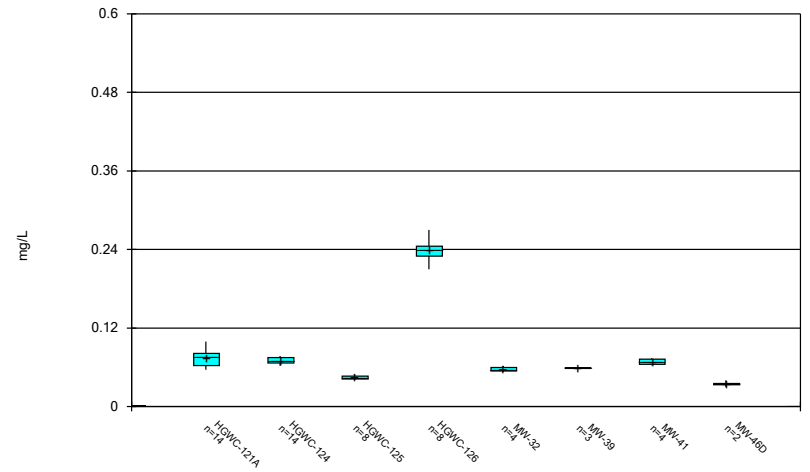
Constituent: Arsenic Analysis Run 5/14/2021 7:58 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



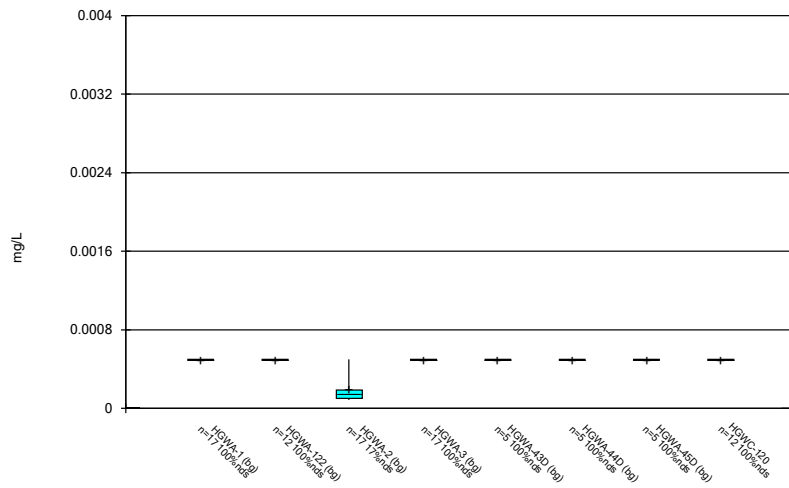
Constituent: Barium Analysis Run 5/14/2021 7:58 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



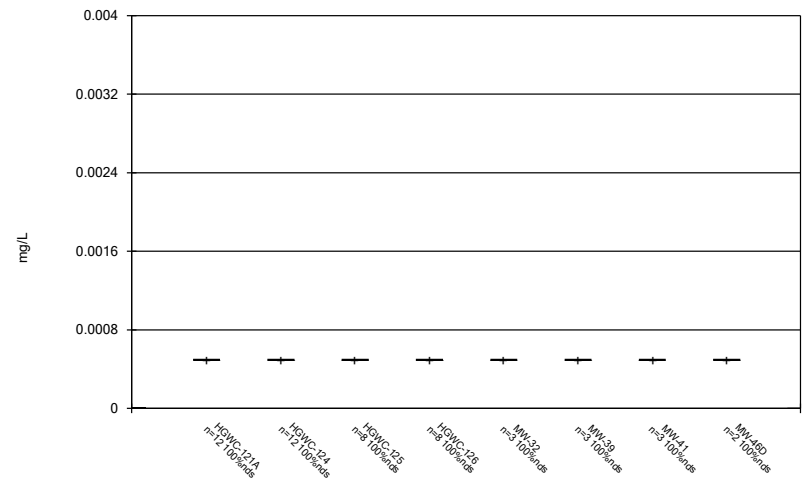
Constituent: Barium Analysis Run 5/14/2021 7:58 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



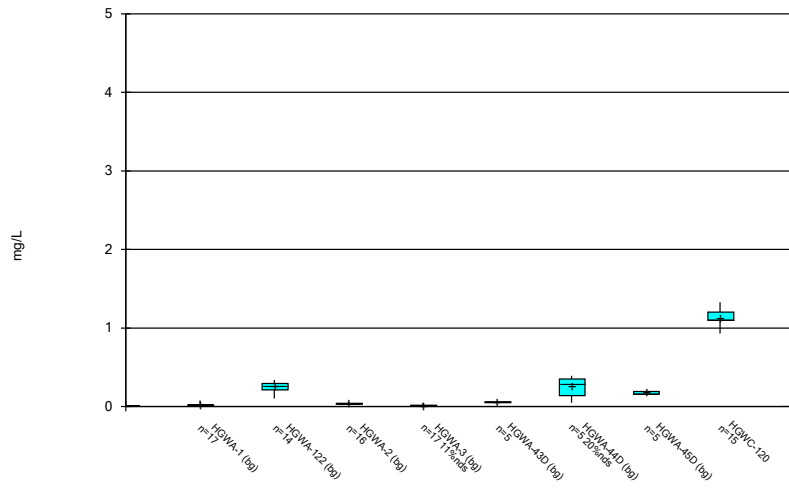
Constituent: Beryllium Analysis Run 5/14/2021 7:58 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



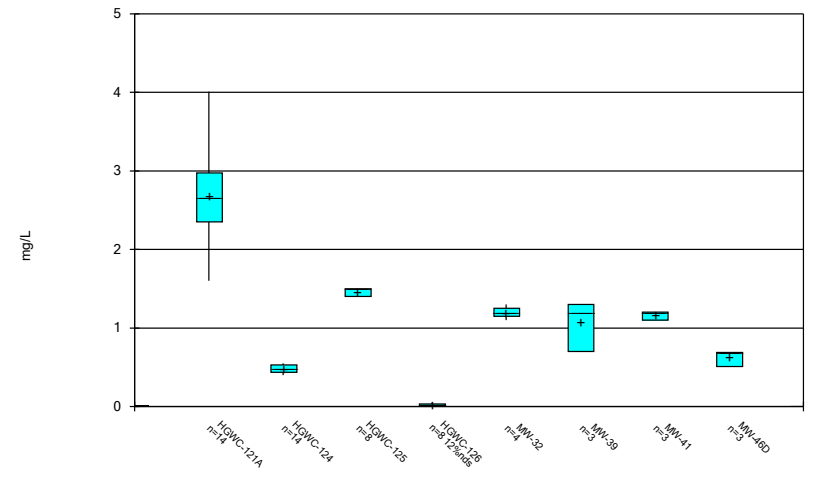
Constituent: Beryllium Analysis Run 5/14/2021 7:58 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



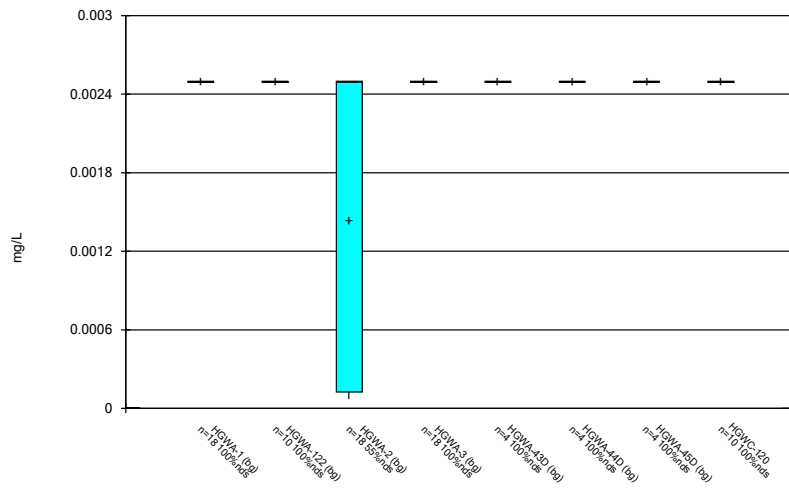
Constituent: Boron Analysis Run 5/14/2021 7:58 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



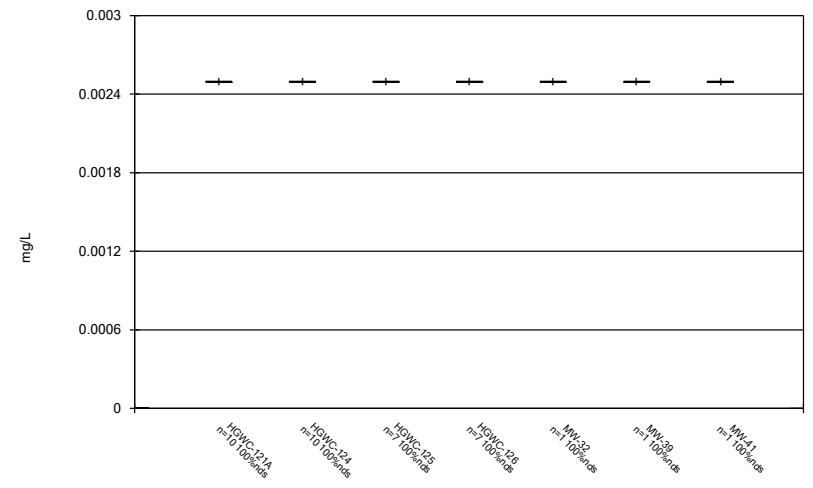
Constituent: Boron Analysis Run 5/14/2021 7:58 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



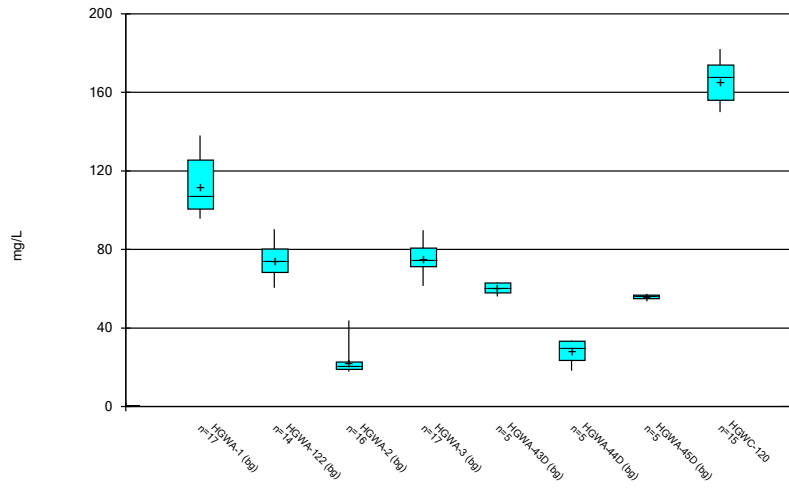
Constituent: Cadmium Analysis Run 5/14/2021 7:58 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



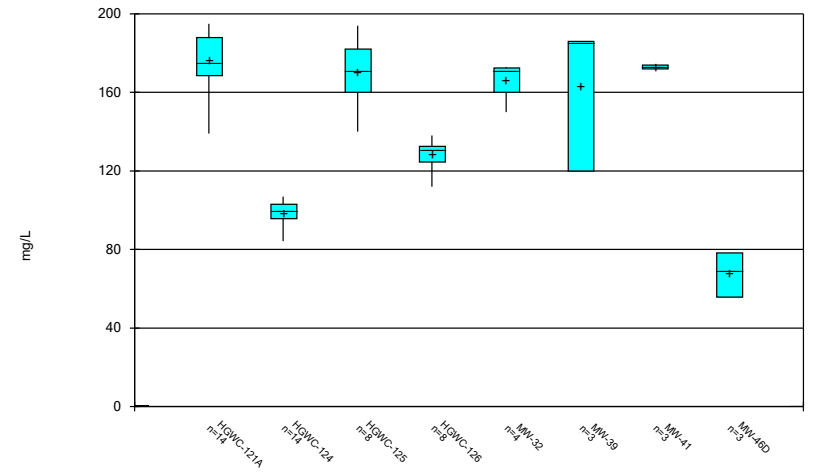
Constituent: Cadmium Analysis Run 5/14/2021 7:58 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



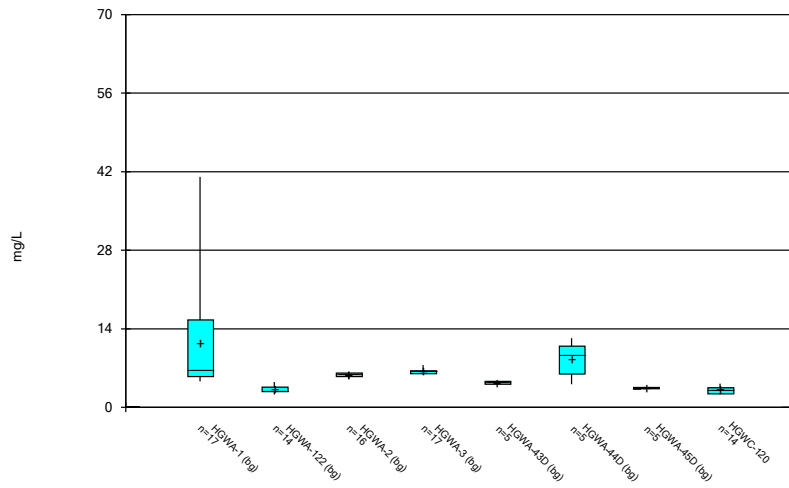
Constituent: Calcium Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



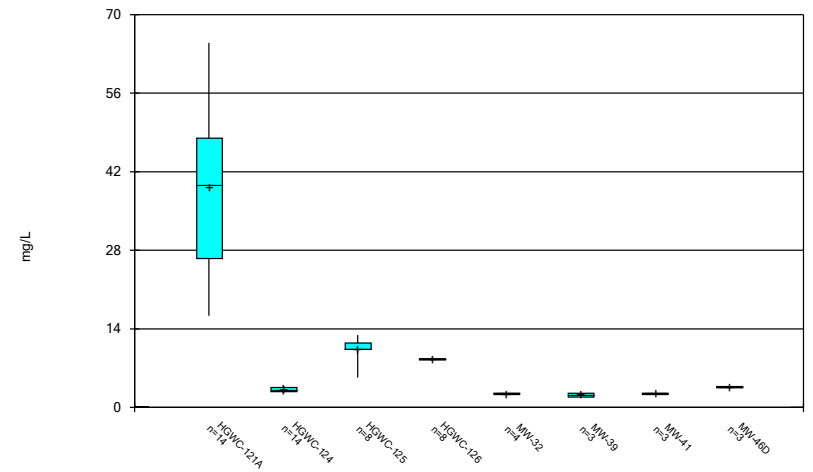
Constituent: Calcium Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



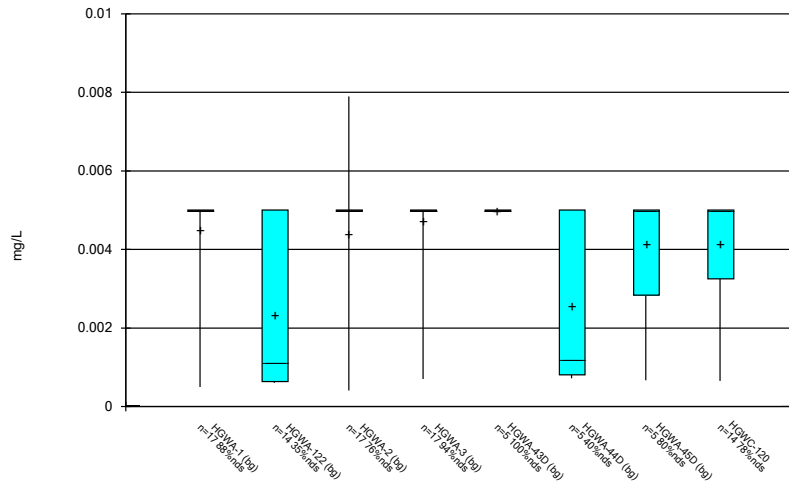
Constituent: Chloride Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



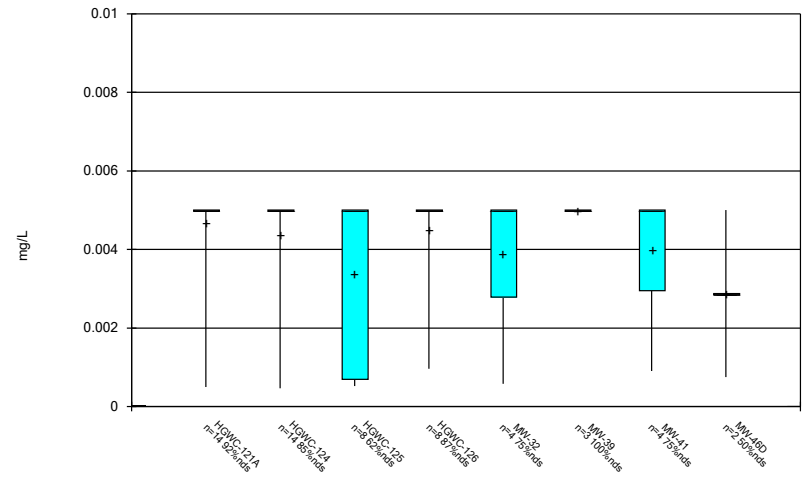
Constituent: Chloride Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



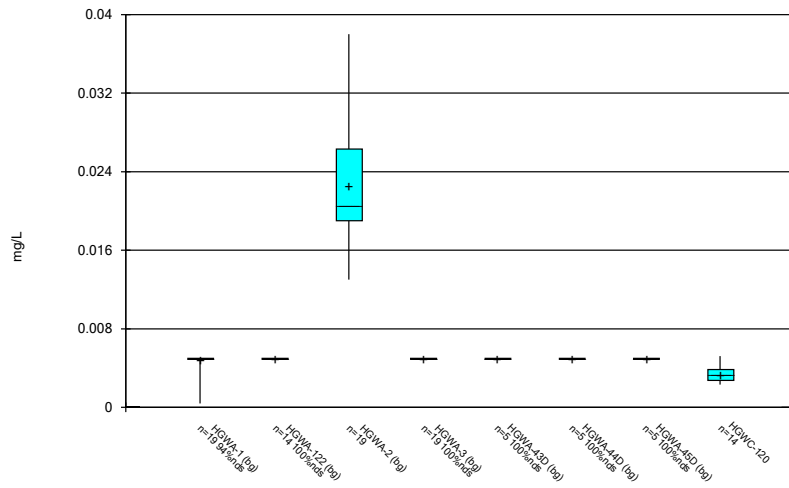
Constituent: Chromium Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



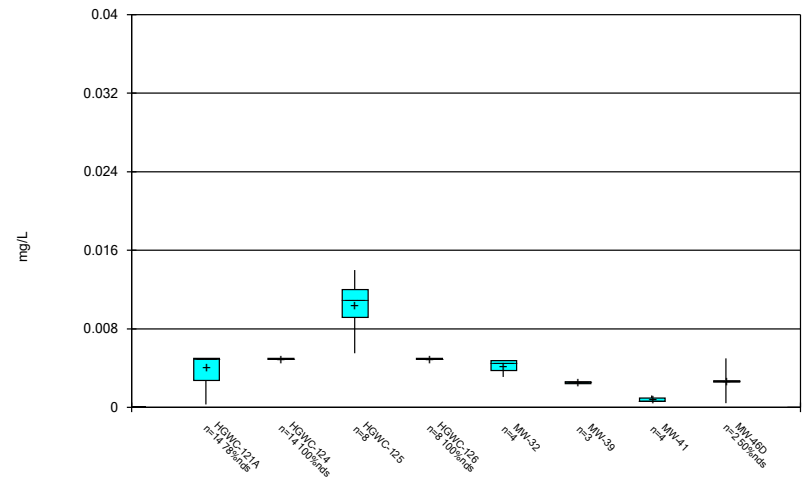
Constituent: Chromium Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



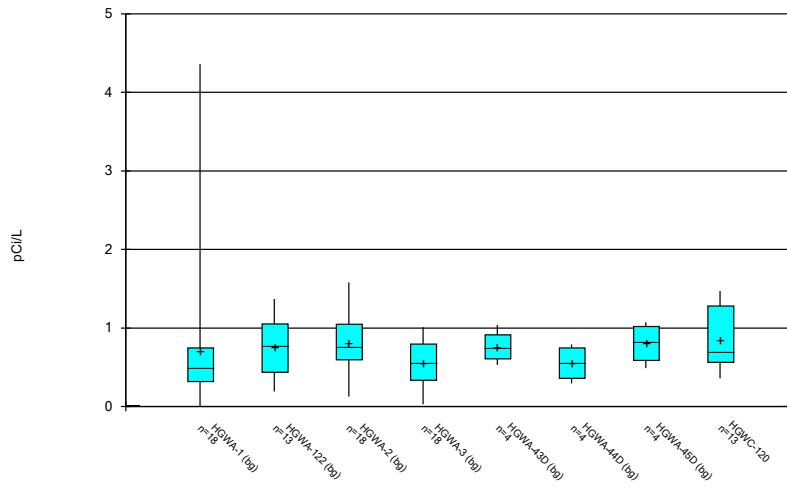
Constituent: Cobalt Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



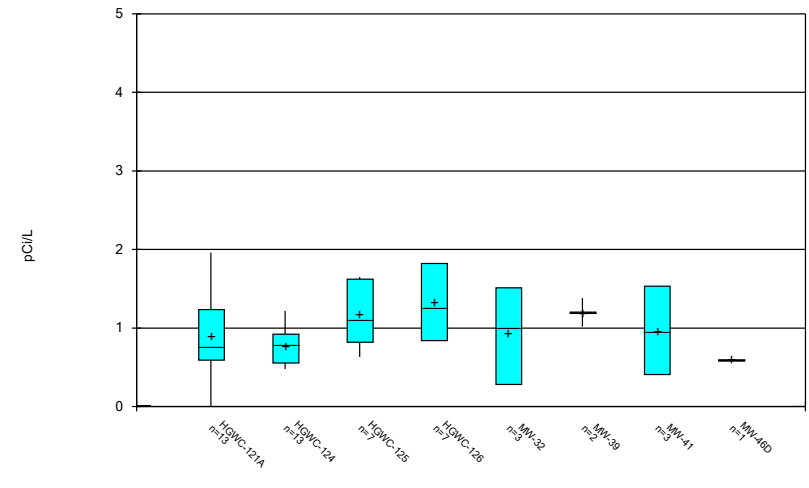
Constituent: Cobalt Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



