

Georgia Power Company

241 Ralph McGill Blvd NE Atlanta, Georgia 30308

2021 ANNUAL GROUNDWATER MONITORING & CORRECTIVE ACTION REPORT

GEORGIA POWER COMPANY PLANT HAMMOND ASH POND 4 (AP-4)

Prepared by



engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200 Kennesaw, Georgia 30144

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CERTIFICATION STATEMENT

This 2021 Annual Groundwater Monitoring & Corrective Action Report, Georgia Power Company - Plant Hammond – Ash Pond 4 (AP-4) 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] 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.



Whitney Law

Georgia Professional Engineer No. 36641

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 between August 2020 and July 2021 at the Georgia Power Company (Georgia Power) Plant Hammond Ash Pond 4 (AP-4) (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 is a four-unit, coalfired electric generating facility. All four units at Plant Hammond were decommissioned in July 2019 and no longer produce electricity. Dry ash stacking operations in AP-4 began in 1994 and continued until



Plant Hammond and the Site

2010; AP-4 received both fly ash and bottom ash during this period. AP-4 was closed in 2012; therefore, AP-4 is not subject to the Federal monitoring requirements. The Site is located on the western portion of the Plant Hammond property. The Georgia Environmental Protection Division (GA EPD) approved Closure permit No. 057-025D(CCR) for AP-4 on January 27, 2021. Georgia Power plans to perform closure by removal of CCR from AP-4.

Groundwater at the Site is monitored using a monitoring system comprised of five upgradient and eight downgradient wells installed between August 2012 and August 2020 that meet federal and state monitoring requirements. Groundwater monitoring-related activities have been performed at AP-4 since August 2016 in support of establishing the detection monitoring program for the CCR unit in accordance with § 257.94. During the 2020-2021 annual reporting period, the Site remained in assessment monitoring.

During the 2020-2021 annual reporting period, Geosyntec conducted groundwater sampling events in August 2020, September 2020, and March 2021. Groundwater

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

samples were submitted to Pace Analytical Services, LLC, for analysis. Per the CCR rule, groundwater results for September 2020 and March 2021 data were evaluated in accordance with the certified statistical methods. That evaluation identified statistically significant values of Appendix III² and Appendix IV³ constituents, as presented in the table below. The March 2021 sampling event is the initial event that a statistically significant level of an Appendix IV parameter has been identified at AP-4.

Based on review of the Appendix III and Appendix IV statistical results completed for the groundwater monitoring through March 2021, the Site will continue in assessment monitoring. Georgia Power is evaluating the statistically significant level of cobalt identified in well HGWC-117 to assess whether the unit will enter an assessment of corrective measures program. Georgia Power will continue routine groundwater monitoring and reporting at the Site during the cobalt evaluation. Reports will be posted to the website and provided semiannually to GA EPD.

Appendix III Parameter	September 2020	March 2021
Boron	HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118	HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118
Calcium	HGWC-102, HGWC-103, HGWC-105, HGWC-118	HGWC-102, HGWC-103, HGWC-105, HGWC-117, HGWC-118
Chloride	HGWC-102, HGWC-103, HGWC-117	HGWC-102, HGWC-103, HGWC-117
pН		HGWC-101
Sulfate	HGWC-101, HGWC-102, HGWC- 103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118	HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118
Total Dissolved Solids	HGWC-102, HGWC-103, HGWC- 105, HGWC-117, HGWC-118	HGWC-102, HGWC-103, HGWC-105, HGWC-117
Appendix IV Parameter	September 2020	March 2021
Cobalt		HGWC-117