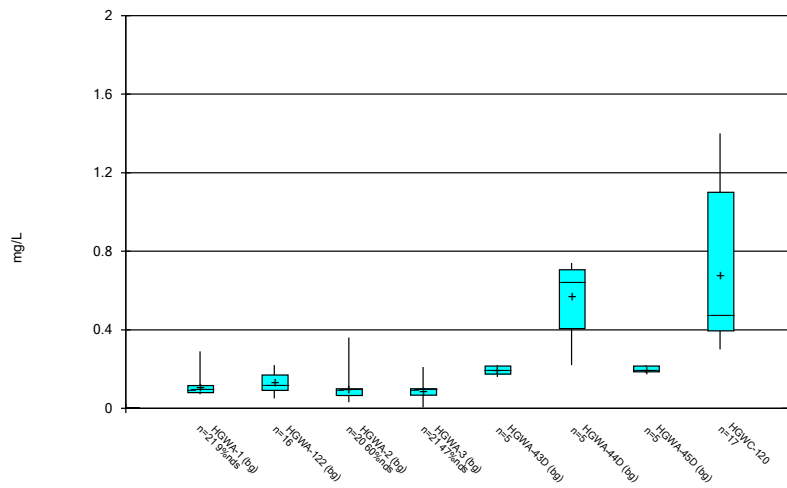
Constituent: Combined Radium 226 + 228 Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



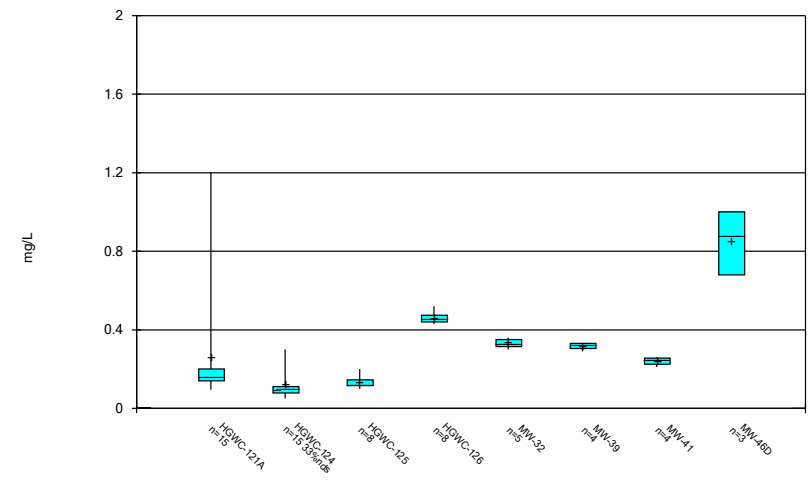
Constituent: Combined Radium 226 + 228 Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



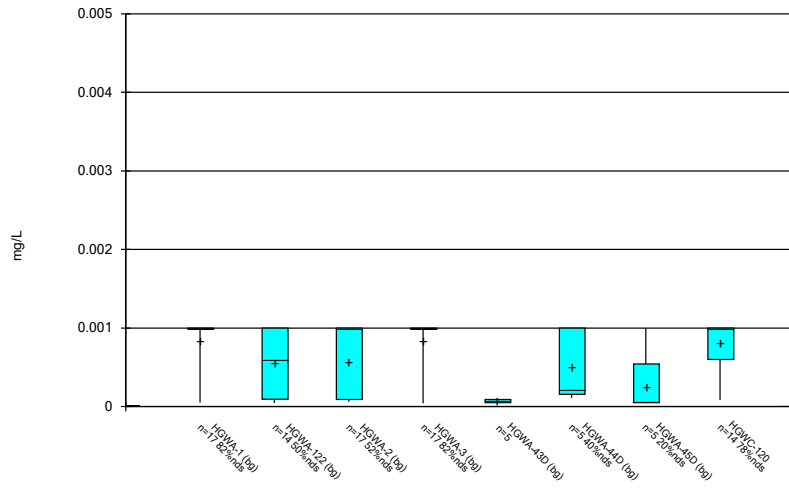
Constituent: Fluoride Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



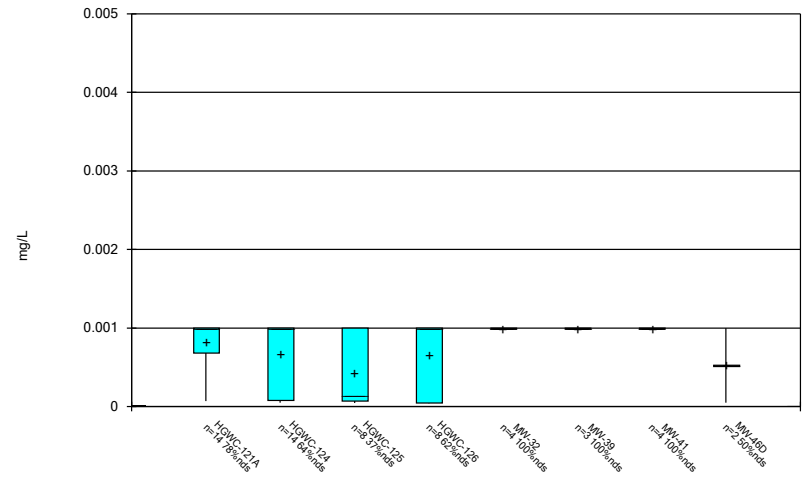
Constituent: Fluoride Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



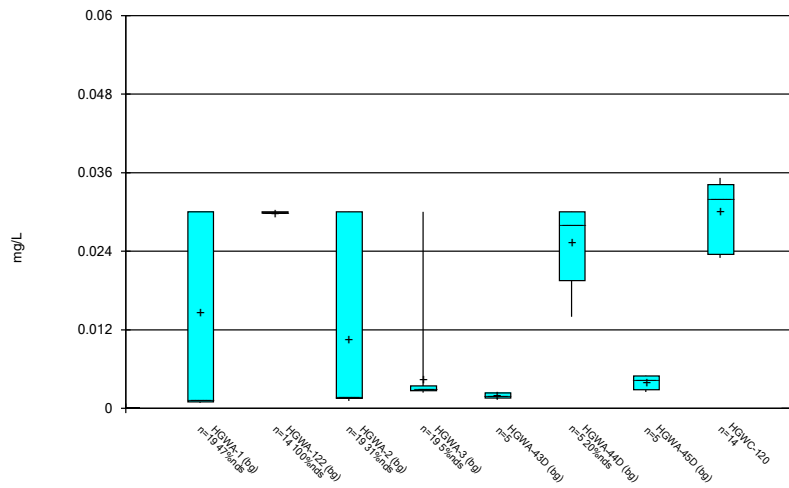
Constituent: Lead Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



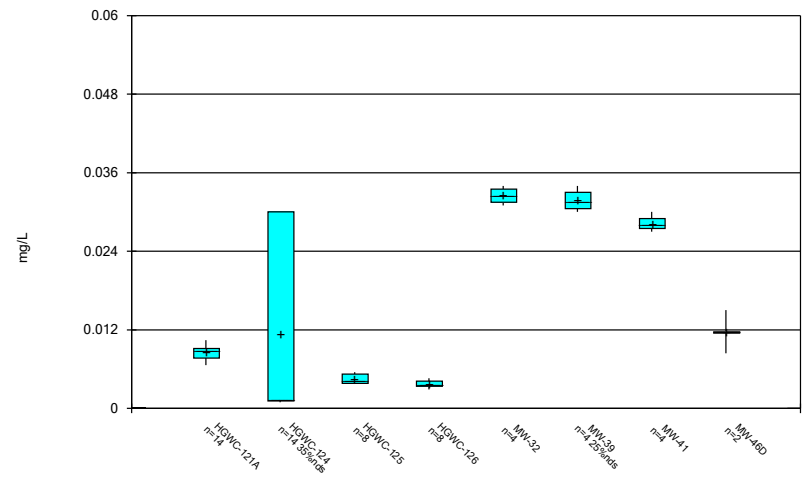
Constituent: Lead Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



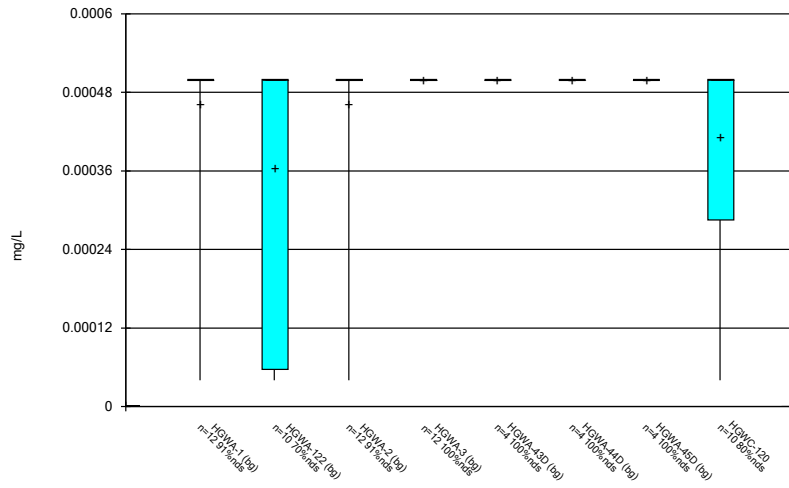
Constituent: Lithium Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



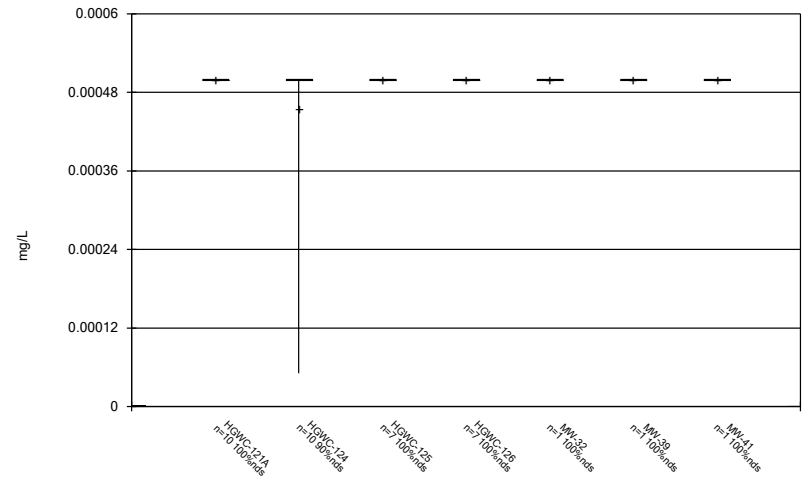
Constituent: Lithium Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



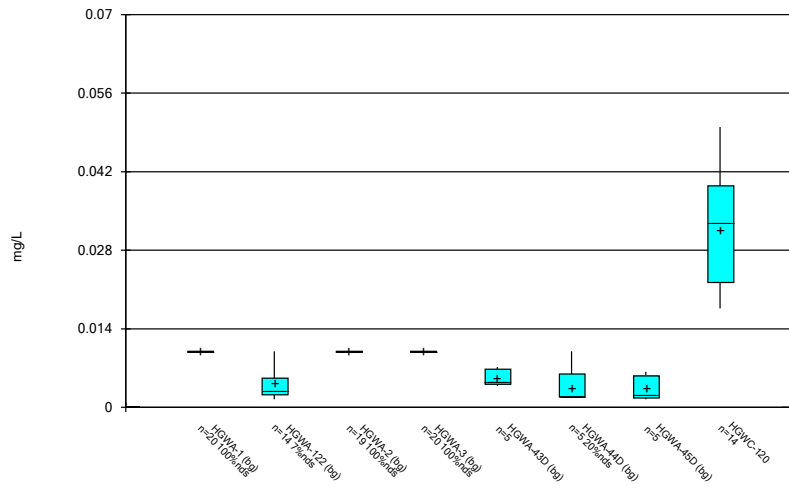
Constituent: Mercury Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



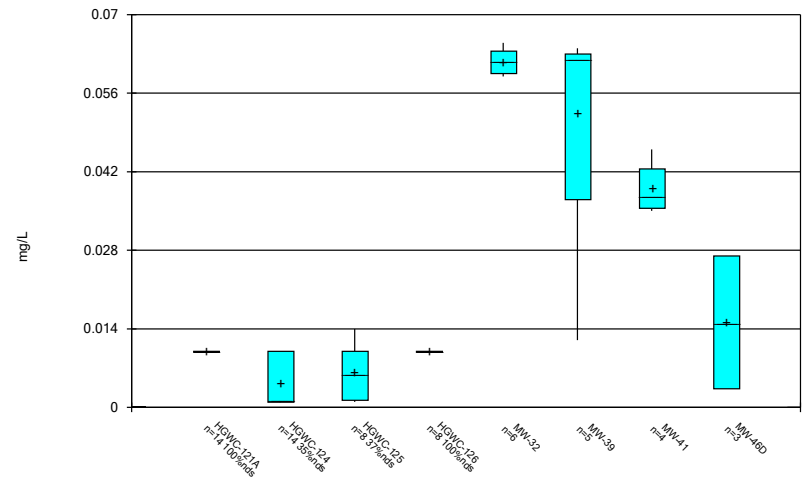
Constituent: Mercury Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



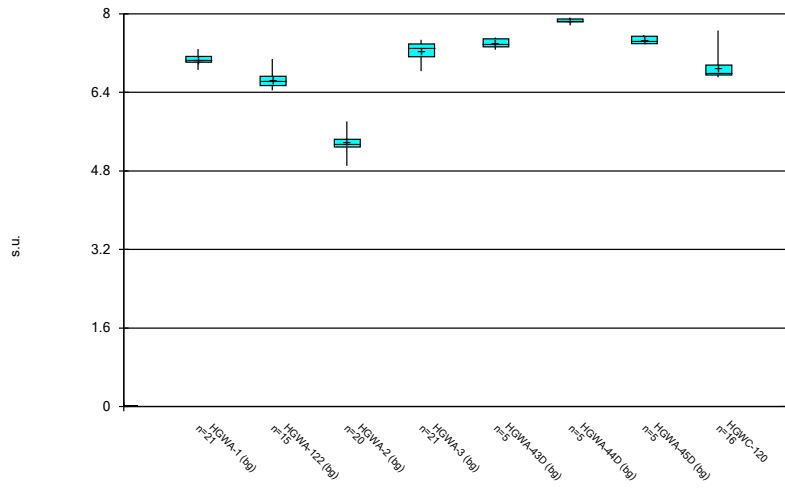
Constituent: Molybdenum Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



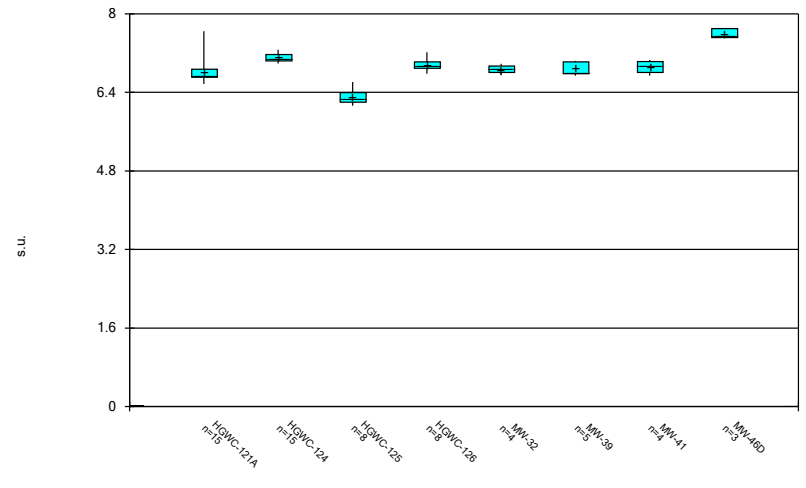
Constituent: Molybdenum Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



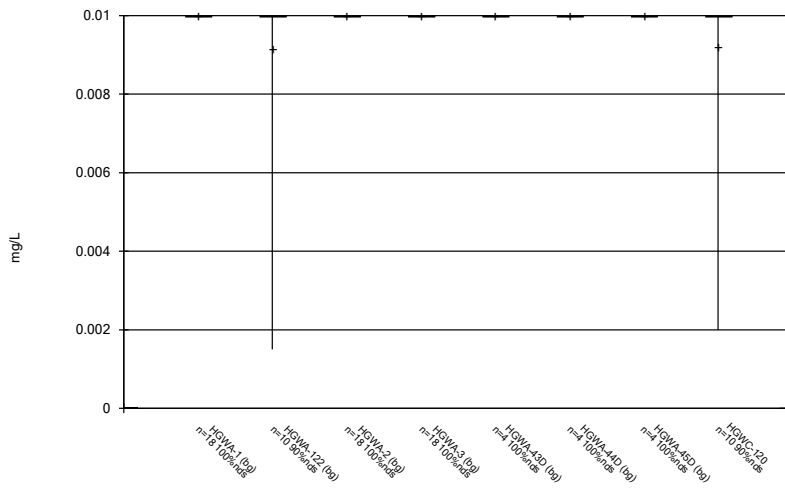
Constituent: pH Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



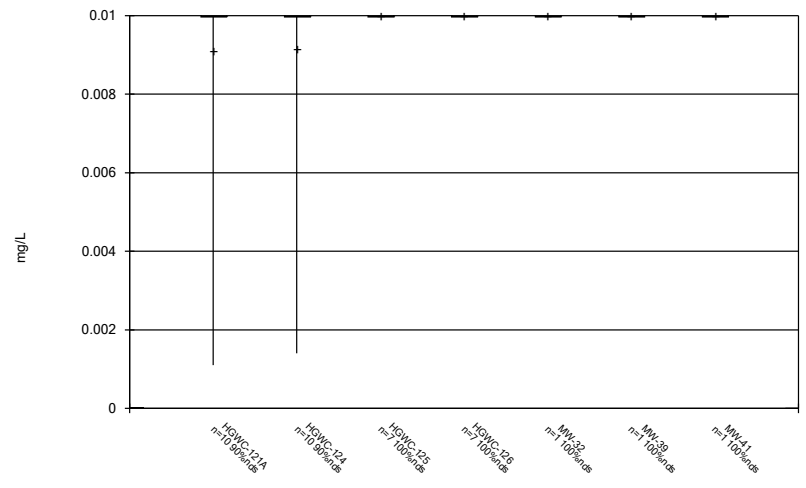
Constituent: pH Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



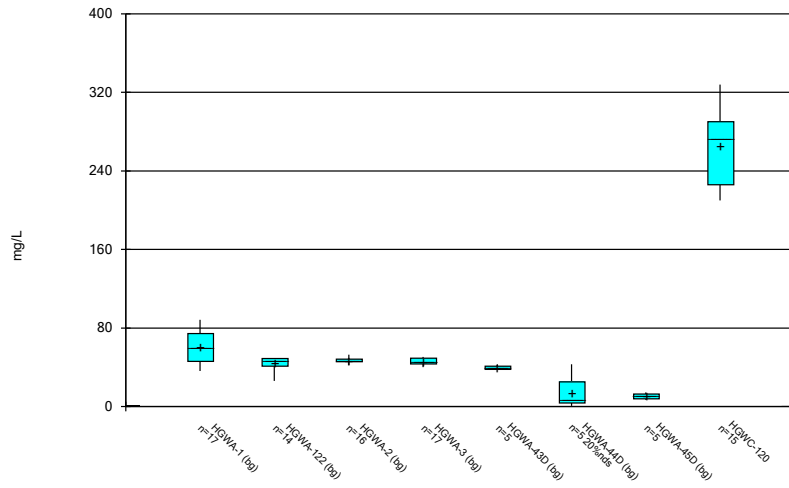
Constituent: Selenium Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



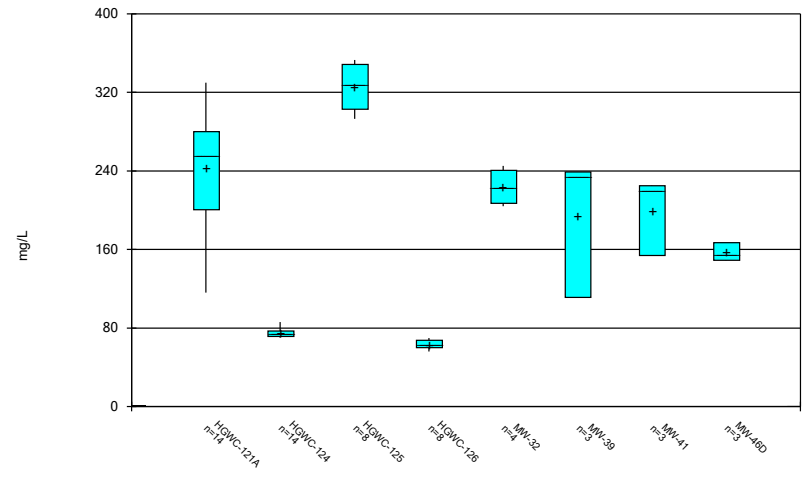
Constituent: Selenium Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



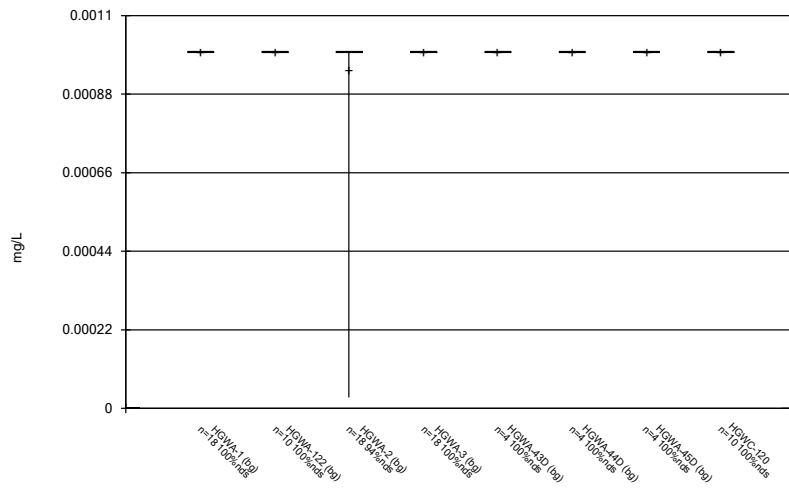
Constituent: Sulfate Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



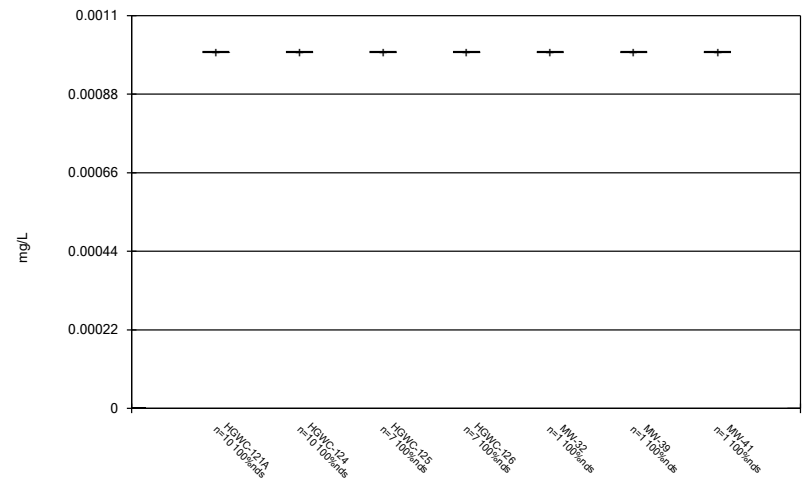
Constituent: Sulfate Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



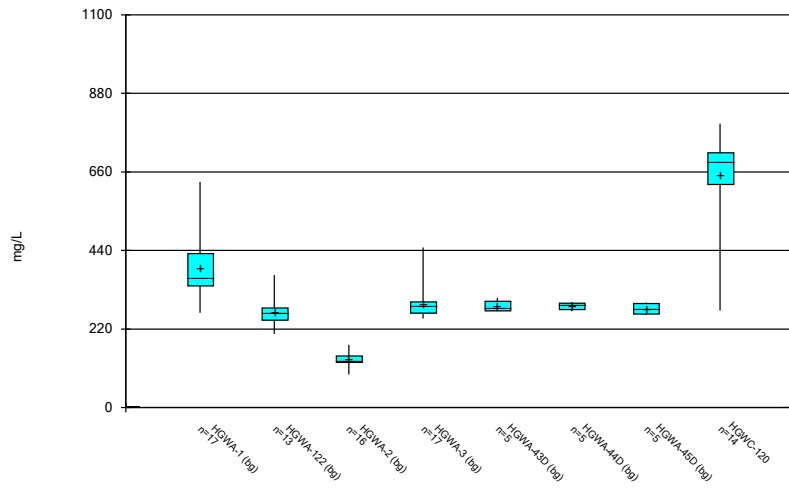
Constituent: Thallium Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



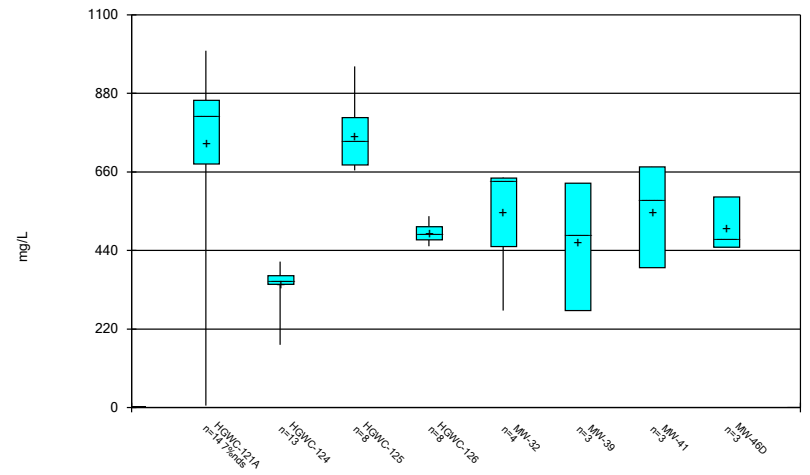
Constituent: Thallium Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 5/14/2021 7:59 AM
 Plant Hammond Client: Southern Company Data: Hammond AP-3

FIGURE C.