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 combined radium 226 + 228



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LIST OF ACRONYMS

AP ash pond

ASD alternate source demonstration CCR coal combustion residuals CFR Code of Federal Regulations

cm/sec centimeters per second DO dissolved oxygen feet per day

ft/ft feet per foot

GA EPD Georgia Environmental Protection Division

GCL geosynthetic clay liner Georgia Power Georgia Power Company

GWPS Groundwater Protection Standard
HAR Hydrogeologic Assessment Report
Kh horizontal hydraulic conductivity

mg/L milligram per liter
NAD North American Datum

NAVD North American Vertical Datum

NELAP National Environmental Laboratory Accreditation Program

NTU oxidation-reduction potential ORP 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 has prepared this *2021 Semiannual Groundwater Monitoring & Corrective Action Report* to document groundwater monitoring activities conducted at Georgia Power Company (Georgia Power) Plant Hammond (Site) Ash Pond 4 (AP-4) 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 the GA EPD Rules for Solid Waste Management 391-3-4-.10(6), but also 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], specifically § 257.90 through 257.95 of the Federal CCR rule. To specify groundwater monitoring requirements, GA EPD rule 391-3-4-.10(6)(a) incorporates by reference the USEPA CCR Rule. For ease of reference, the USEPA CCR rules are cited within this report.

AP-4 was closed in 2012; therefore, AP-4 is not subject to the Federal monitoring requirements. A permit application for AP-4 was submitted to GA EPD in November 2018. GA EPD approved Closure permit No. 057-025D(CCR) for AP-4 on January 27, 2021. Groundwater monitoring has been initiated in order to meet the GA EPD CCR requirements.

Due to statistically significant increases (SSIs) of Appendix III constituents identified in the 2019 Annual Groundwater Monitoring and Corrective Action Report (Geosyntec, 2019), Georgia Power initiated an assessment monitoring program for AP-4 in August 2019. Since then, Georgia Power has routinely sampled the AP-4 monitoring well network in accordance with the assessment monitoring program as outlined in § 257.95. 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

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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 2019 and no longer produce electricity.

AP-4 was commissioned in 1986 as a surface impoundment with a corresponding surface area of approximately 54 acres. Dry ash stacking operations in AP-4 began in 1994 and continued until 2010; AP-4 received both fly ash and bottom ash during this period. AP-4 was capped in place in 2011-2012 in accordance with the GA EPD regulations regarding landfill closures. AP-4 was graded, engineered with drainage, and capped with a geosynthetic clay liner (GCL) and soil cover. Georgia Power plans to perform closure by removal of CCR from AP-4.

1.2 Regional Geology & Hydrogeologic Setting

The following section summarizes the geologic and hydrogeologic conditions at AP-4 as described in the *Hydrogeologic Assessment Report Revision 01 – Ash Pond 4* (HAR Rev 01) submitted to GA EPD under separate cover in support of the AP-4 closure permit application (Geosyntec, 2020a).

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-4 is underlain by the lower units of the Cambrian age Conasauga Formation, consisting of mostly calcareous shale. Based on review of subsurface investigations, the bedrock underneath AP-4 was described as predominantly shale. AP-4 is underlain primarily by five lithologic units: (i) terrace alluvium, (ii) colluvium, (iii) residuum, (iv) partially weathered shale bedrock, and (v) unweathered shale bedrock.

Based on subsurface investigations, the alluvial deposits generally grade from a silt and silty clay to a clayey sand and silty sand to a sand and gravelly sand at depth. The colluvium consists of silty sand, silty clay with the presence of angular fragments of rocks/materials not expected in the lower units of the Conasauga, such as chert, sandstone,

limestone, or coal. Residual or native soils have been derived from the in-place weathering of the shale bedrock. The residuum is generally described as brown to yellow brown firm clayey silt with weathered shale fragments. The partially weathered shale zone occurs as an intermediate weathering stage between the residuum and the unweathered shale bedrock. The weathered material is described as black to dark gray to dark red hard, fissile shale and claystone. The unweathered shale bedrock was not encountered or directly observed in the historical borings advanced at AP-4. However, based on geologic conditions in the region, weathering, fracturing and jointing decreases with depth and the weathered rock material grades into competent bedrock.