Outlier Summary

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 5/17/2021, 10:30 AM

HGWA-122 Total Dissolved Solids (mg/L)

4/2/2019

814 (o)

FIGURE D.

Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 5/17/2021, 10:35 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-120	0.39	n/a	3/12/2021	1.1	Yes	79	n/a	n/a	3.797	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-121A	0.39	n/a	3/15/2021	1.9	Yes	79	n/a	n/a	3.797	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-124	0.39	n/a	3/15/2021	0.4	Yes	79	n/a	n/a	3.797	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-125	0.39	n/a	3/12/2021	1.5	Yes	79	n/a	n/a	3.797	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-120	125.9	n/a	3/12/2021	174	Yes	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-121A	125.9	n/a	3/15/2021	167	Yes	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-125	125.9	n/a	3/12/2021	165	Yes	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-126	125.9	n/a	3/12/2021	138	Yes	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Sulfate (mg/L)	HGWC-120	88.2	n/a	3/12/2021	210	Yes	79	n/a	n/a	1.266	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-121A	88.2	n/a	3/15/2021	177	Yes	79	n/a	n/a	1.266	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-125	88.2	n/a	3/12/2021	293	Yes	79	n/a	n/a	1.266	n/a	n/a	0.0003081	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-125	632	n/a	3/12/2021	664	Yes	78	n/a	n/a	0	n/a	n/a	0.000317	NP Inter (normality) 1 of 2

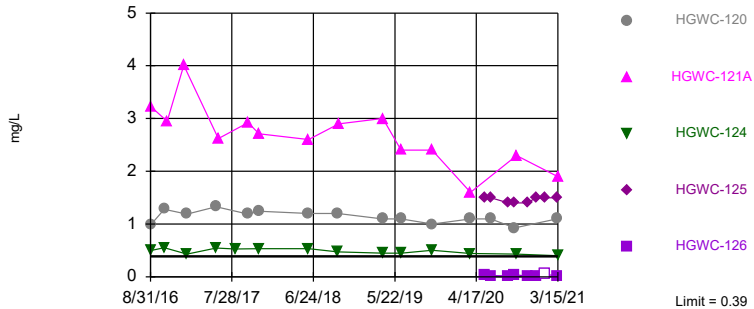
Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 5/17/2021, 10:35 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-120	0.39	<i>n/a</i>	3/12/2021	1.1	Yes	79	<i>n/a</i>	<i>n/a</i>	3.797	<i>n/a</i>	<i>n/a</i>	0.0003081	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-121A	0.39	<i>n/a</i>	3/15/2021	1.9	Yes	79	<i>n/a</i>	<i>n/a</i>	3.797	<i>n/a</i>	<i>n/a</i>	0.0003081	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-124	0.39	<i>n/a</i>	3/15/2021	0.4	Yes	79	<i>n/a</i>	<i>n/a</i>	3.797	<i>n/a</i>	<i>n/a</i>	0.0003081	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-125	0.39	<i>n/a</i>	3/12/2021	1.5	Yes	79	<i>n/a</i>	<i>n/a</i>	3.797	<i>n/a</i>	<i>n/a</i>	0.0003081	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-126	0.39	<i>n/a</i>	3/12/2021	0.016J	No	79	<i>n/a</i>	<i>n/a</i>	3.797	<i>n/a</i>	<i>n/a</i>	0.0003081	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-120	125.9	<i>n/a</i>	3/12/2021	174	Yes	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-121A	125.9	<i>n/a</i>	3/15/2021	167	Yes	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-124	125.9	<i>n/a</i>	3/15/2021	103	No	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-125	125.9	<i>n/a</i>	3/12/2021	165	Yes	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Calcium (mg/L)	HGWC-126	125.9	<i>n/a</i>	3/12/2021	138	Yes	79	67.04	32.34	0	None	No	0.001504	Param Inter 1 of 2
Chloride (mg/L)	HGWC-120	41.1	<i>n/a</i>	3/12/2021	2.4	No	79	<i>n/a</i>	<i>n/a</i>	0	<i>n/a</i>	<i>n/a</i>	0.0003081	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-121A	41.1	<i>n/a</i>	3/15/2021	21.8	No	79	<i>n/a</i>	<i>n/a</i>	0	<i>n/a</i>	<i>n/a</i>	0.0003081	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-124	41.1	<i>n/a</i>	3/15/2021	2.9	No	79	<i>n/a</i>	<i>n/a</i>	0	<i>n/a</i>	<i>n/a</i>	0.0003081	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-125	41.1	<i>n/a</i>	3/12/2021	10.8	No	79	<i>n/a</i>	<i>n/a</i>	0	<i>n/a</i>	<i>n/a</i>	0.0003081	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-126	41.1	<i>n/a</i>	3/12/2021	8.5	No	79	<i>n/a</i>	<i>n/a</i>	0	<i>n/a</i>	<i>n/a</i>	0.0003081	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-120	0.74	<i>n/a</i>	3/12/2021	0.42	No	93	<i>n/a</i>	<i>n/a</i>	25.81	<i>n/a</i>	<i>n/a</i>	0.0002244	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-121A	0.74	<i>n/a</i>	3/15/2021	0.16	No	93	<i>n/a</i>	<i>n/a</i>	25.81	<i>n/a</i>	<i>n/a</i>	0.0002244	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-124	0.74	<i>n/a</i>	3/15/2021	0.1ND	No	93	<i>n/a</i>	<i>n/a</i>	25.81	<i>n/a</i>	<i>n/a</i>	0.0002244	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-125	0.74	<i>n/a</i>	3/12/2021	0.12	No	93	<i>n/a</i>	<i>n/a</i>	25.81	<i>n/a</i>	<i>n/a</i>	0.0002244	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-126	0.74	<i>n/a</i>	3/12/2021	0.46	No	93	<i>n/a</i>	<i>n/a</i>	25.81	<i>n/a</i>	<i>n/a</i>	0.0002244	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-120	7.92	4.9	3/12/2021	6.95	No	92	<i>n/a</i>	<i>n/a</i>	0	<i>n/a</i>	<i>n/a</i>	0.0004576	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-121A	7.92	4.9	3/15/2021	6.87	No	92	<i>n/a</i>	<i>n/a</i>	0	<i>n/a</i>	<i>n/a</i>	0.0004576	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-124	7.92	4.9	3/15/2021	7.22	No	92	<i>n/a</i>	<i>n/a</i>	0	<i>n/a</i>	<i>n/a</i>	0.0004576	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-125	7.92	4.9	3/12/2021	6.18	No	92	<i>n/a</i>	<i>n/a</i>	0	<i>n/a</i>	<i>n/a</i>	0.0004576	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-126	7.92	4.9	3/12/2021	7.05	No	92	<i>n/a</i>	<i>n/a</i>	0	<i>n/a</i>	<i>n/a</i>	0.0004576	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-120	88.2	<i>n/a</i>	3/12/2021	210	Yes	79	<i>n/a</i>	<i>n/a</i>	1.266	<i>n/a</i>	<i>n/a</i>	0.0003081	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-121A	88.2	<i>n/a</i>	3/15/2021	177	Yes	79	<i>n/a</i>	<i>n/a</i>	1.266	<i>n/a</i>	<i>n/a</i>	0.0003081	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-124	88.2	<i>n/a</i>	3/15/2021	74	No	79	<i>n/a</i>	<i>n/a</i>	1.266	<i>n/a</i>	<i>n/a</i>	0.0003081	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-125	88.2	<i>n/a</i>	3/12/2021	293	Yes	79	<i>n/a</i>	<i>n/a</i>	1.266	<i>n/a</i>	<i>n/a</i>	0.0003081	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-126	88.2	<i>n/a</i>	3/12/2021	69.7	No	79	<i>n/a</i>	<i>n/a</i>	1.266	<i>n/a</i>	<i>n/a</i>	0.0003081	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-120	632	<i>n/a</i>	3/12/2021	584	No	78	<i>n/a</i>	<i>n/a</i>	0	<i>n/a</i>	<i>n/a</i>	0.000317	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-121A	632	<i>n/a</i>	3/15/2021	614	No	78	<i>n/a</i>	<i>n/a</i>	0	<i>n/a</i>	<i>n/a</i>	0.000317	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-124	632	<i>n/a</i>	3/15/2021	340	No	78	<i>n/a</i>	<i>n/a</i>	0	<i>n/a</i>	<i>n/a</i>	0.000317	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-125	632	<i>n/a</i>	3/12/2021	664	Yes	78	<i>n/a</i>	<i>n/a</i>	0	<i>n/a</i>	<i>n/a</i>	0.000317	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-126	632	<i>n/a</i>	3/12/2021	474	No	78	<i>n/a</i>	<i>n/a</i>	0	<i>n/a</i>	<i>n/a</i>	0.000317	NP Inter (normality) 1 of 2

Exceeds Limit: HGWC-120, HGWC-121A, HGWC-124, HGWC-125

Prediction Limit
Interwell Non-parametric

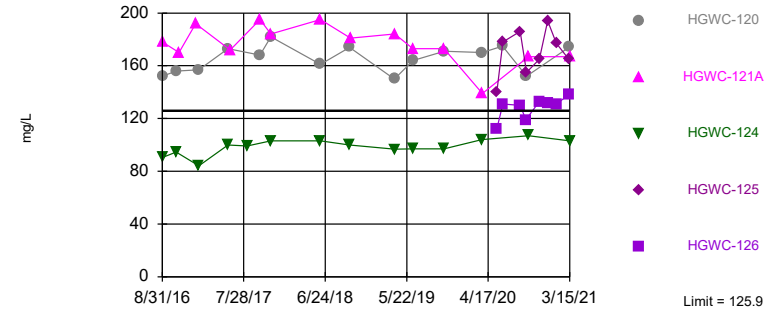


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 79 background values. 3.797% NDs. Annual per-constituent alpha = 0.003077. Individual comparison alpha = 0.0003081 (1 of 2). Comparing 5 points to limit.

Constituent: Boron Analysis Run 5/17/2021 10:32 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

Exceeds Limit: HGWC-120, HGWC-121A, HGWC-125, HGWC-126

Prediction Limit
Interwell Parametric

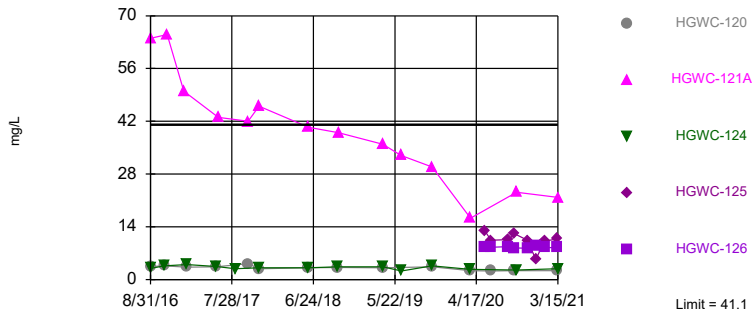


Background Data Summary: Mean=67.04, Std. Dev.=32.34, n=79. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9589, critical = 0.957. Kappa = 1.819 (c=7, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001504. Comparing 5 points to limit.

Constituent: Calcium Analysis Run 5/17/2021 10:32 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

Within Limit

Prediction Limit
Interwell Non-parametric

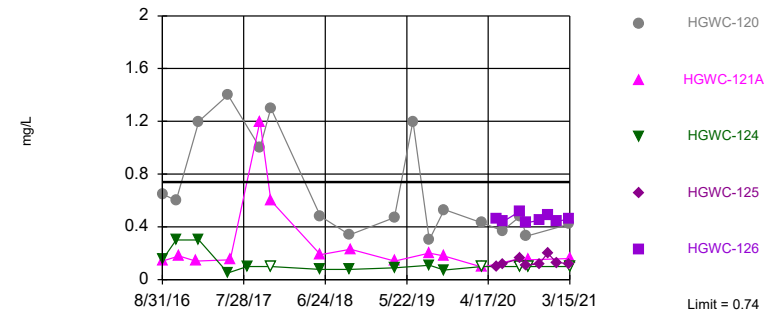


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 79 background values. Annual per-constituent alpha = 0.003077. Individual comparison alpha = 0.0003081 (1 of 2). Comparing 5 points to limit.

Constituent: Chloride Analysis Run 5/17/2021 10:32 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

Within Limit

Prediction Limit
Interwell Non-parametric

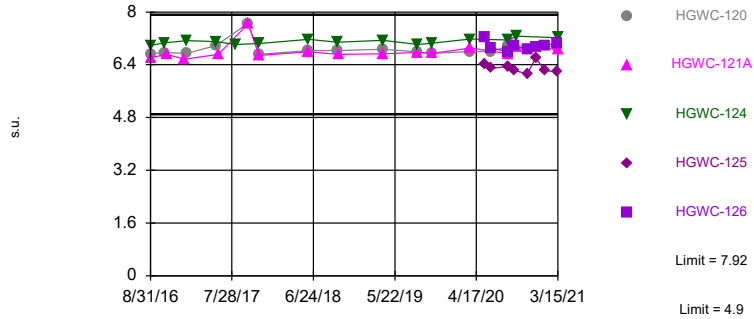


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 93 background values. 25.81% NDs. Annual per-constituent alpha = 0.002241. Individual comparison alpha = 0.0002244 (1 of 2). Comparing 5 points to limit.

Constituent: Fluoride Analysis Run 5/17/2021 10:32 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

Within Limits

Prediction Limit
Interwell Non-parametric

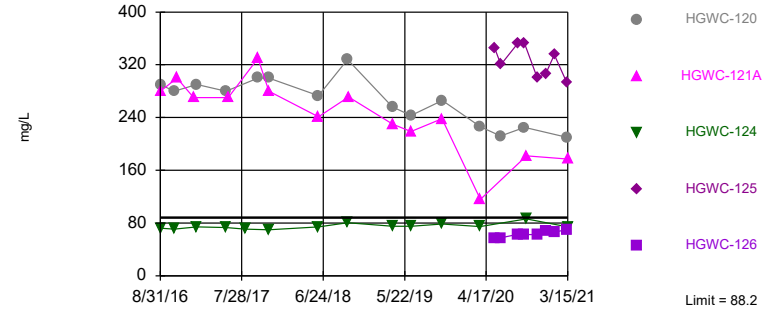


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 92 background values. Annual per-constituent alpha = 0.004571. Individual comparison alpha = 0.0004576 (1 of 2). Comparing 5 points to limit.

Constituent: pH Analysis Run 5/17/2021 10:32 AM View: Appendix III
 Plant Hammond Client: Southern Company Data: Hammond AP-3

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

Prediction Limit
Interwell Non-parametric

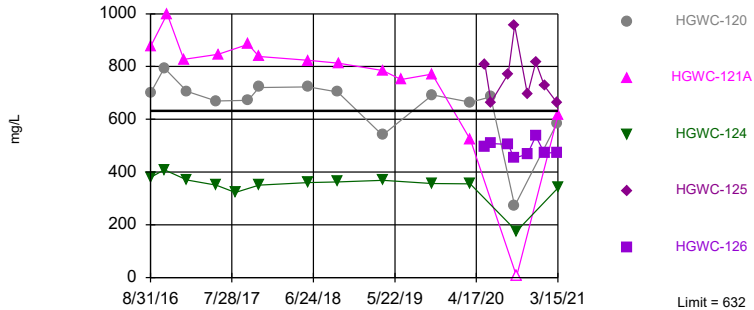


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 79 background values. 1,266% NDs. Annual per-constituent alpha = 0.003077. Individual comparison alpha = 0.0003081 (1 of 2). Comparing 5 points to limit.

Constituent: Sulfate Analysis Run 5/17/2021 10:32 AM View: Appendix III
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Exceeds Limit: HGWC-125

Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 78 background values. Annual per-constituent alpha = 0.003165. Individual comparison alpha = 0.000317 (1 of 2). Comparing 5 points to limit.

Constituent: Total Dissolved Solids Analysis Run 5/17/2021 10:32 AM View: Appendix III
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III

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

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

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-125	HGWC-126
1/19/2021									
1/20/2021								1.5	<0.1
3/10/2021	0.015 (J)								
3/11/2021		0.015 (J)	0.056	0.2					
3/12/2021						1.1		1.5	0.016 (J)
3/15/2021					1.9		0.4		

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III

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

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

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
1/19/2021	0.049 (J)	<0.1	
1/20/2021			0.19
3/10/2021		0.39	
3/11/2021	0.06		
3/12/2021			0.19
3/15/2021			

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III

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

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-125	HGWC-126
5/19/2016	138	76.2	22.9						
7/11/2016	97.2		22.3						
7/12/2016		61.5							
8/30/2016	97.5	65.1	26.4	71.3					
8/31/2016					178	152	90.4		
10/19/2016	99.2	73.2	21.7						
10/20/2016				90.3					
10/26/2016						156	94.5		
11/7/2016					170				
12/6/2016	105	74.9	18.2						
1/13/2017					192				
1/24/2017	95.7	69.6	18.5						
1/25/2017				77.3					
1/27/2017						157	84.2		
3/21/2017	106	75.7	18.6						
5/22/2017	107	71.5	17.8						
5/25/2017				69.9		173	100		
6/3/2017					172				
8/11/2017				79.5				99.1	
10/2/2017					195	168			
10/3/2017	102	76.3	20.2						
11/15/2017				72.8	184	182	103		
6/4/2018	124	73.4	19.1						
6/5/2018				71.4	195	161	103		
10/1/2018	108	80.9	20.5 (J)						
10/2/2018				66.6		174	100		
10/5/2018					181				
4/1/2019		80.5							
4/2/2019	132		22.5 (J)	60.9		150			
4/3/2019					184		96.7		
6/17/2019					173	164			
6/18/2019				75			97.1		
9/23/2019	118	71	19.5						
10/21/2019				80.8	173		96.9		
10/22/2019						171			
3/24/2020				81.2			104		
3/25/2020	127	89.8	23		139	170			
5/22/2020								140	112
6/15/2020						175			
6/16/2020	130	85.1					178	131	
8/25/2020							186	130	
9/15/2020	103	73.1	21.1	75.8					
9/16/2020									
9/18/2020									119
9/21/2020						152		155	
9/25/2020									
9/28/2020					167		107		
11/10/2020									
11/11/2020									133
11/12/2020							165		
12/15/2020									
12/16/2020							194		132

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-125	HGWC-126
1/19/2021									
1/20/2021								177 (M1)	131
3/10/2021	111								
3/11/2021		83.8	43.8	60.4 (M1)					
3/12/2021						174		165	138
3/15/2021					167		103		

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

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

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
1/19/2021	60.1	33	
1/20/2021			55
3/10/2021		18.3	
3/11/2021	59.6		
3/12/2021			56.5
3/15/2021			

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-126	HGWC-125
1/19/2021									
1/20/2021								8.5	10.2
3/10/2021	7.4								
3/11/2021		5.9	5.1	2.3					
3/12/2021						2.4		8.5	10.8
3/15/2021					21.8		2.9		

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

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

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
1/19/2021	4.1	9.5	
1/20/2021			3.5
3/10/2021		12.3	
3/11/2021	4.5		
3/12/2021			3.3
3/15/2021			

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III

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

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

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-124	HGWC-120	HGWC-126	HGWC-125
9/16/2020									
9/18/2020								0.43	
9/21/2020							0.33		0.11
9/25/2020									
9/28/2020					0.15	<0.1			
11/10/2020									
11/11/2020								0.45	
11/12/2020									0.12
12/15/2020									
12/16/2020								0.49	0.2
1/19/2021									
1/20/2021								0.44	0.13
3/10/2021	0.079 (J)								
3/11/2021		<0.1	0.1	0.059 (J)					
3/12/2021							0.42	0.46	0.12
3/15/2021					0.16	<0.1			