1.2.2 Hydrogeologic Setting

The uppermost aquifer at AP-4 is a regional groundwater aquifer that occurs primarily in the alluvium, colluvium, and residuum, but also to some degree within the weathered and fractured bedrock. Based on observations of alluvium, colluvium, and residuum soil types and horizontal conductivity values, the movement of groundwater in the soil can be characterized as low-to moderate permeability, porous media flow. The groundwater flow in the shallow underlying bedrock is characterized as fracture flow, and due to the preponderance of shale beneath AP-4, is expected to be very low permeability. Groundwater flow direction is generally from north to south.

1.3 **Groundwater Monitoring Well Network**

In accordance with § 257.91, a groundwater monitoring system was installed at AP-4 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 compliance monitoring well network for AP-4 consists of thirteen monitoring wells. A network of piezometers has been installed at the Site that are used to gauge water levels to define groundwater flow direction and gradients. The locations of the compliance monitoring well network and piezometers associated with AP-4 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-4 between August 2020 and July 2021, except where noted. All groundwater sampling was performed in accordance with § 257.93.

2.1 Monitoring Well Installation and Maintenance

Two additional compliance monitoring wells (HGWA-47 and HGWA-48D) were installed in August 2020 to provide additional data to characterize background groundwater quality and flow conditions. A well installation report that includes detailed boring and well construction logs for the installation of these wells is provided in **Appendix A-1**. The installation report was submitted to GA EPD under separate cover in November 2020.

The AP-4 well network was resurveyed by GEL Solutions May 4-6, 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 American 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-4 well network. The 'September 2020 Well Installation Addendum' was submitted to GA EPD on September 29, 2020 (Geosyntec, 2020b) and included the survey data certified by a Georgia-licensed surveyor. The certified well survey data is also presented in **Appendix A-2**.

The well and piezometer networks are inspected during groundwater monitoring events 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 subsequent groundwater sampling event. The well inspection forms for the August 2020, September 2020, and March 2021 events are provided in **Appendix B**.

Based on review of field logs, monitoring wells HGWA-111, HGWA-113, HGWC-117, and HGWC-118 were redeveloped in June 2021 to improve turbidity measurements.

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Monitoring well HGWC-117 showed increased sediment intake through the filter pack during redevelopment activities (surge and purge method) indicating potential well construction issues. Due to the concern regarding well construction integrity, Georgia Power plans to install a replacement well at the same depth adjacent to HGWC-117 to further evaluate groundwater conditions. Redevelopment activities were performed on June 15 through 18 and June 23, 2021; development and calibration logs are provided in **Appendix C**.

2.2 Assessment Monitoring

Georgia Power initiated an assessment monitoring program for groundwater at AP-4 in August 2019. An Assessment Monitoring Program Notification was prepared for AP-4 on November 13, 2019, pursuant to § 257.94(e)(3) and placed in the Operating Record as required by § 257.105(h)(5).

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

2.3 Additional Groundwater Sampling

During this reporting period, additional samples were collected at HGWC-102, HGWA-47 and HGWA-48D to characterize background groundwater conditions, as shown on **Table 2**. For each event, the samples were analyzed for the complete list of Appendix III and Appendix IV constituents. The laboratory reports associated with the groundwater sampling events are provided in **Appendix C**. The July 2020 data for well HGWC-102 was received too late to include with the previous annual monitoring report; therefore, these data are included herein for program completeness.

Following the redevelopment activities described in Section 2.1, a supplemental groundwater sample was collected from HGWC-117 June 23, 2021, to evaluate post-redevelopment groundwater quality conditions relative to historical data. The sample was analyzed for Appendix III constituents and the Appendix IV constituent, cobalt. The associated laboratory report is provided in **Appendix C**.

3.0 SAMPLING METHODOLOGY & ANALYSES

The following section presents a summary of the field sampling procedures that were implemented in connection with the assessment monitoring program conducted at AP-4 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-4 wells and piezometers and used to calculate the groundwater elevations. The calculated groundwater elevations for the August 2020, September 2020, and March 2021 sampling events are presented in **Table 3**. The 2020 survey data was used to calculate the groundwater elevations for the three events.