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

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

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

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
9/16/2020	0.22	0.22	
9/18/2020			
9/21/2020			
9/25/2020			0.21
9/28/2020			
11/10/2020	0.19	0.59	
11/11/2020			0.19
11/12/2020			
12/15/2020	0.21	0.67	
12/16/2020			0.18
1/19/2021	0.16	0.74	
1/20/2021			0.22
3/10/2021		0.65	
3/11/2021	0.2		
3/12/2021			0.2
3/15/2021			

Prediction Limit

Constituent: pH (s.u.) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-124	HGWC-120	HGWC-125	HGWC-126
9/21/2020							6.98	6.22	
9/25/2020									
9/28/2020					6.93	7.27			
11/10/2020									
11/11/2020									6.86
11/12/2020								6.13	
12/15/2020									
12/16/2020								6.61	6.93
1/19/2021									
1/20/2021								6.23	6.99
3/10/2021	6.95								
3/11/2021		7.33	5.8	6.65					
3/12/2021							6.95	6.18	7.05
3/15/2021					6.87	7.22			

Prediction Limit

Constituent: pH (s.u.) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-45D (bg)
5/19/2016			
7/11/2016			
7/12/2016			
8/30/2016			
8/31/2016			
10/19/2016			
10/20/2016			
10/27/2016			
11/7/2016			
12/6/2016			
1/13/2017			
1/24/2017			
1/25/2017			
1/27/2017			
3/21/2017			
5/22/2017			
5/25/2017			
6/3/2017			
8/11/2017			
10/2/2017			
10/3/2017			
11/15/2017			
4/2/2018			
4/3/2018			
6/4/2018			
6/5/2018			
10/1/2018			
10/2/2018			
10/5/2018			
3/12/2019			
4/1/2019			
4/2/2019			
4/3/2019			
8/22/2019			
8/23/2019			
9/23/2019			
10/21/2019			
10/22/2019			
3/2/2020			
3/24/2020			
3/25/2020			
5/22/2020			
6/15/2020			
6/16/2020			
8/24/2020			
8/25/2020			
8/26/2020			
8/27/2020			
8/28/2020			
9/15/2020			
9/16/2020	7.83	7.52	
9/18/2020			

Prediction Limit

Constituent: pH (s.u.) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-44D (bg)	HGWA-43D (bg)	HGWA-45D (bg)
9/21/2020			
9/25/2020			7.57
9/28/2020			
11/10/2020	7.84	7.27	
11/11/2020			7.4
11/12/2020			
12/15/2020	7.87	7.39	
12/16/2020			7.39
1/19/2021	7.86	7.39	
1/20/2021			7.47
3/10/2021	7.92		
3/11/2021		7.46	
3/12/2021			7.52
3/15/2021			

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III

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

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-125	HGWC-126
5/19/2016	66.9	42.3	48.6						
7/11/2016	41		45						
7/12/2016		44							
8/30/2016	36	40	42	49					
8/31/2016					280	290	72		
10/19/2016	46	43	44						
10/20/2016				49					
10/26/2016						280	71		
11/7/2016					300				
12/6/2016	59	43	44						
1/13/2017					270				
1/24/2017	46	48	46						
1/25/2017				48					
1/27/2017						290	74		
3/21/2017	63	45	46						
5/22/2017	77	46	48						
5/25/2017				48		280	73		
6/3/2017					270				
8/11/2017				47			71		
10/2/2017					330	300			
10/3/2017	42	48	47						
11/15/2017				49	280	300	70		
6/4/2018	71.8	46.6	47.8						
6/5/2018				48.9	241	273	74		
10/1/2018	49.1	48.6	48.1						
10/2/2018				48.6		328	80.7		
10/5/2018					271				
4/1/2019		50.4							
4/2/2019	84.3		48.7	39.6		256			
4/3/2019					230		75.2		
6/17/2019					219	243			
6/18/2019				44.5			75.3		
9/23/2019	70.2	43.9	47.2						
10/21/2019				45.6	238		78.5		
10/22/2019						266			
3/24/2020				25.9			74.6		
3/25/2020	85.9	50.5	46.3		116	226			
5/22/2020								345	56.1
6/15/2020						212			
6/16/2020	88.2	49.5						320	57.6
8/25/2020								353	62.8
9/15/2020	47.3	44.7	51.5	41.4					
9/16/2020									
9/18/2020									62.7
9/21/2020						225		352	
9/25/2020									
9/28/2020					182		86.2		
11/10/2020									
11/11/2020									62.3
11/12/2020							300		
12/15/2020									
12/16/2020							306		68.1

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-125	HGWC-126
1/19/2021									
1/20/2021								335	66.6
3/10/2021	49.6								
3/11/2021		50.4	52.9	40.7					
3/12/2021						210		293	69.7
3/15/2021					177		74		

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

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

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
1/19/2021	37.3	7.4	
1/20/2021			14.2
3/10/2021		<1	
3/11/2021	38.6		
3/12/2021			8.7
3/15/2021			

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWA-122 (bg)	HGWC-121A	HGWC-120	HGWC-124	HGWC-126	HGWC-125
1/19/2021									
1/20/2021								472	726
3/10/2021	348								
3/11/2021		267	169	206					
3/12/2021						584		474	664
3/15/2021					614		340		

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

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

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/17/2021 10:35 AM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWA-43D (bg)	HGWA-44D (bg)	HGWA-45D (bg)
1/19/2021	270	278	
1/20/2021			289
3/10/2021		289	
3/11/2021	279		
3/12/2021			260
3/15/2021			

FIGURE E.

Trend Test Summary - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 5/17/2021, 10:41 AM

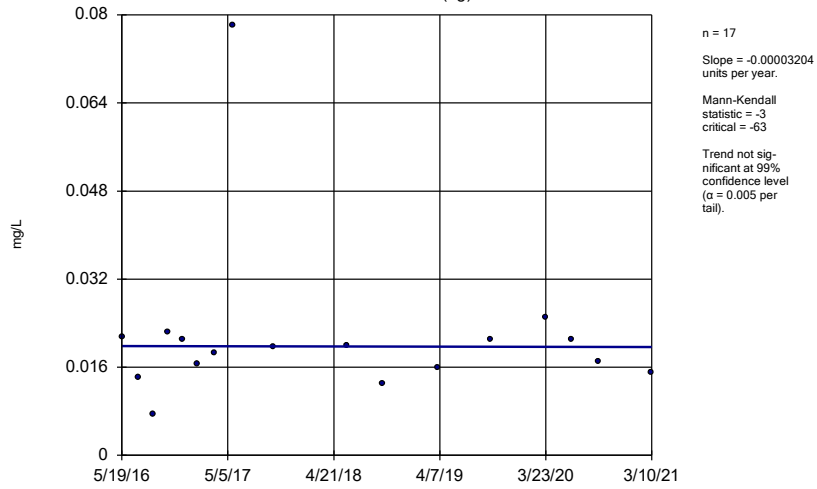
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-122 (bg)	-0.02581	-50	-48	Yes	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-2 (bg)	0.00257	72	58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-121A	-0.2534	-60	-48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-122 (bg)	-1.832	-55	-48	Yes	14	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)	1.515	77	63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-120	-17.94	-64	-53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-121A	-25.46	-61	-48	Yes	14	0	n/a	n/a	0.01	NP

Trend Test Summary - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 5/17/2021, 10:41 AM

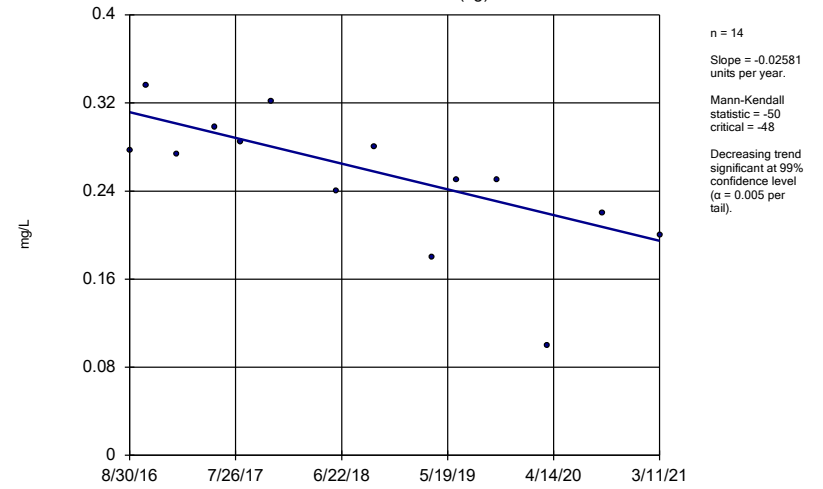
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-1 (bg)	-0.00003204	-3	-63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-122 (bg)	-0.02581	-50	-48	Yes	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-2 (bg)	0.00257	72	58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-3 (bg)	-0.0002616	-15	-63	No	17	11.76	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-120	-0.04548	-43	-53	No	15	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-121A	-0.2534	-60	-48	Yes	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-124	-0.02177	-48	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-125	0	3	21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-1 (bg)	4.579	52	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-122 (bg)	-1.907	-9	-48	No	14	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)	2.895	58	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-120	2.955	27	53	No	15	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-121A	-5.103	-31	-48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-125	28.44	5	21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-126	14.88	15	21	No	8	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-1 (bg)	4.851	51	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-122 (bg)	-1.832	-55	-48	Yes	14	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)	1.515	77	63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-120	-17.94	-64	-53	Yes	15	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-121A	-25.46	-61	-48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-125	-46.69	-12	-21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	10.91	22	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-122 (bg)	-5.15	-14	-43	No	13	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)	0.6748	7	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-125	-119.1	-6	-21	No	8	0	n/a	n/a	0.01	NP

Sen's Slope Estimator
HGWA-1 (bg)



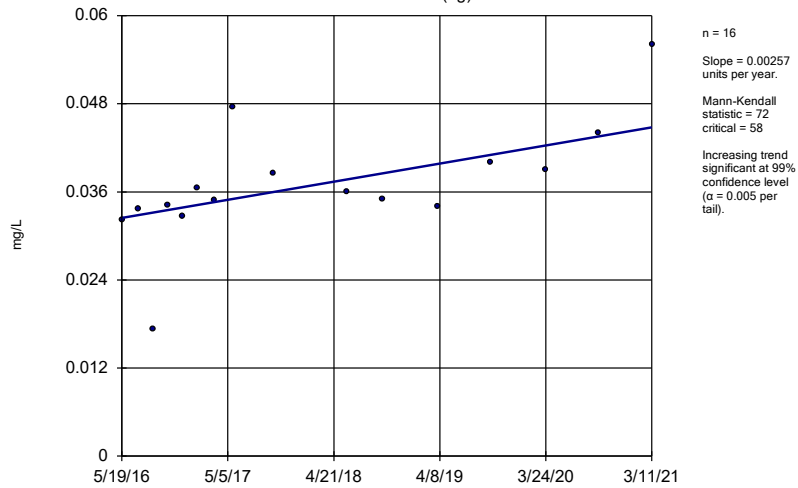
Constituent: Boron Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator
HGWA-122 (bg)



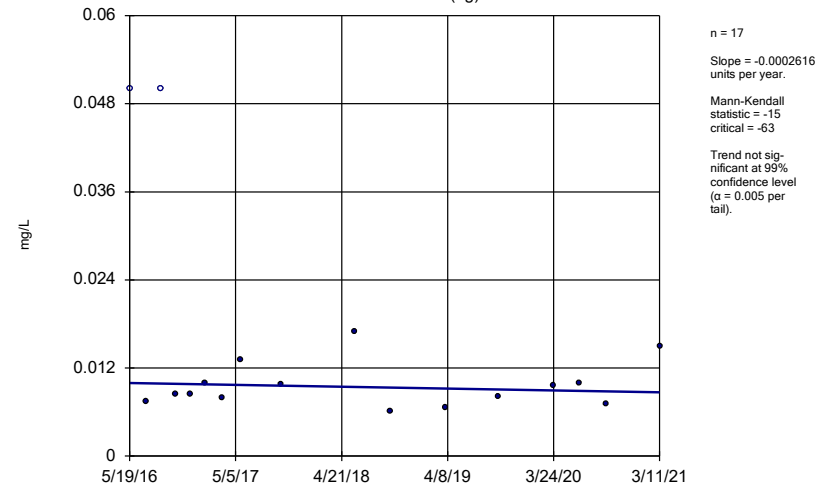
Constituent: Boron Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator
HGWA-2 (bg)



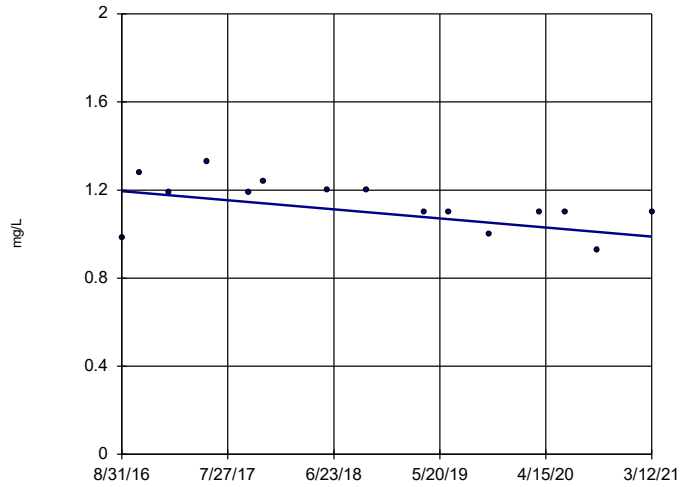
Constituent: Boron Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator
HGWA-3 (bg)



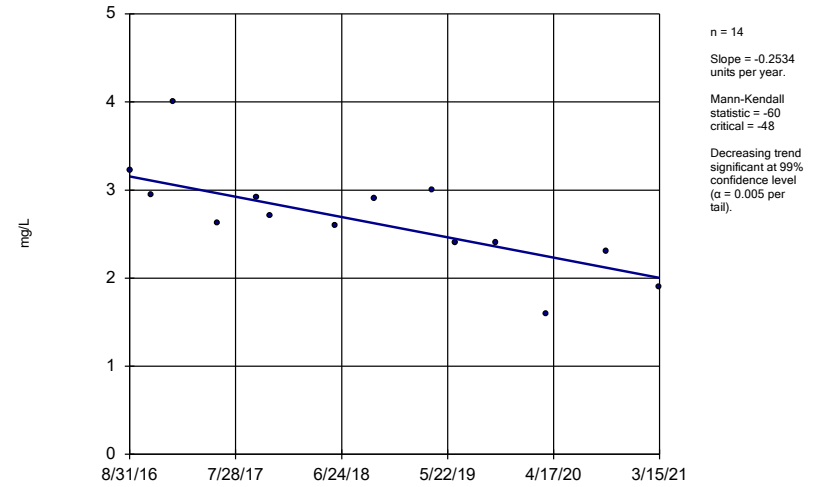
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Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator
HGWC-120



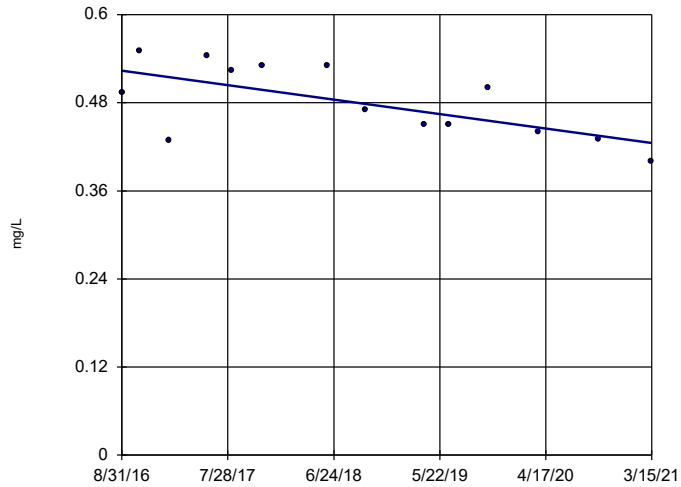
Constituent: Boron Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator
HGWC-121A



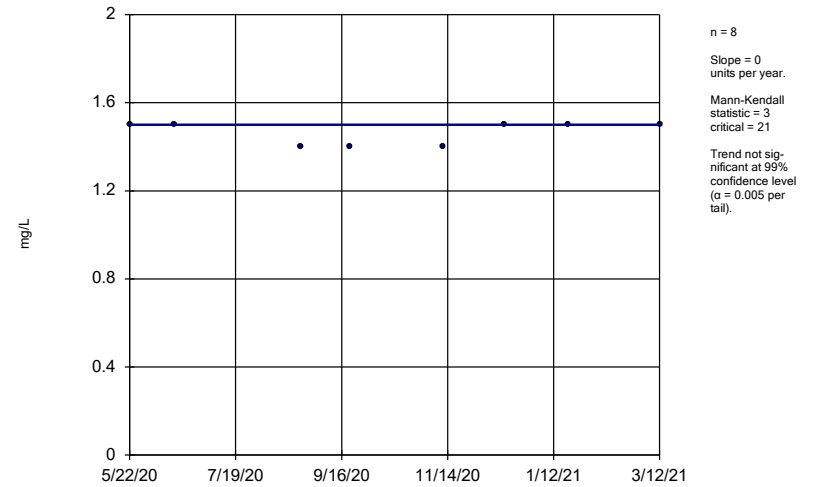
Constituent: Boron Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator
HGWC-124



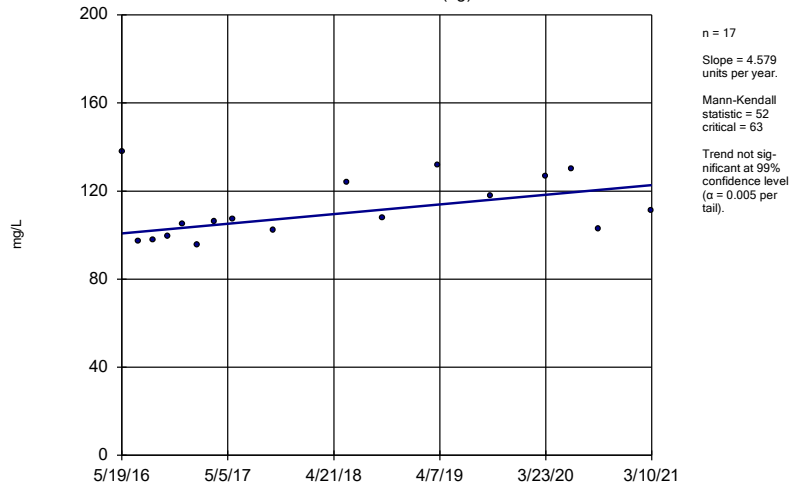
Constituent: Boron Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator
HGWC-125



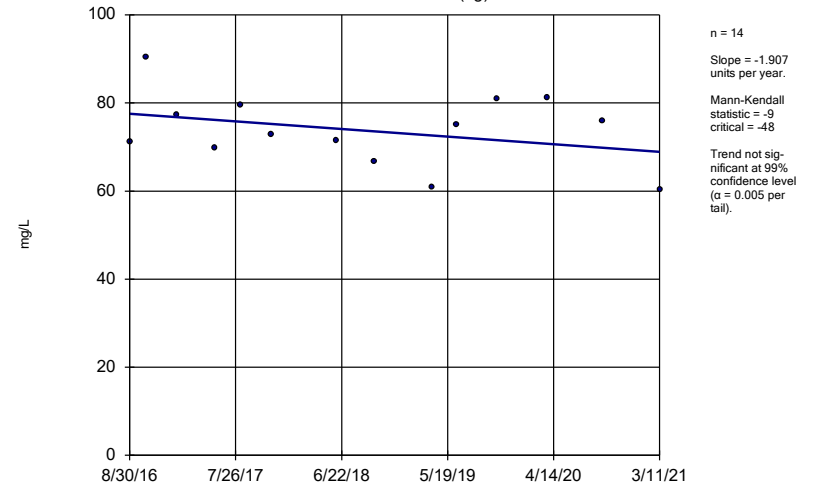
Constituent: Boron Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator
HGWA-1 (bg)



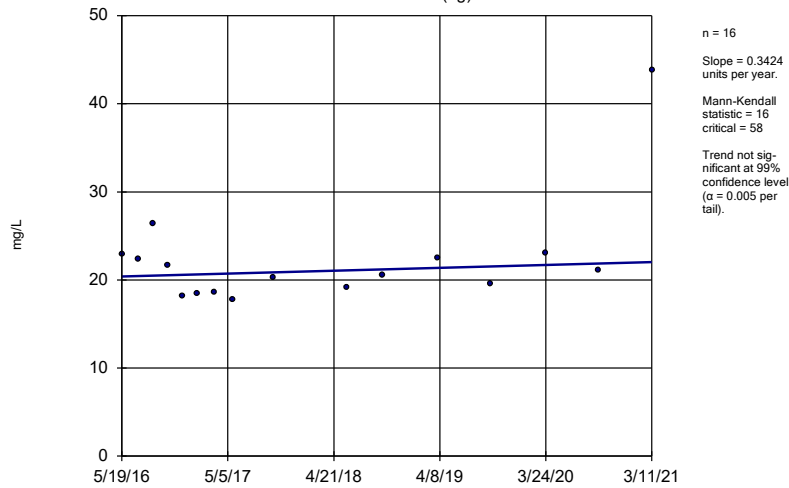
Constituent: Calcium Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator
HGWA-122 (bg)



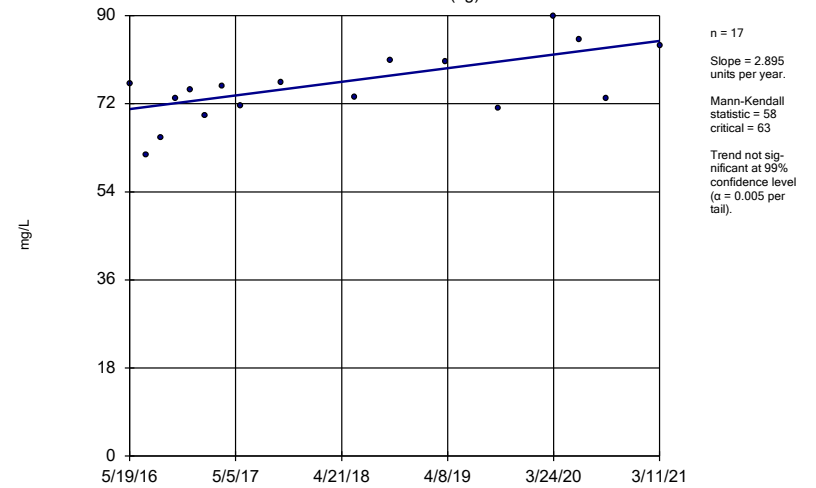
Constituent: Calcium Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator
HGWA-2 (bg)



Constituent: Calcium Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

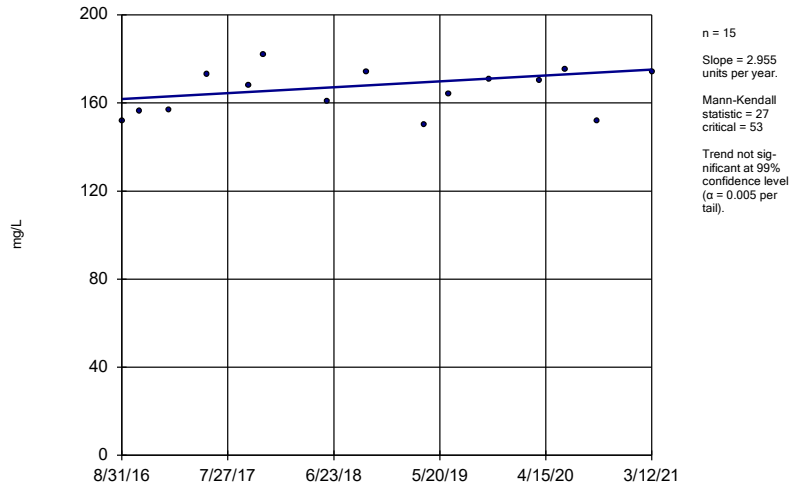
Sen's Slope Estimator
HGWA-3 (bg)



Constituent: Calcium Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

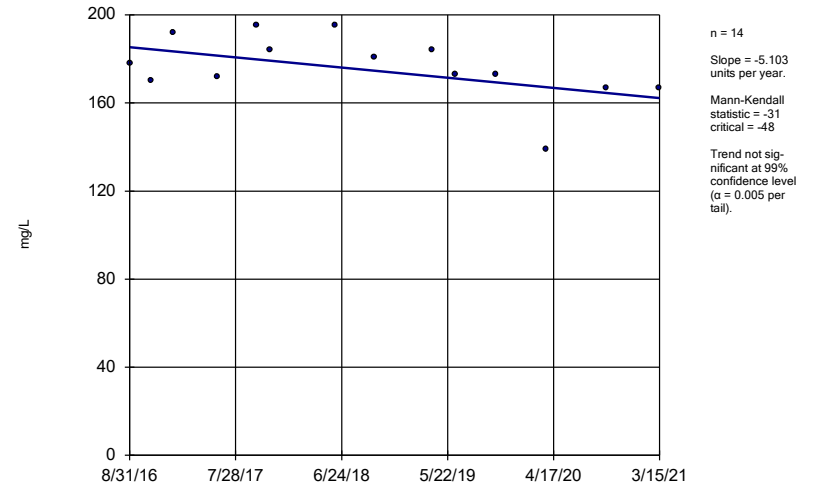
HGWC-120



Constituent: Calcium Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

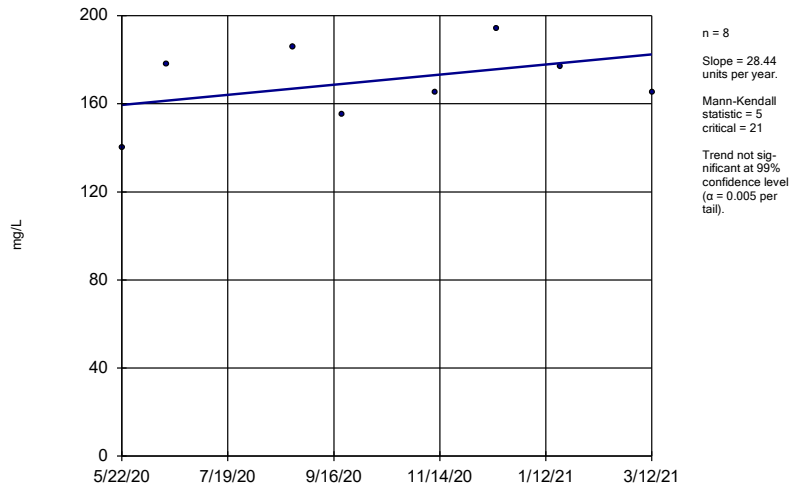
HGWC-121A



Constituent: Calcium Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

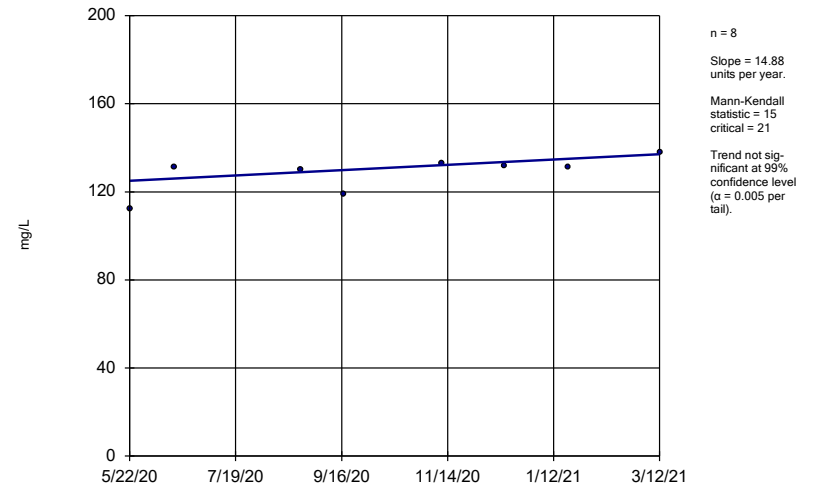
HGWC-125



Constituent: Calcium Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

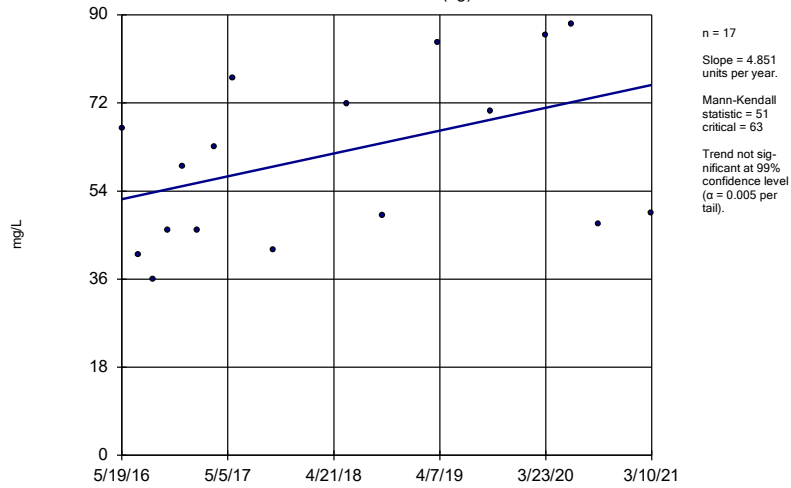
HGWC-126



Constituent: Calcium Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

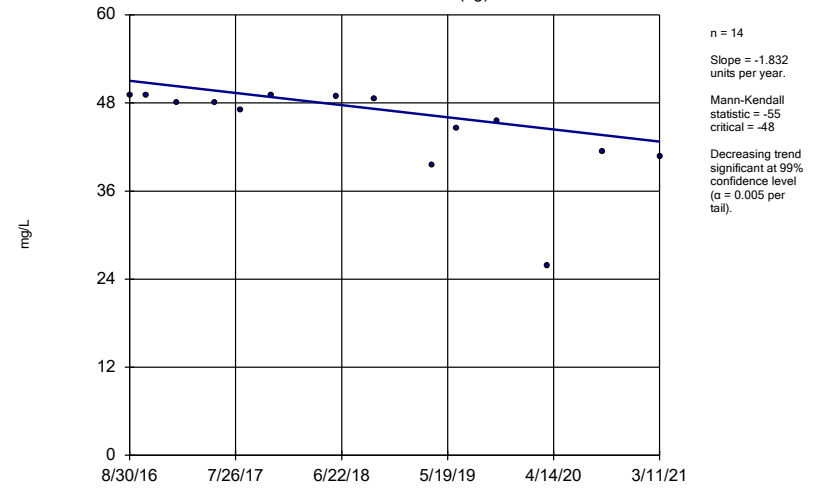
HGWA-1 (bg)



Constituent: Sulfate Analysis Run 5/17/2021 10:40 AM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

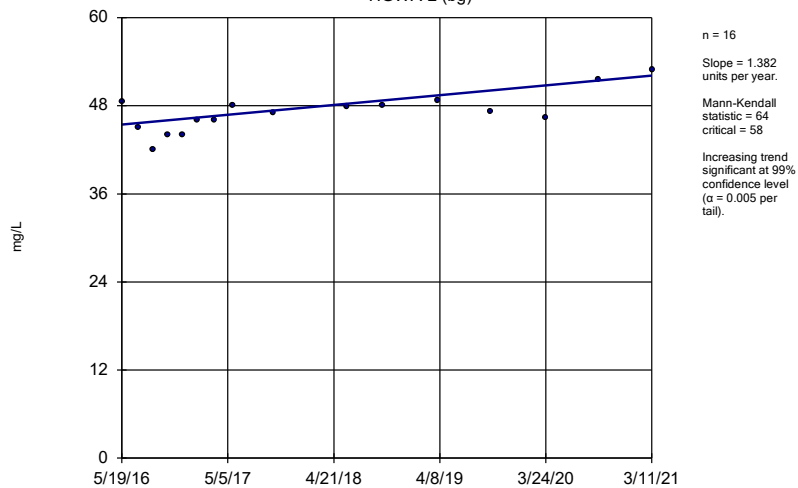
HGWA-122 (bg)



Constituent: Sulfate Analysis Run 5/17/2021 10:40 AM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

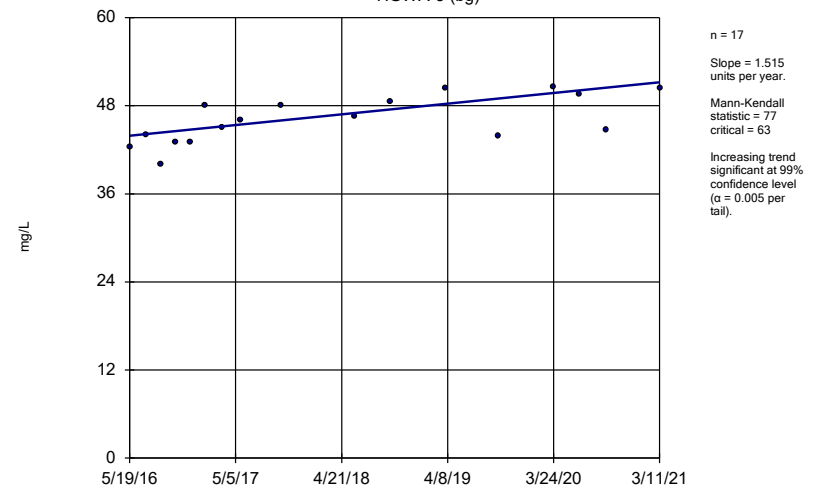
HGWA-2 (bg)



Constituent: Sulfate Analysis Run 5/17/2021 10:40 AM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

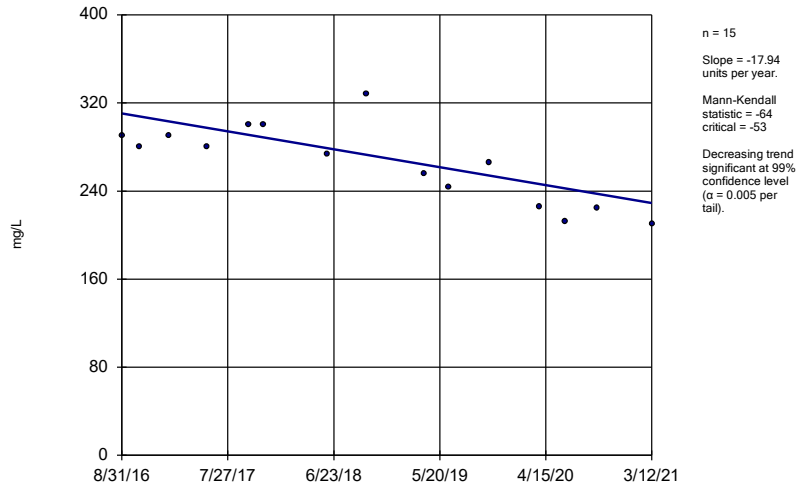
Sen's Slope Estimator

HGWA-3 (bg)



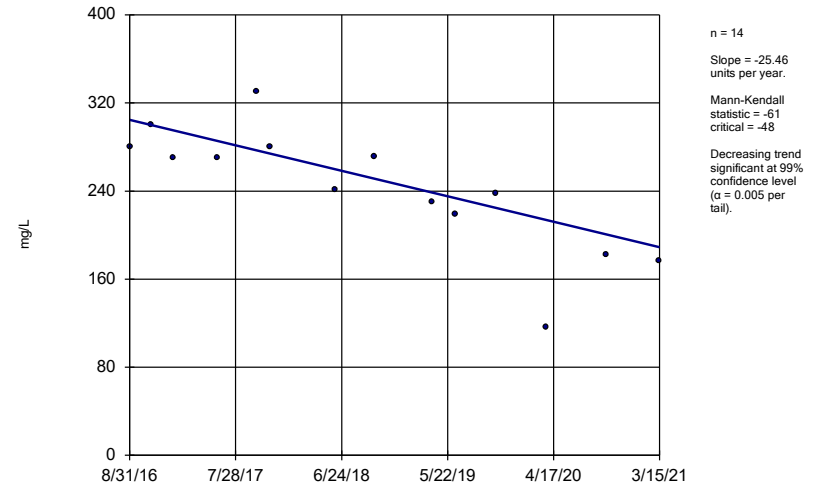
Constituent: Sulfate Analysis Run 5/17/2021 10:40 AM View: Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator
HGWC-120



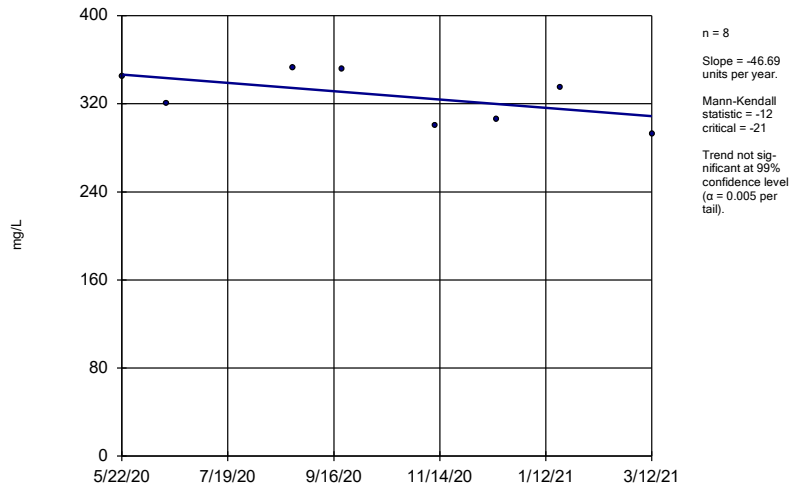
Constituent: Sulfate Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator
HGWC-121A



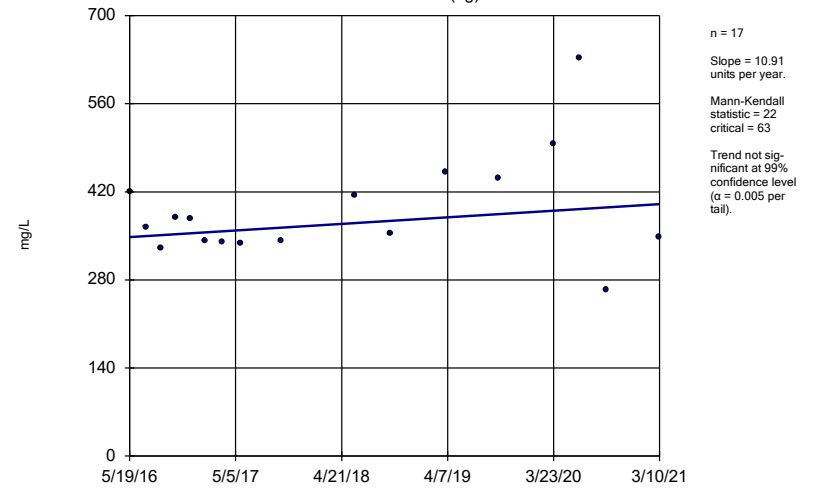
Constituent: Sulfate Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator
HGWC-125



Constituent: Sulfate Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

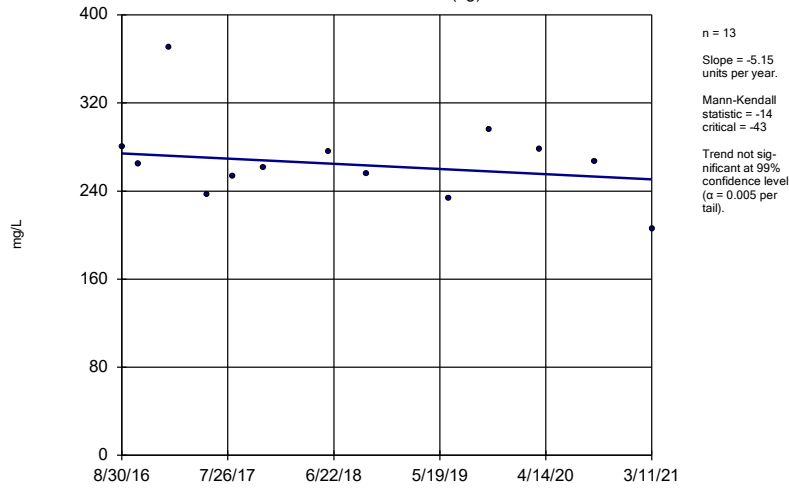
Sen's Slope Estimator
HGWA-1 (bg)



Constituent: Total Dissolved Solids Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

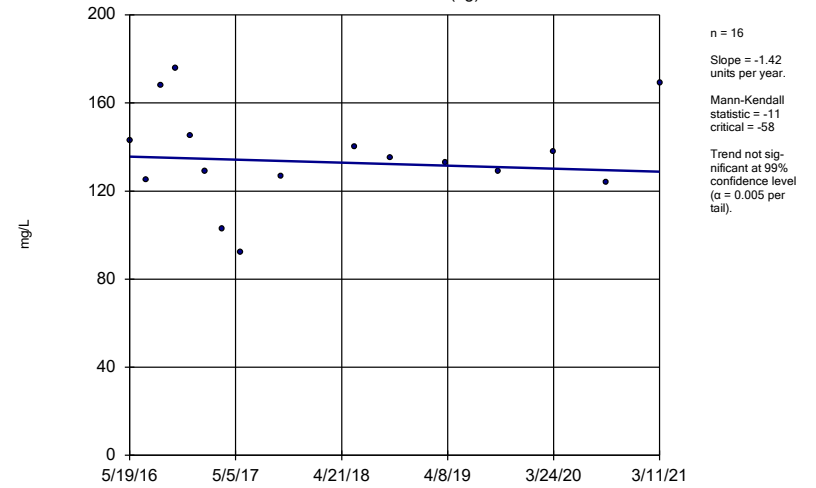
HGWA-122 (bg)



Constituent: Total Dissolved Solids Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

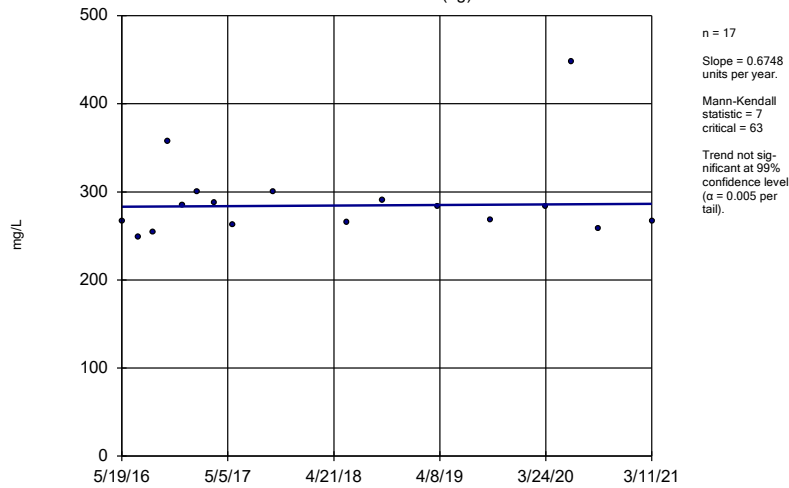
HGWA-2 (bg)



Constituent: Total Dissolved Solids Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

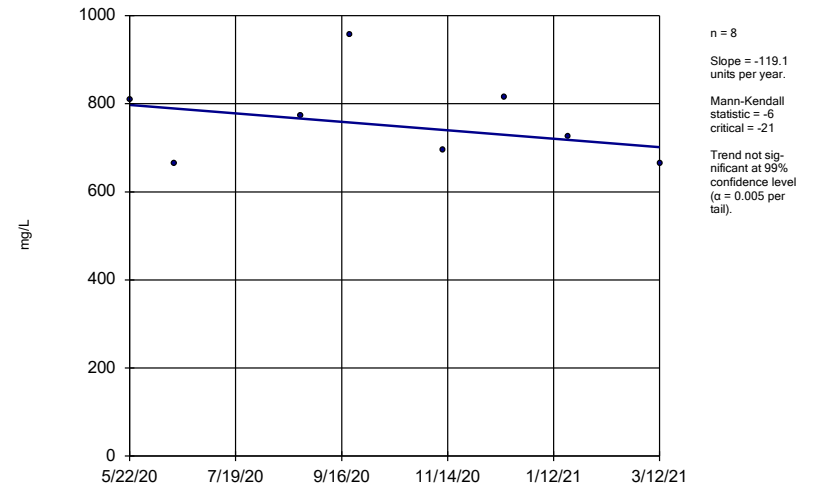
HGWA-3 (bg)



Constituent: Total Dissolved Solids Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

Sen's Slope Estimator

HGWC-125



Constituent: Total Dissolved Solids Analysis Run 5/17/2021 10:40 AM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-3

FIGURE F.