The groundwater elevation data were used to prepare potentiometric surface contour maps for the August 2020, September 2020, and March 2021 events, which are presented on **Figures 3, 4**, and **5**, respectively. Groundwater in the AP-4 area flows under the influence of topography from slightly higher ground surface elevations on the northern side of AP-4 towards lower elevations to the south of AP-4 along the Coosa River.

3.2 **Groundwater Gradient and Flow Velocity**

The representative groundwater hydraulic gradients within the uppermost aquifer beneath AP-4 were 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. When possible, 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. Given the surface area covered by AP-4, hydraulic gradients were calculated along the eastern, central, and western portions of the unit. The well pairs correlating to these flow areas are, respectively: GWA-14 and HGWC-118; HGWA-113 and HGWC-102; HGWA-111 and HGWC-107. **Table 4** provides the calculated hydraulic gradients. The calculated gradients from the three portions were averaged for each sampling event and then averaged for the reporting period to provide a representative gradient of 0.016 feet per foot (ft/ft) across AP-4.

The approximate horizontal flow velocity associated with AP-4 groundwater was calculated using the following derivative of Darcy's Law.

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

where:

$$V = \text{Groundwater flow velocity}\left(\frac{feet}{day}\right)$$
 $K_h = \text{Average horizontal hydraulic conductivity}\left(\frac{feet}{day}\right)$
 $i = \text{Horizontal hydraulic gradient}\left(\frac{feet}{feet}\right)$
 $n_e = \text{Effective porosity}$

Aquifer testing was conducted by Southern Company Services (SCS) in 2013 to evaluate hydraulic conditions in the vicinity of AP-4. Results of these field events are discussed in detail in the HAR Rev 01. Horizontal hydraulic conductivity (K_h) was estimated for units above the top of bedrock by performing slug tests. The tests were conducted at wells screened in the terrace alluvium or colluvial material; a geometric mean for K_h of 5.86 x 10⁻⁴ centimeters per second (cm/sec) [1.67 feet per day (ft/day)] was calculated from the slug test data for the two units. Since majority of the wells are screened in either alluvial or alluvial/colluvial materials, no hydraulic conductivity testing was conducted on the residuum, weathered shale, or unweathered shale.

The groundwater flow velocity calculation is performed using the geometric mean for K_h of 1.67 ft/day. An estimated effective porosity of 0.15 is used to represent average conditions for the silty clay alluvium/colluvium, derived based on review of literature, observed site lithology, and professional judgement. With these variables determined, and accounting for the representative hydraulic gradient discussed above, the representative groundwater flow velocity underneath AP-4 was calculated to be 0.18 ft/day for the reporting period.

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). The wells were purged and sampled using a dedicated bladder pump equipped with dedicated tubing except for well HGWA-48D which was sampled using a portable bladder pump. Wells HGWC-102 and HGWA-47 were sampled using a peristaltic pump. All non-disposable equipment was decontaminated before use and between well locations.

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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%.
- ± 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 conducted in August 2020 and September 2020, as well as forms from additional sampling events for HGWC-102, HGWA-47 and HGWA-48D, are provided in **Appendix C**.

3.4 <u>Laboratory Analyses</u>

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 C.**

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The groundwater analytical results from the August 2020, September 2020, March 2021 sampling events, as well as additional background sampling events for HGWC-102, HGWA-47 and HGWA-48D are summarized in **Table 5**. The associated Pace Analytical laboratory reports are provided in **Appendix C**.

3.5 Quality Assurance & Quality Control Summary

Quality assurance/quality control (QA/QC) samples were collected during the groundwater monitoring events 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 report is provided in **Appendix C**, along with the laboratory reports.

4.0 STATISTICAL ANALYSIS

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

4.1 Statistical Methods

Analytical data 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 GWPS. Detailed statistical methods used for Appendix III and Appendix IV constituents are discussed in statistical analysis packages provided in **Appendix D** and summarized in Sections 4.1.1 and 4.1.2. The GWPS were finalized pursuant to § 257.95(d)(2) and presented in **Table 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 from wells HGWA-47, HGWA-48D, HGWA-111, HGWA-112, and HGWA-113 to establish a background limit for an individual constituent, and the most recent sample from each downgradient well is compared to the same limit for each parameter. The most recent sample from each downgradient well is compared to the background limit to determine whether there are SSIs. An "initial exceedance" occurs when an Appendix III constituent reported in the groundwater of a downgradient compliance monitoring well exceeds the

constituent's associated PL. The 1-of-2 resample plan allows for collection of an independent resample. A confirmed exceedance is noted only when the resample confirms the initial exceedance by also exceeding the statistical limit. If the resample falls within its respective prediction limit, no exceedance is declared.

4.1.2 Appendix IV Statistical Methods

To statistically compare groundwater data to GWPS, confidence intervals are constructed for each of the detected Appendix IV constituents in each downgradient compliance monitoring well. 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 statistically significant levels (SSL) for Appendix IV constituents. Those confidence intervals are compared to the state GWPS. Only when the entire confidence interval is above a GWPS is the well/constituent pair considered to exceed its GWPS. If a confidence interval exceeds a GWPS, an SSL exceedance is identified.

As described in the GA EPD CCR Rule, the 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.

USEPA revised the Federal CCR Rule on July 30, 2018, specifying GWPS for cobalt, lead, lithium, and molybdenum as described in § 257.95(h)(2). Presently those rule-specified GWPS have not yet been incorporated into the current GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a).

Following the above 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 statistical analyses, Appendix III constituents continue to exceed background PLs for the September 2020 and March 2021 assessment monitoring event.

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Pursuant to § 257.95(f), assessment monitoring should continue based on these statistical results.

Statistical analysis of the March 2021 data identified an SSL of Appendix IV constituent cobalt above the established state GWPS (0.005 mg/L) in downgradient well HGWC-117. This is the first reporting period for which an SSL has been identified for any Appendix IV constituents in an AP-4 compliance monitoring well. A groundwater exceedance notification acknowledging the SSL of cobalt will be placed in the Operating Record within 30 days of statistically identifying the exceedance, pursuant to § 257.95(g).



5.0 MONITORING PROGRAM STATUS

Based on the statistical evaluation results presented for the reporting period, SSIs of Appendix III constituents have not returned to background levels, and therefore Georgia Power will continue to monitor groundwater at AP-4 in accordance with the assessment monitoring program regulations of § 257.95.

Statistical analyses of the compiled AP-4 groundwater data identified an SSL of cobalt in compliance well HGWC-117 following the March 2021 semiannual monitoring event. As discussed in Section 2, HGWC-117 was redeveloped and subsequently sampled June 23, 2021, to evaluate post-redevelopment groundwater concentrations of cobalt relative to historical data. Pace Analtyical reported a cobalt concentration of 0.016 mg/L for the June 23, 2021, groundwater sample, which is in excess of the applicable GWPS. Due to past flooding of the Coosa River in 2019 and 2020 and higher turbidity measured since 2018 at HGWC-117, as well as potential well construction issues (observed during redevelopment), Georgia Power plans to install a well at the same depth adjacent to HGWC-117 to further evaluate groundwater conditions. In accordance with § 257.96, Georgia Power will evaluate the data from the replacement well to determine if an assessment of corrective measures will be initiated for the unit or if an alternative source demonstration (ASD) may be prepared within 90 days of the March 2021 groundwater exceedance notification.



6.0 CONCLUSIONS & FUTURE ACTIONS

This 2021 Annual Groundwater Monitoring & Corrective Action Report for Plant Hammond AP-4 was prepared to fulfill the requirements of GA EPD Rules for Solid Waste Management 391-3-4-.10, and indirectly by reference the USEPA's CCR Rule.

In August 2019, Georgia Power initiated an assessment monitoring program for AP-4 in accordance with the requirements of § 257.95. During the current reporting period of August 2020 to July 2021, Georgia Power conducted an initial Appendix IV assessment monitoring event in August 2020 and two semiannual assessment monitoring events in September 2020 and March 2021. Statistical evaluation of the compiled groundwater quality data following the March 2021 event identified an SSL of Appendix IV constituent cobalt in excess of the state GWPS (0.005 mg/L).