Upper Tolerance Limits

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 4/19/2021, 6:57 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	81	81.48	n/a	0.01569	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.005	n/a	n/a	n/a	82	73.17	n/a	0.01491	NP Inter(normality)
Barium (mg/L)	n/a	0.54	n/a	n/a	n/a	89	1.124	n/a	0.01041	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0005	n/a	n/a	n/a	81	81.48	n/a	0.01569	NP Inter(NDs)
Cadmium (mg/L)	n/a	0.0005	n/a	n/a	n/a	82	89.02	n/a	0.01491	NP Inter(NDs)
Chromium (mg/L)	n/a	0.0079	n/a	n/a	n/a	83	75.9	n/a	0.01416	NP Inter(NDs)
Cobalt (mg/L)	n/a	0.038	n/a	n/a	n/a	89	76.4	n/a	0.01041	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	n/a	4.36	n/a	n/a	n/a	89	0	n/a	0.01041	NP Inter(normality)
Fluoride (mg/L)	n/a	0.74	n/a	n/a	n/a	96	26.04	n/a	0.007269	NP Inter(normality)
Lead (mg/L)	n/a	0.001	n/a	n/a	n/a	83	57.83	n/a	0.01416	NP Inter(normality)
Lithium (mg/L)	n/a	0.03	n/a	n/a	n/a	89	34.83	n/a	0.01041	NP Inter(normality)
Mercury (mg/L)	n/a	0.0005	n/a	n/a	n/a	61	91.8	n/a	0.04377	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.01	n/a	n/a	n/a	91	70.33	n/a	0.009394	NP Inter(normality)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	82	97.56	n/a	0.01491	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	82	98.78	n/a	0.01491	NP Inter(NDs)

FIGURE G.

PLANT HAMMOND AP-3 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		0.54	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0079	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	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	0.03	0.04
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

FIGURE H.

PLANT HAMMOND AP-3 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		0.54	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0079	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	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	0.03	0.03
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.01
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

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

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

FIGURE I.

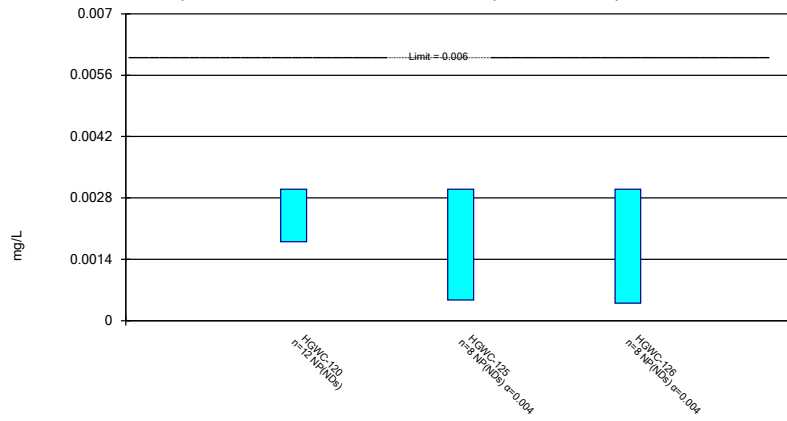
Federal Confidence Intervals - All Results (No Significant)

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 5/17/2021, 11:08 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-120	0.003	0.0018	0.006	No	12	0.0029	0.0003464	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-125	0.003	0.00047	0.006	No	8	0.002385	0.001139	75	None	No	0.004	NP (NDs)
Antimony (mg/L)	HGWC-126	0.003	0.0004	0.006	No	8	0.002354	0.001197	75	None	No	0.004	NP (NDs)
Barium (mg/L)	HGWC-120	0.05167	0.04562	2	No	14	0.04864	0.004274	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-121A	0.08367	0.06597	2	No	14	0.07482	0.0125	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-124	0.07352	0.06695	2	No	14	0.07024	0.004638	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-125	0.04747	0.04128	2	No	8	0.04438	0.002925	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-126	0.2571	0.2204	2	No	8	0.2388	0.01727	0	None	No	0.01	Param.
Barium (mg/L)	MW-32	0.06552	0.04798	2	No	4	0.05675	0.003862	0	None	No	0.01	Param.
Barium (mg/L)	MW-41	0.0797	0.0573	2	No	4	0.0685	0.004933	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-120	0.005	0.0015	0.1	No	14	0.004134	0.001732	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-121A	0.005	0.0005	0.1	No	14	0.004679	0.001203	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-124	0.005	0.00051	0.1	No	14	0.004355	0.00164	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-125	0.005	0.00052	0.1	No	8	0.003364	0.00226	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	HGWC-126	0.005	0.00096	0.1	No	8	0.004495	0.001428	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-32	0.005	0.00058	0.1	No	4	0.003895	0.00221	75	None	No	0.0625	NP (NDs)
Chromium (mg/L)	MW-41	0.005	0.0009	0.1	No	4	0.003975	0.00205	75	None	No	0.0625	NP (NDs)
Cobalt (mg/L)	HGWC-120	0.003905	0.002837	0.038	No	14	0.003371	0.0007539	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-121A	0.005	0.0005	0.038	No	14	0.004007	0.001973	78.57	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-125	0.01326	0.007691	0.038	No	8	0.01048	0.002627	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-32	0.006033	0.002467	0.038	No	4	0.00425	0.0007853	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-41	0.001482	0.0002772	0.038	No	4	0.0007775	0.0002857	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-120	1.121	0.5734	5	No	13	0.8474	0.3685	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-121A	1.279	0.5176	5	No	13	0.8985	0.5123	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-124	0.9537	0.6046	5	No	13	0.7792	0.2348	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-125	1.656	0.7096	5	No	7	1.183	0.3985	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-126	1.82	0.837	5	No	7	1.34	0.47	0	None	No	0.008	NP (normality)
Fluoride (mg/L)	HGWC-120	1.2	0.37	4	No	17	0.6765	0.3798	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-121A	0.23	0.14	4	No	15	0.261	0.2849	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-124	0.15	0.05	4	No	15	0.1052	0.0841	33.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-125	0.1653	0.1006	4	No	8	0.1325	0.0324	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-126	0.493	0.4295	4	No	8	0.4613	0.02997	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-32	0.3683	0.2957	4	No	5	0.332	0.02168	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-39	0.3573	0.2729	4	No	4	0.3175	0.01893	0	None	x^2	0.01	Param.
Fluoride (mg/L)	MW-41	0.289	0.191	4	No	4	0.24	0.0216	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-120	0.001	0.0002	0.015	No	14	0.0008121	0.0003742	78.57	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-121A	0.001	0.00036	0.015	No	14	0.0008271	0.0003485	78.57	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-124	0.001	0.000075	0.015	No	14	0.0006676	0.0004629	64.29	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-125	0.001	0.000044	0.015	No	8	0.0004316	0.0004719	37.5	None	No	0.004	NP (normality)
Lead (mg/L)	HGWC-126	0.001	0.000042	0.015	No	8	0.0006416	0.0004946	62.5	None	No	0.004	NP (NDs)
Lithium (mg/L)	HGWC-120	0.0335	0.02767	0.04	No	14	0.03004	0.004789	0	None	x^4	0.01	Param.
Lithium (mg/L)	HGWC-121A	0.009226	0.00776	0.04	No	14	0.008493	0.001034	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-124	0.015	0.001	0.04	No	14	0.006065	0.006912	35.71	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-125	0.0055	0.0037	0.04	No	8	0.004475	0.0007667	0	None	No	0.004	NP (normality)
Lithium (mg/L)	HGWC-126	0.004368	0.003132	0.04	No	8	0.00375	0.0005831	0	None	No	0.01	Param.
Lithium (mg/L)	MW-32	0.03543	0.02957	0.04	No	4	0.0325	0.001291	0	None	No	0.01	Param.
Lithium (mg/L)	MW-39	0.03501	0.02819	0.04	No	4	0.028	0.008756	25	Kaplan-Meier	x^2	0.01	Param.
Lithium (mg/L)	MW-41	0.03111	0.02539	0.04	No	4	0.02825	0.001258	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-120	0.03845	0.02481	0.1	No	14	0.03163	0.009633	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-124	0.005	0.00091	0.1	No	14	0.002488	0.00195	35.71	None	No	0.01	NP (normality)
Molybdenum (mg/L)	HGWC-125	0.005097	0.0004784	0.1	No	8	0.004274	0.004341	37.5	Kaplan-Meier	x^(1/3)	0.01	Param.
Molybdenum (mg/L)	MW-32	0.06435	0.05865	0.1	No	6	0.0615	0.002074	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-39	0.064	0.012	0.1	No	5	0.0524	0.0226	0	None	No	0.031	NP (normality)
Molybdenum (mg/L)	MW-41	0.05028	0.02772	0.1	No	4	0.039	0.004967	0	None	No	0.01	Param.

Non-Parametric Confidence Interval

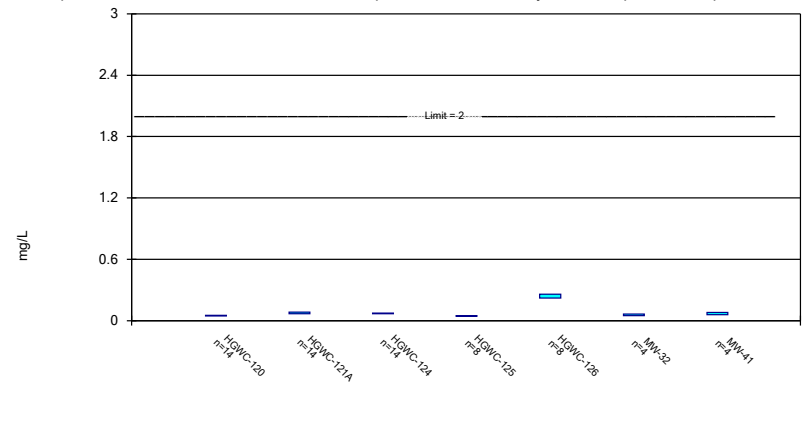
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Antimony Analysis Run 5/17/2021 11:06 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric Confidence Interval

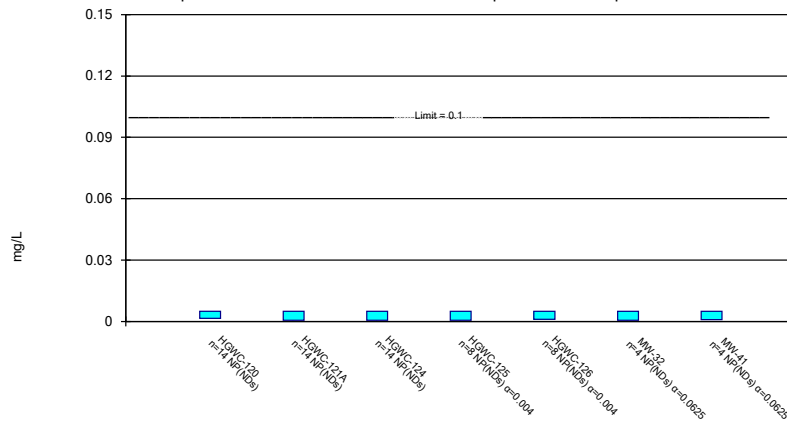
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/17/2021 11:06 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Non-Parametric Confidence Interval

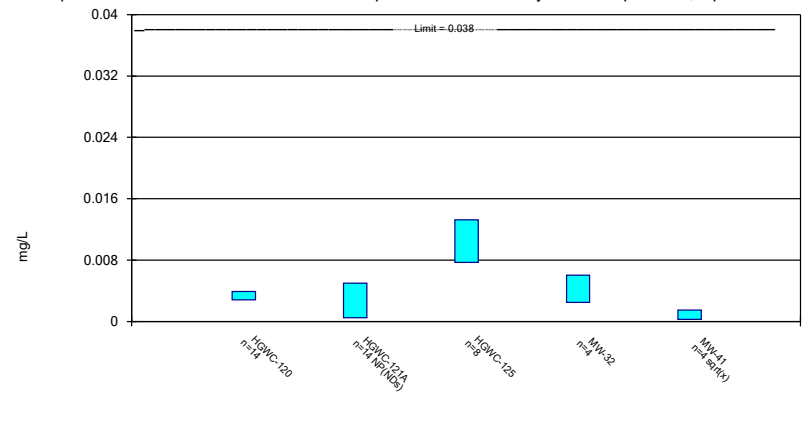
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 5/17/2021 11:06 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

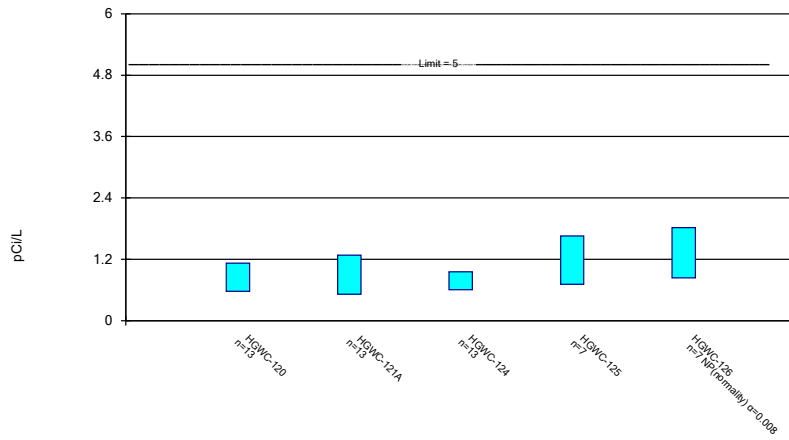
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/17/2021 11:06 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

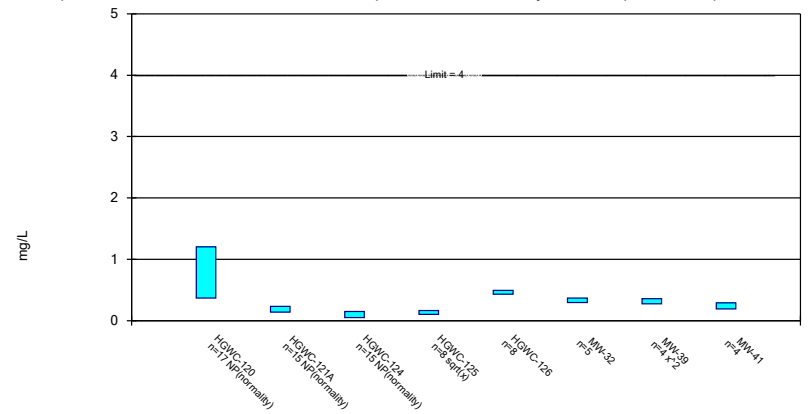
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/17/2021 11:06 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

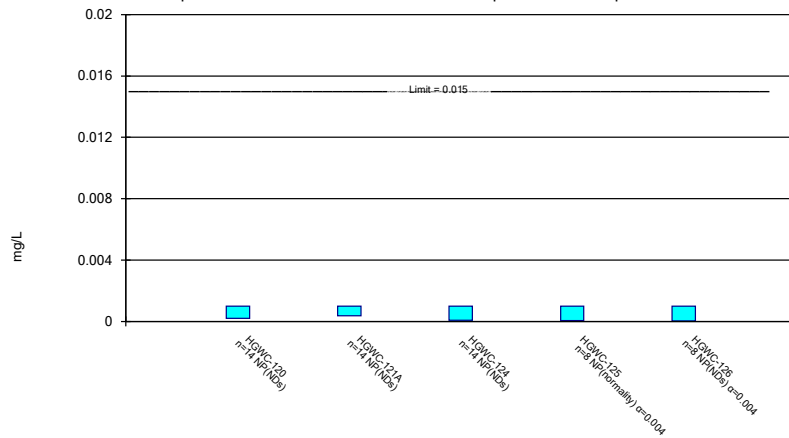
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/17/2021 11:06 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-3

Non-Parametric Confidence Interval

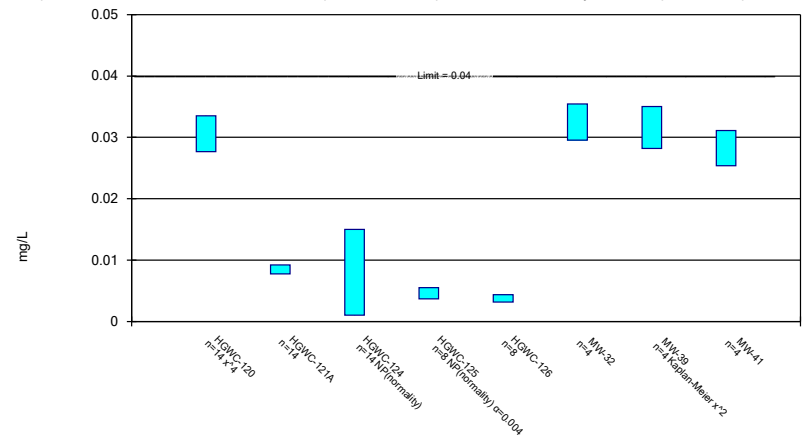
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Lead Analysis Run 5/17/2021 11:06 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

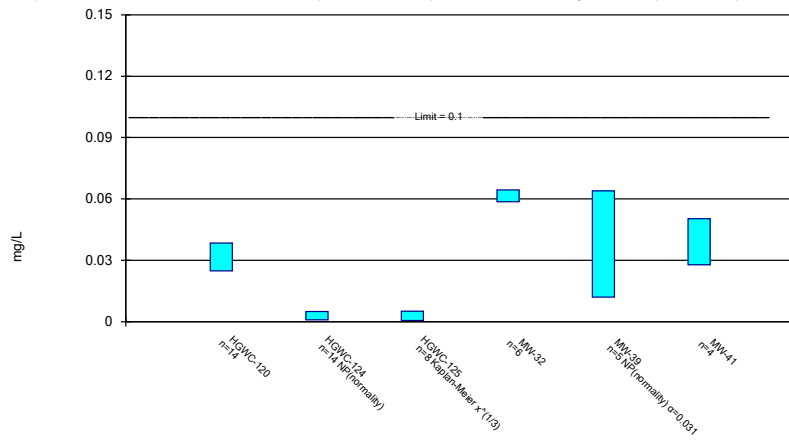
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/17/2021 11:06 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

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



Constituent: Molybdenum Analysis Run 5/17/2021 11:06 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-3

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 5/17/2021 11:08 AM View: Appendix IV

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

	HGWC-120	HGWC-125	HGWC-126
8/31/2016	<0.003		
10/26/2016	<0.003		
1/27/2017	<0.003		
5/25/2017	<0.003		
10/2/2017	<0.003		
11/15/2017	<0.003		
6/5/2018	<0.003		
10/2/2018	<0.003		
8/22/2019	<0.003		
5/22/2020		0.00047 (J)	<0.003
6/16/2020		<0.003	<0.003
8/25/2020		<0.003	<0.003
8/26/2020	<0.003		
9/18/2020			<0.003
9/21/2020	<0.003	<0.003	
11/11/2020			0.0004 (J)
11/12/2020		<0.003	
12/16/2020		<0.003	<0.003
1/20/2021		<0.003	<0.003
3/12/2021	0.0018 (J)	0.00061 (J)	0.00043 (J)
Mean	0.0029	0.002385	0.002354
Std. Dev.	0.0003464	0.001139	0.001197
Upper Lim	0.003	0.003	0.003
Lower Lim.	0.0018	0.00047	0.0004

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 5/17/2021 11:08 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-41
8/31/2016	0.045	0.0782	0.0744				
10/26/2016	0.0462		0.0735				
11/7/2016		0.0764					
1/13/2017		0.0744					
1/27/2017	0.0451		0.0632				
5/25/2017	0.0488		0.0773				
6/3/2017		0.0933					
8/11/2017			0.0672				
10/2/2017	0.0479	0.0815					
11/15/2017	0.051	0.0807	0.0707				
6/5/2018	0.051	0.078	0.07				
10/2/2018	0.059		0.067				
10/5/2018		0.074					
8/22/2019	0.05	0.066					
8/23/2019			0.066				
10/21/2019		0.074	0.075				
10/22/2019	0.051						
3/24/2020			0.075				
3/25/2020	0.052	0.099				0.062	
5/22/2020				0.048	0.24		
6/15/2020							0.074
6/16/2020				0.049	0.24		
8/25/2020				0.045	0.23		
8/26/2020	0.041	0.057				0.055	0.066
8/27/2020			0.062				
9/18/2020					0.21		
9/21/2020	0.046			0.042			
9/28/2020		0.056	0.071			0.053	0.071
11/11/2020					0.23		
11/12/2020				0.042			
12/16/2020				0.041	0.24		
1/20/2021				0.045	0.25		
3/12/2021	0.047			0.043	0.27		
3/15/2021		0.059	0.071			0.057	0.063
Mean	0.04864	0.07482	0.07024	0.04438	0.2388	0.05675	0.0685
Std. Dev.	0.004274	0.0125	0.004638	0.002925	0.01727	0.003862	0.004933
Upper Lim	0.05167	0.08367	0.07352	0.04747	0.2571	0.06552	0.0797
Lower Lim.	0.04562	0.06597	0.06695	0.04128	0.2204	0.04798	0.0573

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 5/17/2021 11:08 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-41
8/31/2016	<0.005	<0.005	<0.005				
10/26/2016	<0.005		<0.005				
11/7/2016		<0.005					
1/13/2017		<0.005					
1/27/2017	<0.005		<0.005				
5/25/2017	<0.005		<0.005				
6/3/2017		<0.005					
8/11/2017			<0.005				
10/2/2017	<0.005	<0.005					
11/15/2017	<0.005	<0.005	<0.005				
6/5/2018	<0.005	<0.005	<0.005				
10/2/2018	<0.005		<0.005				
10/5/2018		<0.005					
8/22/2019	0.00072 (J)	<0.005					
8/23/2019			<0.005				
10/21/2019		<0.005	0.00046 (J)				
10/22/2019	<0.005						
3/24/2020			0.00051 (J)				
3/25/2020	0.0015 (J)	0.0005 (J)				<0.005	
5/22/2020				0.00058 (J)	<0.005		
6/15/2020							<0.005
6/16/2020				0.00052 (J)	<0.005		
8/25/2020				<0.005	0.00096 (J)		
8/26/2020	<0.005	<0.005				<0.005	<0.005
8/27/2020			<0.005				
9/18/2020					<0.005		
9/21/2020	0.00065 (J)			<0.005			
9/28/2020		<0.005	<0.005			0.00058 (J)	<0.005
11/11/2020					<0.005		
11/12/2020				<0.005			
12/16/2020				<0.005	<0.005		
1/20/2021				0.00081 (J)	<0.005		
3/12/2021	<0.005			<0.005	<0.005		
3/15/2021		<0.005	<0.005			<0.005	0.0009 (J)
Mean	0.004134	0.004679	0.004355	0.003364	0.004495	0.003895	0.003975
Std. Dev.	0.001732	0.001203	0.00164	0.00226	0.001428	0.00221	0.00205
Upper Lim	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.0015	0.0005	0.00051	0.00052	0.00096	0.00058	0.0009