In accordance with § 257.96, within 90 days of the March 2021 SSL notification, Georgia Power will either initiate an assessment of corrective measures for the unit or prepare an ASD documenting the source of cobalt does not originate from the unit. As part of these efforts to evaluate groundwater conditions, Georgia Power plans to install a well in July 2021 at the same depth adjacent to HGWC-117 to further evaluate groundwater conditions. Georgia Power will continue to monitor groundwater in accordance with the assessment monitoring program as specified in § 257.95. The next assessment monitoring event for AP-4 is scheduled for August 2021. The August 2021 semiannual assessment monitoring event will be a combined event to meet the requirements of §257.95(b) and (d)(1) and will include sampling and analysis of all Appendix III and IV constituents.

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7.0 REFERENCES

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- SanitasTM: Groundwater Statistical Software, v. 9.6.05, 2018. Sanitas Technologies©, Boulder, CO.
- USEPA, 2001. Region IV Environmental Investigations Standard Operating Procedures and Quality Assurance Manual. Science and Ecosystem Support Division. Region IV. Athens, GA. November 2001.
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- USEPA, 2011. *Region* IV *Data Validation Standard Operating Procedures*. Science and Ecosystem Support Division. Region IV. Athens, GA. September 2011.
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TABLES

Table 1Monitoring Well Network Summary
Plant Hammond AP-4, Floyd County, Georgia

Well ID	Hydraulic Location	Installation Date	Northing (1)	Easting (1)	Ground Surface Elevation (ft)	Top of Casing Elevation (2) (ft)	Top of Screen Elevation ⁽²⁾ (ft)	Bottom of Screen Elevation (2) (ft)	Well Depth (ft BTOC) (3)	Screen Interval Length
Compliance Monitoring Well	l									
HGWA-47	Upgradient	8/21/2020	1548990.96	1934171.84	577.39	580.33	546.84	536.84	43.74	10
HGWA-48D	Upgradient	8/20/2020	1548989.39	1934178.15	577.29	580.26	517.54	507.54	72.97	10
HGWA-111	Upgradient	8/21/2012	1548834.26	1935222.81	588.79	591.75	558.48	548.48	43.67	10
HGWA-112	Upgradient	8/21/2012	1548885.63	1935647.00	593.46	596.27	566.52	556.52	40.15	10
HGWA-113	Upgradient	10/2/2012	1548944.62	1935990.09	592.07	594.58	568.87	558.87	36.11	10
HGWC-101	Downgradient	8/7/2012	1547725.50	1936369.58	575.91	578.85	551.31	541.31	37.94	10
HGWC-102	Downgradient	8/7/2012	1547713.50	1936033.33	574.54	577.54	550.51	540.51	37.43	10
HGWC-103	Downgradient	8/8/2012	1547848.88	1935732.96	577.76	580.79	553.51	543.51	37.68	10
HGWC-105	Downgradient	8/8/2012	1547855.56	1935110.36	579.08	582.09	547.72	537.72	44.67	10
HGWC-107	Downgradient	8/8/2012	1547909.99	1934442.24	576.43	579.31	551.51	541.51	38.20	10
HGWC-109	Downgradient	8/15/2012	1548627.41	1934362.77	573.66	576.77	555.81	545.81	31.36	10
HGWC-117	Downgradient	8/14/2012	1548100.77	1937180.43	579.31	581.98	552.12	542.12	40.26	10
HGWC-118	Downgradient	10/1/2012	1547980.56	1936946.37	576.52	579.02	548.51	538.51	40.91	10
Piezometer										
MW-12	Downgradient	10/21/2014	1547853.78	1937525.46	580.59	583.27	555.84	545.84	37.83	10
GWC-4	Downgradient	8/8/2012	1547898.31	1935398.70	577.73	580.65	543.47	533.47	47.58	10
GWC-6	Downgradient	8/13/2012	1547843.93	1934800.45	578.55	581.63	553.90	543.90	38.13	10
GWC-8	Downgradient	8/9/2012	1548167.13	1934342.94	577.13	579.99	549.47	539.47	40.92	10
GWA-14	Upgradient	10/2/2012	1548982.59	1936642.58	589.70	592.14	561.40	551.40	41.14	10
GWA-15	Upgradient	8/22/2012	1548766.17	1936808.47	588.37	591.56	571.44	561.44	30.52	10
GWA-16	Upgradient	8/21/2012	1548592.74	1937210.99	579.58	582.55	569.94	559.94	23.01	10
GWC-19	Upgradient	8/14/2012	1547892.89	1936572.97	576.90	579.83	554.04	544.04	36.19	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 May 11, 2020. Wells HGWA-47 and HGWA-48D survey data certified September 10, 2020.
- (2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey data certified May 11, 2020. Wells HGWA-47 and HGWA-48D survey data certified September 10, 2020.
- (3) Total well depth accounts for sump if data provided on well construction logs.

Table 2Groundwater Sampling Event Summary
Plant Hammond AP-4, Floyd County, Georgia

Well ID	Hydraulic Location	July 21, 2020	August 24-27, 2020	September 18-28, 2020	November 10-11, 2020	December 15, 2020	January 19, 2021	March 10-19, 2021	June 23, 2021
Purpose of	Sampling Event:	Supplemental	App. IV Annual	Assessment	Supplemental	Supplemental	Supplemental	Assessment	Supplemental
HGWA-47	Upgradient			X	X	X	X	X	
HGWA-48D	Upgradient			X	X	X	X	X	
HGWA-111	Upgradient		X	X				X	
HGWA-112	Upgradient		X	X				X	
HGWA-113	Upgradient		X	X				X	
HGWC-101	Downgradient		X	X				X	
HGWC-102	Downgradient	X	X	X				X	
HGWC-103	Downgradient		X	X				X	
HGWC-105	Downgradient		X	X				X	
HGWC-107	Downgradient		X	X				X	
HGWC-109	Downgradient		X	X				X	
HGWC-117	Downgradient		X	X				X	X
HGWC-118	Downgradient		X	X				X	

Table 3
Summary of Groundwater Elevations
Plant Hammond AP-4, Floyd County, Georgia

	T. CC	August	24, 2020	Septemb	er 14, 2020	March	10, 2021
Well ID	Top of Casing Elevation ⁽¹⁾ (ft)	Depth to Water (ft BTOC)	Groundwater Elevations (ft)	Depth to Water (ft BTOC)	Groundwater Elevations (ft)	Depth to Water (ft BTOC)	Groundwater Elevations (ft)
Compliance Mon	itoring Well						
HGWA-47	580.33			9.15	571.18	6.78	573.55
HGWA-48D	580.26			9.05	571.21	6.65	573.61
HGWA-111	591.75	12.51	579.24	13.47	578.28	11.25	580.50
HGWA-112	596.27	12.40	583.87	14.60	581.67	9.60	586.67
HGWA-113	594.58	11.57	583.01	12.50	582.08	4.73	589.85
HGWC-101	578.85	13.27	565.58	13.60	565.25	13.06	565.79
HGWC-102	577.54	13.03	564.51	13.73	563.81	13.77	563.77
HGWC-103	580.79	13.91	566.88	14.03	566.76	13.25	567.54
HGWC-105	582.09	17.90	564.19	18.55	563.54	18.82	563.27
HGWC-107	579.31	15.11	564.20	15.67	563.64	15.68	563.63
HGWC-109	576.77	8.85	567.92	9.30	567.47	7.70	569.07
HGWC-117	581.98	16.80	565.18	17.40	564.58	17.15	564.83
HGWC-118	579.02	13.45	565.57	14.00	565.02	13.45	565.57
Piezometer							
MW-12	583.27	18.54	564.73	19.20	564.07	NM	NM
GWC-4	580.65	13.71	566.94	13.85	566.80	13.04	567.61
GWC-6	581.63	17.29	564.34	18.77	562.86	17.66	563.97
GWC-8	579.99	14.29	565.70	14.55	565.44	12.72	567.27
GWA-14	592.14	7.95	584.19	8.80	583.34	3.25	588.89
GWA-15	591.56	9.54	582.02	10.65	580.91	7.90	583.66
GWA-16	582.55	5.65	576.90	5.85	576.70	5.27	577.28
GWC-19	579.83	13.20	566.63	13.45	566.38	12.70	567.13
Surface Water Le	evel Gauge Point						
Coosa River ⁽²⁾			564.35		563.50		563.10
P-105			564.36		(3)		(3)
Unnamed Creek			565.05		565.12		NM