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 5/17/2021 11:08 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-125	MW-32	MW-41
8/31/2016	0.0052 (J)	<0.005			
10/26/2016	0.0041 (J)				
11/7/2016		<0.005			
1/13/2017		<0.005			
1/27/2017	0.0034 (J)				
5/25/2017	0.0035 (J)				
6/3/2017		0.0005 (J)			
10/2/2017	0.0036 (J)	0.0003 (J)			
11/15/2017	0.0032 (J)	0.0003 (J)			
6/5/2018	0.0031 (J)	<0.005			
10/2/2018	0.0025 (J)				
10/5/2018		<0.005			
8/22/2019	0.0028 (J)	<0.005			
10/21/2019		<0.005			
10/22/2019	0.0031 (J)				
3/25/2020	0.0036 (J)	<0.005		0.0031 (J)	
5/22/2020			0.01		
6/15/2020					0.0012 (J)
6/16/2020			0.0096		
8/25/2020			0.0087		
8/26/2020	0.0023 (J)	<0.005		0.0048 (J)	0.00068 (J)
9/21/2020	0.0041 (J)		0.012		
9/28/2020		<0.005		0.0047 (J)	0.00066 (J)
11/12/2020			0.012		
12/16/2020			0.0055		
1/20/2021			0.012		
3/12/2021	0.0027 (J)		0.014		
3/15/2021		<0.005		0.0044 (J)	0.00057 (J)
Mean	0.003371	0.004007	0.01048	0.00425	0.0007775
Std. Dev.	0.0007539	0.001973	0.002627	0.0007853	0.0002857
Upper Lim	0.003905	0.005	0.01326	0.006033	0.001482
Lower Lim.	0.002837	0.0005	0.007691	0.002467	0.0002772

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/17/2021 11:08 AM View: Appendix IV

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

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	1.47	1.57	1.22		
10/26/2016	0.864 (U)		0.637 (U)		
11/7/2016		0.739 (U)			
1/13/2017		0.744 (U)			
1/27/2017	0.521 (U)		0.795 (U)		
5/25/2017	0.681 (U)		0.896 (U)		
6/3/2017		0 (U)			
8/11/2017			0.828 (U)		
10/2/2017	0.632 (U)	0.68 (U)			
11/15/2017	1.3	0.911 (U)	0.478 (U)		
6/5/2018	1.26 (U)	0.948 (U)	0.947 (U)		
10/2/2018	0.572 (U)		0.617 (U)		
10/5/2018		1.17 (U)			
8/22/2019	1.35	1.3			
8/23/2019			0.834		
10/21/2019		0.393 (U)	1.11 (U)		
10/22/2019	0.76 (U)				
3/24/2020			0.796 (U)		
3/25/2020	0.696 (U)	0.505 (U)			
5/22/2020				1.1 (U)	1.82
6/16/2020				1.62	1.82
8/25/2020				1.65	1.82
8/26/2020	0.357 (U)	1.96			
8/27/2020			0.494 (U)		
9/18/2020					0.841 (U)
9/21/2020	0.553 (U)			1.45	
9/28/2020		0.761 (U)	0.477 (U)		
11/11/2020					0.837 (U)
11/12/2020				0.633 (U)	
12/16/2020				0.818 (U)	1.26 (U)
1/20/2021				1.01 (U)	0.985 (U)
Mean	0.8474	0.8985	0.7792	1.183	1.34
Std. Dev.	0.3685	0.5123	0.2348	0.3985	0.47
Upper Lim	1.121	1.279	0.9537	1.656	1.82
Lower Lim.	0.5734	0.5176	0.6046	0.7096	0.837

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run: 5/17/2021 11:08 AM View: Appendix IV

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

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41
8/31/2016	0.65	0.14 (J)	0.15 (J)					
10/26/2016	0.6		0.3					
11/7/2016		0.18 (J)						
1/13/2017		0.14 (J)						
1/27/2017	1.2		0.3					
5/25/2017	1.4		0.05 (J)					
6/3/2017		0.15 (J)						
8/11/2017			0.1 (J)					
10/2/2017	1	1.2						
11/15/2017	1.3	0.6	<0.1					
6/5/2018	0.48	0.19 (J)	0.078 (J)					
10/2/2018	0.34		0.078 (J)					
10/5/2018		0.23 (J)						
4/2/2019	0.47							
4/3/2019		0.14 (J)	0.089 (J)					
6/17/2019	1.2							
8/22/2019	0.3 (J)	0.2 (J)						
8/23/2019			0.11 (J)					
10/21/2019		0.18 (J)	0.073 (J)					
10/22/2019	0.53							
1/3/2020						0.36		
3/24/2020			<0.1					
3/25/2020	0.43	0.095 (J)				0.34		
3/27/2020							0.29	
5/22/2020				0.1 (J)	0.46			
6/15/2020	0.37							0.21
6/16/2020				0.12	0.44			
8/25/2020				0.16	0.52			
8/26/2020	0.48	0.16				0.33	0.32	0.24
8/27/2020			<0.1					
9/18/2020					0.43			
9/21/2020	0.33			0.11				
9/28/2020		0.15	<0.1			0.33	0.33	0.25
11/11/2020					0.45			
11/12/2020				0.12				
12/16/2020				0.2	0.49			
1/20/2021				0.13	0.44			
3/12/2021	0.42			0.12	0.46			
3/15/2021		0.16	<0.1			0.3	0.33	0.26
Mean	0.6765	0.261	0.1052	0.1325	0.4613	0.332	0.3175	0.24
Std. Dev.	0.3798	0.2849	0.0841	0.0324	0.02997	0.02168	0.01893	0.0216
Upper Lim.	1.2	0.23	0.15	0.1653	0.493	0.3683	0.3573	0.289
Lower Lim.	0.37	0.14	0.05	0.1006	0.4295	0.2957	0.2729	0.191

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 5/17/2021 11:08 AM View: Appendix IV

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

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	<0.001	<0.001	<0.001		
10/26/2016	0.0002 (J)		<0.001		
11/7/2016		<0.001			
1/13/2017		<0.001			
1/27/2017	<0.001		<0.001		
5/25/2017	9E-05 (J)		<0.001		
6/3/2017		7E-05 (J)			
8/11/2017			8E-05 (J)		
10/2/2017	8E-05 (J)	<0.001			
11/15/2017	<0.001	<0.001	<0.001		
6/5/2018	<0.001	0.00036 (J)	<0.001		
10/2/2018	<0.001		<0.001		
10/5/2018		<0.001			
8/22/2019	<0.001	<0.001			
8/23/2019			4.9E-05 (J)		
10/21/2019		<0.001	4.9E-05 (J)		
10/22/2019	<0.001				
3/24/2020			9.4E-05 (J)		
3/25/2020	<0.001	<0.001			
5/22/2020				0.00014 (J)	<0.001
6/16/2020				0.00013 (J)	<0.001
8/25/2020				<0.001	4.5E-05 (J)
8/26/2020	<0.001	<0.001			
8/27/2020			<0.001		
9/18/2020					<0.001
9/21/2020	<0.001			<0.001	
9/28/2020		<0.001	7.5E-05 (J)		
11/11/2020					4.2E-05 (J)
11/12/2020				4.7E-05 (J)	
12/16/2020				<0.001	<0.001
1/20/2021				9.2E-05 (J)	<0.001
3/12/2021	<0.001			4.4E-05 (J)	4.6E-05 (J)
3/15/2021		0.00015 (J)	<0.001		
Mean	0.0008121	0.0008271	0.0006676	0.0004316	0.0006416
Std. Dev.	0.0003742	0.0003485	0.0004629	0.0004719	0.0004946
Upper Lim	0.001	0.001	0.001	0.001	0.001
Lower Lim.	0.0002	0.00036	7.5E-05	4.4E-05	4.2E-05

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 5/17/2021 11:08 AM View: Appendix IV

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

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41
8/31/2016	0.0333 (J)	0.0077 (J)	<0.03					
10/26/2016	0.0352 (J)		<0.03					
11/7/2016		0.0089 (J)						
1/13/2017		0.0091 (J)						
1/27/2017	0.0329 (J)		<0.03					
5/25/2017	0.0347 (J)		0.0011 (J)					
6/3/2017		0.0104 (J)						
8/11/2017			<0.03					
10/2/2017	0.0337 (J)	0.0095 (J)						
11/15/2017	0.0347 (J)	0.0086 (J)	<0.03					
6/5/2018	0.033 (J)	0.0092 (J)	0.0012 (J)					
10/2/2018	0.031 (J)		0.0012 (J)					
10/5/2018		0.0091 (J)						
8/22/2019	0.029 (J)	0.0084 (J)						
8/23/2019			0.0011 (J)					
10/21/2019		0.009 (J)	0.0011 (J)					
10/22/2019	0.03 (J)							
3/24/2020			0.0012 (J)					
3/25/2020	0.024 (J)	0.0066 (J)				0.034		
3/27/2020							<0.03	
5/22/2020				0.0052 (J)	0.0046 (J)			
6/15/2020								0.028 (J)
6/16/2020				0.0053 (J)	0.0045 (J)			
8/25/2020				0.0037 (J)	0.0037 (J)			
8/26/2020	0.023 (J)	0.0071 (J)				0.031	0.031	0.027 (J)
8/27/2020			0.00091 (J)					
9/18/2020					0.0035 (J)			
9/21/2020	0.023 (J)			0.0038 (J)				
9/28/2020		0.0076 (J)	0.0011 (J)			0.032	0.034	0.028 (J)
11/11/2020					0.0032 (J)			
11/12/2020				0.0038 (J)				
12/16/2020				0.0055 (J)	0.0029 (J)			
1/20/2021				0.0046 (J)	0.0038 (J)			
3/12/2021	0.023 (J)			0.0039 (J)	0.0038 (J)			
3/15/2021		0.0077 (J)	0.001 (J)			0.033	0.032	0.03 (J)
Mean	0.03004	0.008493	0.006065	0.004475	0.00375	0.0325	0.028	0.02825
Std. Dev.	0.004789	0.001034	0.006912	0.0007667	0.0005831	0.001291	0.008756	0.001258
Upper Lim	0.0335	0.009226	0.015	0.0055	0.004368	0.03543	0.03501	0.03111
Lower Lim.	0.02767	0.00776	0.001	0.0037	0.003132	0.02957	0.02819	0.02539

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 5/17/2021 11:08 AM View: Appendix IV

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

	HGWC-120	HGWC-124	HGWC-125	MW-32	MW-39	MW-41
8/31/2016	0.0176	<0.01				
10/26/2016	0.0187	<0.01				
1/27/2017	0.0214	<0.01				
5/25/2017	0.0231	0.0009 (J)				
8/11/2017		0.0013 (J)				
10/2/2017	0.0259					
11/15/2017	0.0281	0.0012 (J)				
6/5/2018	0.033	<0.01				
10/2/2018	0.036	<0.01				
8/22/2019	0.039					
8/23/2019		0.0014 (J)				
10/21/2019		0.0013 (J)				
10/22/2019	0.04					
1/3/2020				0.06		
1/22/2020				0.059		
3/24/2020		0.001 (J)				
3/25/2020	0.034			0.062		
3/27/2020					0.012	
4/24/2020					0.062	
5/22/2020			<0.01			
6/15/2020						0.035
6/16/2020			<0.01			
8/25/2020			0.00099 (J)			
8/26/2020	0.05			0.065	0.064	0.039
8/27/2020		0.00091 (J)				
9/21/2020	0.043		<0.01			
9/28/2020		0.0009 (J)		0.062	0.062	0.036
11/12/2020			0.0017 (J)			
12/16/2020			0.014			
1/20/2021			0.0013 (J)			
3/12/2021	0.033		0.0012 (J)			
3/15/2021		0.00092 (J)		0.061	0.062	0.046
Mean	0.03163	0.002488	0.004274	0.0615	0.0524	0.039
Std. Dev.	0.009633	0.00195	0.004341	0.002074	0.0226	0.004967
Upper Lim	0.03845	0.005	0.005097	0.06435	0.064	0.05028
Lower Lim.	0.02481	0.00091	0.0004784	0.05865	0.012	0.02772

FIGURE J.

State Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 5/17/2021, 11:13 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	HGWC-120	0.03845	0.02481	0.01	Yes	14	0.03163	0.009633	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-32	0.06435	0.05865	0.01	Yes	6	0.0615	0.002074	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-39	0.064	0.012	0.01	Yes	5	0.0524	0.0226	0	None	No	0.031	NP (normality)
Molybdenum (mg/L)	MW-41	0.05028	0.02772	0.01	Yes	4	0.039	0.004967	0	None	No	0.01	Param.

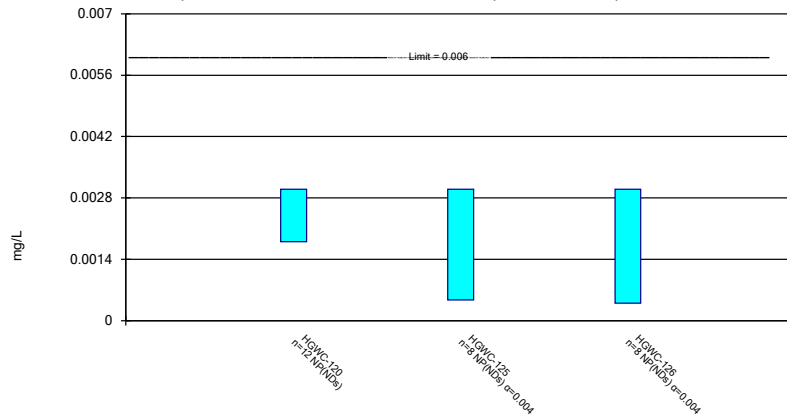
State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-3 Printed 5/17/2021, 11:13 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-120	0.003	0.0018	0.006	No	12	0.0029	0.0003464	91.67	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-125	0.003	0.00047	0.006	No	8	0.002385	0.001139	75	None	No	0.004	NP (NDs)
Antimony (mg/L)	HGWC-126	0.003	0.0004	0.006	No	8	0.002354	0.001197	75	None	No	0.004	NP (NDs)
Barium (mg/L)	HGWC-120	0.05167	0.04562	2	No	14	0.04864	0.004274	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-121A	0.08367	0.06597	2	No	14	0.07482	0.0125	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-124	0.07352	0.06695	2	No	14	0.07024	0.004638	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-125	0.04747	0.04128	2	No	8	0.04438	0.002925	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-126	0.2571	0.2204	2	No	8	0.2388	0.01727	0	None	No	0.01	Param.
Barium (mg/L)	MW-32	0.06552	0.04798	2	No	4	0.05675	0.003862	0	None	No	0.01	Param.
Barium (mg/L)	MW-41	0.0797	0.0573	2	No	4	0.0685	0.004933	0	None	No	0.01	Param.
Chromium (mg/L)	HGWC-120	0.005	0.0015	0.1	No	14	0.004134	0.001732	78.57	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-121A	0.005	0.0005	0.1	No	14	0.004679	0.001203	92.86	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-124	0.005	0.00051	0.1	No	14	0.004355	0.00164	85.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-125	0.005	0.00052	0.1	No	8	0.003364	0.00226	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	HGWC-126	0.005	0.00096	0.1	No	8	0.004495	0.001428	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-32	0.005	0.00058	0.1	No	4	0.003895	0.00221	75	None	No	0.0625	NP (NDs)
Chromium (mg/L)	MW-41	0.005	0.0009	0.1	No	4	0.003975	0.00205	75	None	No	0.0625	NP (NDs)
Cobalt (mg/L)	HGWC-120	0.003905	0.002837	0.038	No	14	0.003371	0.0007539	0	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-121A	0.005	0.0005	0.038	No	14	0.004007	0.001973	78.57	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-125	0.01326	0.007691	0.038	No	8	0.01048	0.002627	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-32	0.006033	0.002467	0.038	No	4	0.00425	0.0007853	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-41	0.001482	0.0002772	0.038	No	4	0.0007775	0.0002857	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-120	1.121	0.5734	5	No	13	0.8474	0.3685	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-121A	1.279	0.5176	5	No	13	0.8985	0.5123	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-124	0.9537	0.6046	5	No	13	0.7792	0.2348	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-125	1.656	0.7096	5	No	7	1.183	0.3985	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-126	1.82	0.837	5	No	7	1.34	0.47	0	None	No	0.008	NP (normality)
Fluoride (mg/L)	HGWC-120	1.2	0.37	4	No	17	0.6765	0.3798	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-121A	0.23	0.14	4	No	15	0.261	0.2849	0	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-124	0.15	0.05	4	No	15	0.1052	0.0841	33.33	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-125	0.1653	0.1006	4	No	8	0.1325	0.0324	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-126	0.493	0.4295	4	No	8	0.4613	0.02997	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-32	0.3683	0.2957	4	No	5	0.332	0.02168	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-39	0.3573	0.2729	4	No	4	0.3175	0.01893	0	None	x^2	0.01	Param.
Fluoride (mg/L)	MW-41	0.289	0.191	4	No	4	0.24	0.0216	0	None	No	0.01	Param.
Lead (mg/L)	HGWC-120	0.001	0.0002	0.001	No	14	0.0008121	0.0003742	78.57	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-121A	0.001	0.00036	0.001	No	14	0.0008271	0.0003485	78.57	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-124	0.001	0.000075	0.001	No	14	0.0006676	0.0004629	64.29	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-125	0.001	0.000044	0.001	No	8	0.0004316	0.0004719	37.5	None	No	0.004	NP (normality)
Lead (mg/L)	HGWC-126	0.001	0.000042	0.001	No	8	0.0006416	0.0004946	62.5	None	No	0.004	NP (NDs)
Lithium (mg/L)	HGWC-120	0.0335	0.02767	0.03	No	14	0.03004	0.004789	0	None	x^4	0.01	Param.
Lithium (mg/L)	HGWC-121A	0.009226	0.00776	0.03	No	14	0.008493	0.001034	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-124	0.015	0.001	0.03	No	14	0.006065	0.006912	35.71	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-125	0.0055	0.0037	0.03	No	8	0.004475	0.0007667	0	None	No	0.004	NP (normality)
Lithium (mg/L)	HGWC-126	0.004368	0.003132	0.03	No	8	0.00375	0.0005831	0	None	No	0.01	Param.
Lithium (mg/L)	MW-32	0.03543	0.02957	0.03	No	4	0.0325	0.001291	0	None	No	0.01	Param.
Lithium (mg/L)	MW-39	0.03501	0.02819	0.03	No	4	0.028	0.008756	25	Kaplan-Meier	x^2	0.01	Param.
Lithium (mg/L)	MW-41	0.03111	0.02539	0.03	No	4	0.02825	0.001258	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-120	0.03845	0.02481	0.01	Yes	14	0.03163	0.009633	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-124	0.005	0.00091	0.01	No	14	0.002488	0.00195	35.71	None	No	0.01	NP (normality)
Molybdenum (mg/L)	HGWC-125	0.005097	0.0004784	0.01	No	8	0.004274	0.004341	37.5	Kaplan-Meier	x^(1/3)	0.01	Param.
Molybdenum (mg/L)	MW-32	0.06435	0.05865	0.01	Yes	6	0.0615	0.002074	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-39	0.064	0.012	0.01	Yes	5	0.0524	0.0226	0	None	No	0.031	NP (normality)
Molybdenum (mg/L)	MW-41	0.05028	0.02772	0.01	Yes	4	0.039	0.004967	0	None	No	0.01	Param.

Non-Parametric Confidence Interval

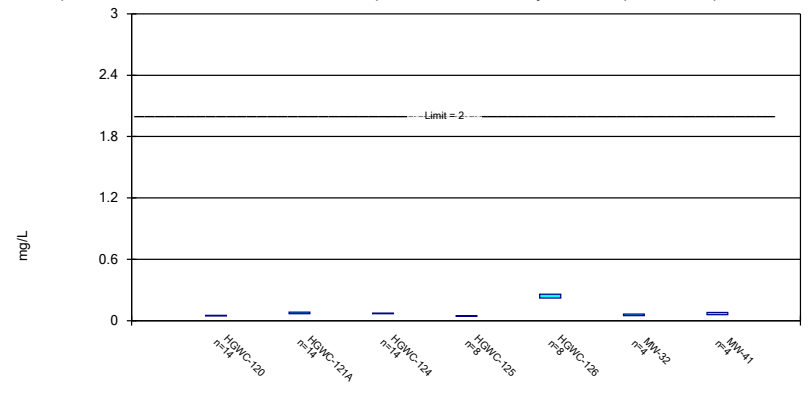
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Antimony Analysis Run 5/17/2021 11:10 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric Confidence Interval

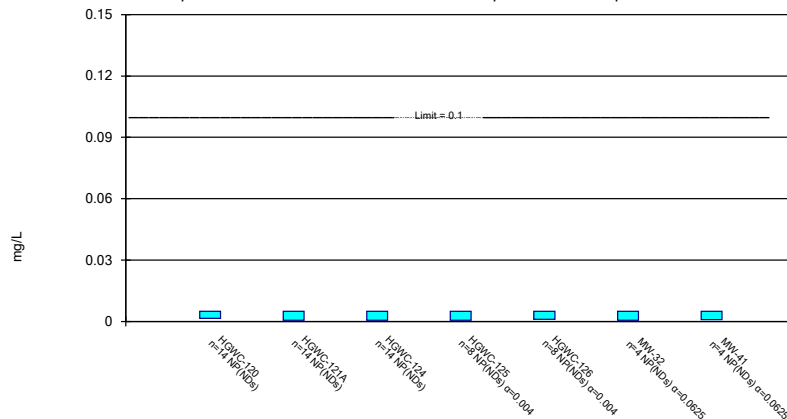
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/17/2021 11:10 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Non-Parametric Confidence Interval

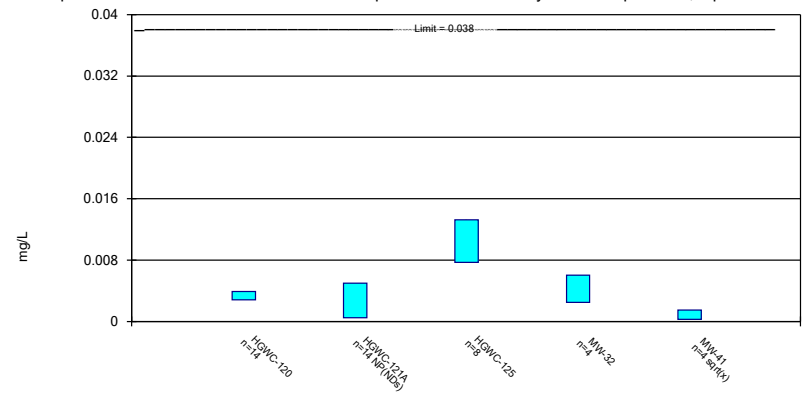
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 5/17/2021 11:10 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

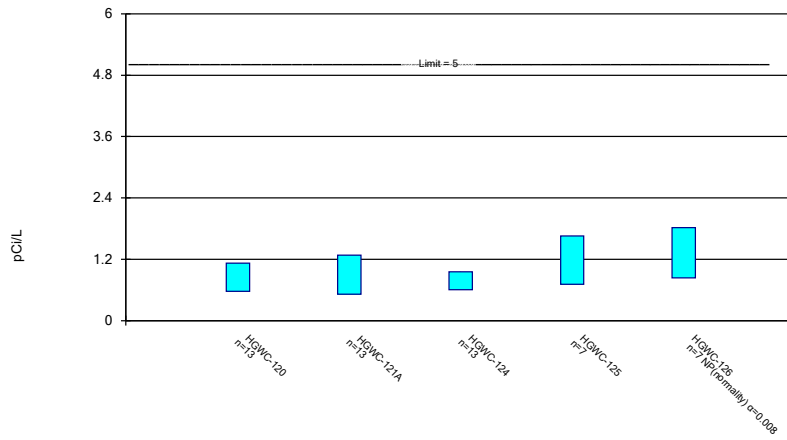
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/17/2021 11:10 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

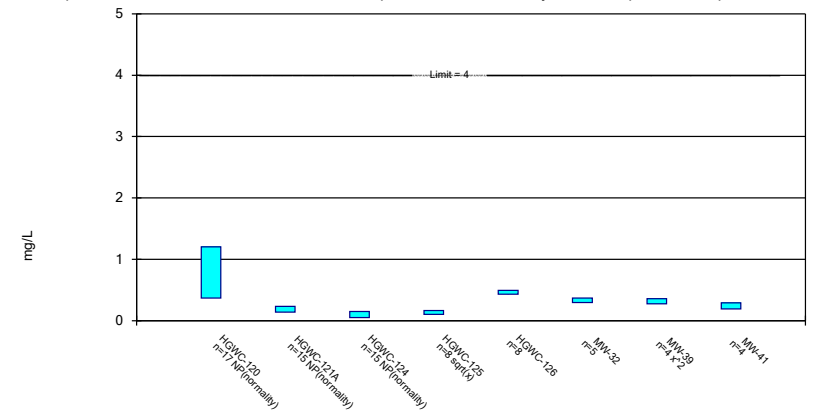
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/17/2021 11:10 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

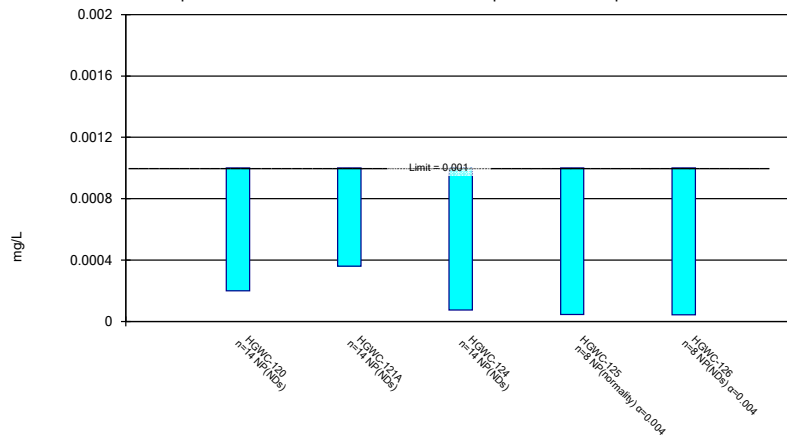
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/17/2021 11:10 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-3

Non-Parametric Confidence Interval

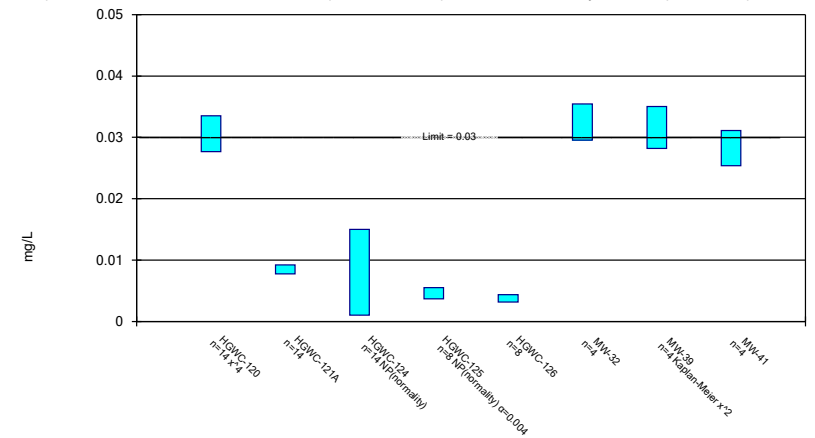
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Lead Analysis Run 5/17/2021 11:10 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-3

Parametric and Non-Parametric (NP) Confidence Interval

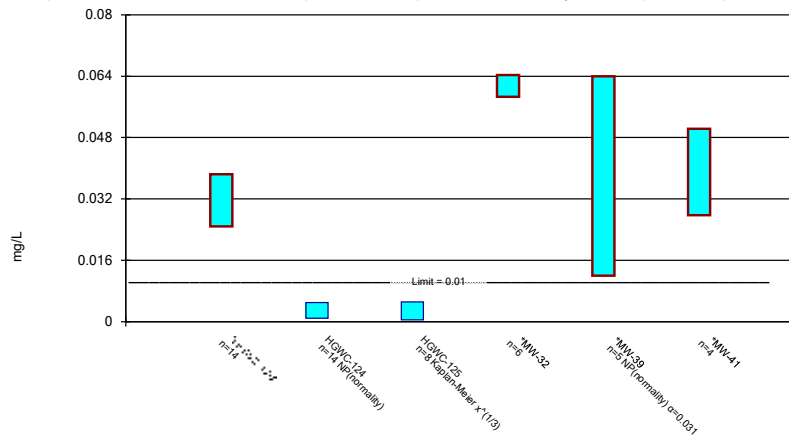
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/17/2021 11:10 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-3

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 5/17/2021 11:10 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-3

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 5/17/2021 11:13 AM View: Appendix IV

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

	HGWC-120	HGWC-125	HGWC-126
8/31/2016	<0.003		
10/26/2016	<0.003		
1/27/2017	<0.003		
5/25/2017	<0.003		
10/2/2017	<0.003		
11/15/2017	<0.003		
6/5/2018	<0.003		
10/2/2018	<0.003		
8/22/2019	<0.003		
5/22/2020		0.00047 (J)	<0.003
6/16/2020		<0.003	<0.003
8/25/2020		<0.003	<0.003
8/26/2020	<0.003		
9/18/2020			<0.003
9/21/2020	<0.003	<0.003	
11/11/2020			0.0004 (J)
11/12/2020		<0.003	
12/16/2020		<0.003	<0.003
1/20/2021		<0.003	<0.003
3/12/2021	0.0018 (J)	0.00061 (J)	0.00043 (J)
Mean	0.0029	0.002385	0.002354
Std. Dev.	0.0003464	0.001139	0.001197
Upper Lim	0.003	0.003	0.003
Lower Lim.	0.0018	0.00047	0.0004

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 5/17/2021 11:13 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-41
8/31/2016	0.045	0.0782	0.0744				
10/26/2016	0.0462		0.0735				
11/7/2016		0.0764					
1/13/2017		0.0744					
1/27/2017	0.0451		0.0632				
5/25/2017	0.0488		0.0773				
6/3/2017		0.0933					
8/11/2017			0.0672				
10/2/2017	0.0479	0.0815					
11/15/2017	0.051	0.0807	0.0707				
6/5/2018	0.051	0.078	0.07				
10/2/2018	0.059		0.067				
10/5/2018		0.074					
8/22/2019	0.05	0.066					
8/23/2019			0.066				
10/21/2019		0.074	0.075				
10/22/2019	0.051						
3/24/2020			0.075				
3/25/2020	0.052	0.099				0.062	
5/22/2020				0.048	0.24		
6/15/2020							0.074
6/16/2020				0.049	0.24		
8/25/2020				0.045	0.23		
8/26/2020	0.041	0.057				0.055	0.066
8/27/2020			0.062				
9/18/2020					0.21		
9/21/2020	0.046			0.042			
9/28/2020		0.056	0.071			0.053	0.071
11/11/2020					0.23		
11/12/2020				0.042			
12/16/2020				0.041	0.24		
1/20/2021				0.045	0.25		
3/12/2021	0.047			0.043	0.27		
3/15/2021		0.059	0.071			0.057	0.063
Mean	0.04864	0.07482	0.07024	0.04438	0.2388	0.05675	0.0685
Std. Dev.	0.004274	0.0125	0.004638	0.002925	0.01727	0.003862	0.004933
Upper Lim	0.05167	0.08367	0.07352	0.04747	0.2571	0.06552	0.0797
Lower Lim.	0.04562	0.06597	0.06695	0.04128	0.2204	0.04798	0.0573

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 5/17/2021 11:13 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-41
8/31/2016	<0.005	<0.005	<0.005				
10/26/2016	<0.005		<0.005				
11/7/2016		<0.005					
1/13/2017		<0.005					
1/27/2017	<0.005		<0.005				
5/25/2017	<0.005		<0.005				
6/3/2017		<0.005					
8/11/2017			<0.005				
10/2/2017	<0.005	<0.005					
11/15/2017	<0.005	<0.005	<0.005				
6/5/2018	<0.005	<0.005	<0.005				
10/2/2018	<0.005		<0.005				
10/5/2018		<0.005					
8/22/2019	0.00072 (J)	<0.005					
8/23/2019			<0.005				
10/21/2019		<0.005	0.00046 (J)				
10/22/2019	<0.005						
3/24/2020			0.00051 (J)				
3/25/2020	0.0015 (J)	0.0005 (J)				<0.005	
5/22/2020				0.00058 (J)	<0.005		
6/15/2020							<0.005
6/16/2020				0.00052 (J)	<0.005		
8/25/2020				<0.005	0.00096 (J)		
8/26/2020	<0.005	<0.005				<0.005	<0.005
8/27/2020			<0.005				
9/18/2020					<0.005		
9/21/2020	0.00065 (J)			<0.005			
9/28/2020		<0.005	<0.005			0.00058 (J)	<0.005
11/11/2020					<0.005		
11/12/2020				<0.005			
12/16/2020				<0.005	<0.005		
1/20/2021				0.00081 (J)	<0.005		
3/12/2021	<0.005			<0.005	<0.005		
3/15/2021		<0.005	<0.005			<0.005	0.0009 (J)
Mean	0.004134	0.004679	0.004355	0.003364	0.004495	0.003895	0.003975
Std. Dev.	0.001732	0.001203	0.00164	0.00226	0.001428	0.00221	0.00205
Upper Lim	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.0015	0.0005	0.00051	0.00052	0.00096	0.00058	0.0009

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 5/17/2021 11:13 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-125	MW-32	MW-41
8/31/2016	0.0052 (J)	<0.005			
10/26/2016	0.0041 (J)				
11/7/2016		<0.005			
1/13/2017		<0.005			
1/27/2017	0.0034 (J)				
5/25/2017	0.0035 (J)				
6/3/2017		0.0005 (J)			
10/2/2017	0.0036 (J)	0.0003 (J)			
11/15/2017	0.0032 (J)	0.0003 (J)			
6/5/2018	0.0031 (J)	<0.005			
10/2/2018	0.0025 (J)				
10/5/2018		<0.005			
8/22/2019	0.0028 (J)	<0.005			
10/21/2019		<0.005			
10/22/2019	0.0031 (J)				
3/25/2020	0.0036 (J)	<0.005		0.0031 (J)	
5/22/2020			0.01		
6/15/2020					0.0012 (J)
6/16/2020			0.0096		
8/25/2020			0.0087		
8/26/2020	0.0023 (J)	<0.005		0.0048 (J)	0.00068 (J)
9/21/2020	0.0041 (J)		0.012		
9/28/2020		<0.005		0.0047 (J)	0.00066 (J)
11/12/2020			0.012		
12/16/2020			0.0055		
1/20/2021			0.012		
3/12/2021	0.0027 (J)		0.014		
3/15/2021		<0.005		0.0044 (J)	0.00057 (J)
Mean	0.003371	0.004007	0.01048	0.00425	0.0007775
Std. Dev.	0.0007539	0.001973	0.002627	0.0007853	0.0002857
Upper Lim	0.003905	0.005	0.01326	0.006033	0.001482
Lower Lim.	0.002837	0.0005	0.007691	0.002467	0.0002772

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/17/2021 11:13 AM View: Appendix IV

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

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	1.47	1.57	1.22		
10/26/2016	0.864 (U)		0.637 (U)		
11/7/2016		0.739 (U)			
1/13/2017		0.744 (U)			
1/27/2017	0.521 (U)		0.795 (U)		
5/25/2017	0.681 (U)		0.896 (U)		
6/3/2017		0 (U)			
8/11/2017			0.828 (U)		
10/2/2017	0.632 (U)	0.68 (U)			
11/15/2017	1.3	0.911 (U)	0.478 (U)		
6/5/2018	1.26 (U)	0.948 (U)	0.947 (U)		
10/2/2018	0.572 (U)		0.617 (U)		
10/5/2018		1.17 (U)			
8/22/2019	1.35	1.3			
8/23/2019			0.834		
10/21/2019		0.393 (U)	1.11 (U)		
10/22/2019	0.76 (U)				
3/24/2020			0.796 (U)		
3/25/2020	0.696 (U)	0.505 (U)			
5/22/2020				1.1 (U)	1.82
6/16/2020				1.62	1.82
8/25/2020				1.65	1.82
8/26/2020	0.357 (U)	1.96			
8/27/2020			0.494 (U)		
9/18/2020					0.841 (U)
9/21/2020	0.553 (U)			1.45	
9/28/2020		0.761 (U)	0.477 (U)		
11/11/2020					0.837 (U)
11/12/2020				0.633 (U)	
12/16/2020				0.818 (U)	1.26 (U)
1/20/2021				1.01 (U)	0.985 (U)
Mean	0.8474	0.8985	0.7792	1.183	1.34
Std. Dev.	0.3685	0.5123	0.2348	0.3985	0.47
Upper Lim	1.121	1.279	0.9537	1.656	1.82
Lower Lim.	0.5734	0.5176	0.6046	0.7096	0.837

Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run: 5/17/2021 11:13 AM View: Appendix IV
 Plant: Hammond Client: Southern Company Data: Hammond AP-3

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41
8/31/2016	0.65	0.14 (J)	0.15 (J)					
10/26/2016	0.6		0.3					
11/7/2016		0.18 (J)						
1/13/2017		0.14 (J)						
1/27/2017	1.2		0.3					
5/25/2017	1.4		0.05 (J)					
6/3/2017		0.15 (J)						
8/11/2017			0.1 (J)					
10/2/2017	1	1.2						
11/15/2017	1.3	0.6	<0.1					
6/5/2018	0.48	0.19 (J)	0.078 (J)					
10/2/2018	0.34		0.078 (J)					
10/5/2018		0.23 (J)						
4/2/2019	0.47							
4/3/2019		0.14 (J)	0.089 (J)					
6/17/2019	1.2							
8/22/2019	0.3 (J)	0.2 (J)						
8/23/2019			0.11 (J)					
10/21/2019		0.18 (J)	0.073 (J)					
10/22/2019	0.53							
1/3/2020						0.36		
3/24/2020			<0.1					
3/25/2020	0.43	0.095 (J)				0.34		
3/27/2020							0.29	
5/22/2020				0.1 (J)	0.46			
6/15/2020	0.37							0.21
6/16/2020				0.12	0.44			
8/25/2020				0.16	0.52			
8/26/2020	0.48	0.16				0.33	0.32	0.24
8/27/2020			<0.1					
9/18/2020					0.43			
9/21/2020	0.33			0.11				
9/28/2020		0.15	<0.1			0.33	0.33	0.25
11/11/2020					0.45			
11/12/2020				0.12				
12/16/2020				0.2	0.49			
1/20/2021				0.13	0.44			
3/12/2021	0.42			0.12	0.46			
3/15/2021		0.16	<0.1			0.3	0.33	0.26
Mean	0.6765	0.261	0.1052	0.1325	0.4613	0.332	0.3175	0.24
Std. Dev.	0.3798	0.2849	0.0841	0.0324	0.02997	0.02168	0.01893	0.0216
Upper Lim.	1.2	0.23	0.15	0.1653	0.493	0.3683	0.3573	0.289
Lower Lim.	0.37	0.14	0.05	0.1006	0.4295	0.2957	0.2729	0.191

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 5/17/2021 11:13 AM View: Appendix IV

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

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126
8/31/2016	<0.001	<0.001	<0.001		
10/26/2016	0.0002 (J)		<0.001		
11/7/2016		<0.001			
1/13/2017		<0.001			
1/27/2017	<0.001		<0.001		
5/25/2017	9E-05 (J)		<0.001		
6/3/2017		7E-05 (J)			
8/11/2017			8E-05 (J)		
10/2/2017	8E-05 (J)	<0.001			
11/15/2017	<0.001	<0.001	<0.001		
6/5/2018	<0.001	0.00036 (J)	<0.001		
10/2/2018	<0.001		<0.001		
10/5/2018		<0.001			
8/22/2019	<0.001	<0.001			
8/23/2019			4.9E-05 (J)		
10/21/2019		<0.001	4.9E-05 (J)		
10/22/2019	<0.001				
3/24/2020			9.4E-05 (J)		
3/25/2020	<0.001	<0.001			
5/22/2020				0.00014 (J)	<0.001
6/16/2020				0.00013 (J)	<0.001
8/25/2020				<0.001	4.5E-05 (J)
8/26/2020	<0.001	<0.001			
8/27/2020			<0.001		
9/18/2020					<0.001
9/21/2020	<0.001			<0.001	
9/28/2020		<0.001	7.5E-05 (J)		
11/11/2020					4.2E-05 (J)
11/12/2020				4.7E-05 (J)	
12/16/2020				<0.001	<0.001
1/20/2021				9.2E-05 (J)	<0.001
3/12/2021	<0.001			4.4E-05 (J)	4.6E-05 (J)
3/15/2021		0.00015 (J)	<0.001		
Mean	0.0008121	0.0008271	0.0006676	0.0004316	0.0006416
Std. Dev.	0.0003742	0.0003485	0.0004629	0.0004719	0.0004946
Upper Lim	0.001	0.001	0.001	0.001	0.001
Lower Lim.	0.0002	0.00036	7.5E-05	4.4E-05	4.2E-05

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 5/17/2021 11:13 AM View: Appendix IV

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

	HGWC-120	HGWC-121A	HGWC-124	HGWC-125	HGWC-126	MW-32	MW-39	MW-41
8/31/2016	0.0333 (J)	0.0077 (J)	<0.03					
10/26/2016	0.0352 (J)		<0.03					
11/7/2016		0.0089 (J)						
1/13/2017		0.0091 (J)						
1/27/2017	0.0329 (J)		<0.03					
5/25/2017	0.0347 (J)		0.0011 (J)					
6/3/2017		0.0104 (J)						
8/11/2017			<0.03					
10/2/2017	0.0337 (J)	0.0095 (J)						
11/15/2017	0.0347 (J)	0.0086 (J)	<0.03					
6/5/2018	0.033 (J)	0.0092 (J)	0.0012 (J)					
10/2/2018	0.031 (J)		0.0012 (J)					
10/5/2018		0.0091 (J)						
8/22/2019	0.029 (J)	0.0084 (J)						
8/23/2019			0.0011 (J)					
10/21/2019		0.009 (J)	0.0011 (J)					
10/22/2019	0.03 (J)							
3/24/2020			0.0012 (J)					
3/25/2020	0.024 (J)	0.0066 (J)				0.034		
3/27/2020							<0.03	
5/22/2020				0.0052 (J)	0.0046 (J)			
6/15/2020								0.028 (J)
6/16/2020				0.0053 (J)	0.0045 (J)			
8/25/2020				0.0037 (J)	0.0037 (J)			
8/26/2020	0.023 (J)	0.0071 (J)				0.031	0.031	0.027 (J)
8/27/2020			0.00091 (J)					
9/18/2020					0.0035 (J)			
9/21/2020	0.023 (J)			0.0038 (J)				
9/28/2020		0.0076 (J)	0.0011 (J)			0.032	0.034	0.028 (J)
11/11/2020					0.0032 (J)			
11/12/2020				0.0038 (J)				
12/16/2020				0.0055 (J)	0.0029 (J)			
1/20/2021				0.0046 (J)	0.0038 (J)			
3/12/2021	0.023 (J)			0.0039 (J)	0.0038 (J)			
3/15/2021		0.0077 (J)	0.001 (J)			0.033	0.032	0.03 (J)
Mean	0.03004	0.008493	0.006065	0.004475	0.00375	0.0325	0.028	0.02825
Std. Dev.	0.004789	0.001034	0.006912	0.0007667	0.0005831	0.001291	0.008756	0.001258
Upper Lim	0.0335	0.009226	0.015	0.0055	0.004368	0.03543	0.03501	0.03111
Lower Lim.	0.02767	0.00776	0.001	0.0037	0.003132	0.02957	0.02819	0.02539

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 5/17/2021 11:13 AM View: Appendix IV

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

	HGWC-120	HGWC-124	HGWC-125	MW-32	MW-39	MW-41
8/31/2016	0.0176	<0.01				
10/26/2016	0.0187	<0.01				
1/27/2017	0.0214	<0.01				
5/25/2017	0.0231	0.0009 (J)				
8/11/2017		0.0013 (J)				
10/2/2017	0.0259					
11/15/2017	0.0281	0.0012 (J)				
6/5/2018	0.033	<0.01				
10/2/2018	0.036	<0.01				
8/22/2019	0.039					
8/23/2019		0.0014 (J)				
10/21/2019		0.0013 (J)				
10/22/2019	0.04					
1/3/2020				0.06		
1/22/2020				0.059		
3/24/2020		0.001 (J)				
3/25/2020	0.034			0.062		
3/27/2020					0.012	
4/24/2020					0.062	
5/22/2020			<0.01			
6/15/2020						0.035
6/16/2020			<0.01			
8/25/2020			0.00099 (J)			
8/26/2020	0.05			0.065	0.064	0.039
8/27/2020		0.00091 (J)				
9/21/2020	0.043		<0.01			
9/28/2020		0.0009 (J)		0.062	0.062	0.036
11/12/2020			0.0017 (J)			
12/16/2020			0.014			
1/20/2021			0.0013 (J)			
3/12/2021	0.033		0.0012 (J)			
3/15/2021		0.00092 (J)		0.061	0.062	0.046
Mean	0.03163	0.002488	0.004274	0.0615	0.0524	0.039
Std. Dev.	0.009633	0.00195	0.004341	0.002074	0.0226	0.004967
Upper Lim	0.03845	0.005	0.005097	0.06435	0.064	0.05028
Lower Lim.	0.02481	0.00091	0.0004784	0.05865	0.012	0.02772