Notes:

NM = not measured.

ft = feet.

ft BTOC = feet below top of casing.

- (2) Water levels for Coosa River were recorded approximately 3,900 ft upstream of AP-4 at a staff gauge located near AP-1.
- (3) P-105 was abandoned during the September 2020 sampling event due to access constraints.

⁽¹⁾ Elevations referenced to the North Amervican Vertical Datum of 1988 (NAVD88). Survey completed by GEL Solution dated May 10, 2020 and September 10, 2020 (for wells HGWA-47 and HGWA-48D).

Table 4

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

		A	ugust 24, 20	20			Sep	tember 14, 2	020		March 10, 2021					
Flow Path Direction (1)	h ₁ (ft)	h ₂ (ft)	Δl (ft)	Δh/Δl (ft/ft)	Avg Δh/Δl (ft/ft)	h ₁ (ft)	h ₂ (ft)	Al (ft)	Δh/Δl (ft/ft)	Avg Δh/Δl (ft/ft)	h ₁ (ft)	h ₂ (ft)	Δl (ft)	Δh/Δl (ft/ft)	Avg Δh/Δl (ft/ft)	
Eastern Flow Path (GWA-14 to HGWC-118)	584.19	565.57	1,075	0.017		583.34	565.02	1,075	0.017		588.89	565.57	1,075	0.022		
Central Flow Path (HGWA-113 to HGWC-102)	583.01	564.51	1,235	0.015	0.015	582.08	563.81	1,235	0.015	0.015	589.85	563.77	1,235	0.021	0.019	
Western Flow Path (HGWA-111 to HGWC-107)	579.24	564.20	1,210	0.012		578.28	563.64	1,210	0.012		580.50	563.63	1,210	0.014		

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		Average	2020/2021	
Flow Path Direction (1)	K _h (ft/d)	n	Δh/Δl (ft/ft)	V (ft/d) ⁽²⁾
Eastern Flow Path (GWA-14 to HGWC-118)				
Central Flow Path (HGWA-113 to HGWC-102)	1.67	0.15	0.016	0.18
Western Flow Path (HGWA-111 to HGWC-107)				

Notes:

ft = feet

ft/d = feet per day

ft/ft = feet per foot

 $h_1, h_2 =$ groundwater elevation for identified location

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

K_h = horizontal hydraulic conductivity

 $\Delta l = distance$ between identified location 1 and 2

n = effective porosity

V = groundwater flow velocity

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

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

July 2021

Table 5 Summary of Groundwater Analytical Data Plant Hammond AP-4, Floyd County, Georgia

	Well ID:	HGWA-47 ⁽⁴⁾	HGWA-48D ⁽⁴⁾	HGWA-111	HGWA-111	HGWA-111	HGWA-112	HGWA-112	HGWA-112								
	Sample Date:	9/18/2020	11/10/2020	12/15/2020	1/19/2021	3/12/2021	9/18/2020	11/11/2020	12/15/2020	1/19/2021	3/12/2021	8/25/2020	9/18/2020	3/11/2021	8/25/2020	9/18/2020	3/12/2021
	Parameter (1,2)																
	Boron	0.0082 J	0.0064 J	< 0.0052	0.015 J	0.0067 J	0.015 J	0.014 J	0.0083 J	0.015 J	0.012 J		0.011 J	0.010 J		0.0080 J	0.0061 J
	Calcium	62.2	73.3	72.5	72.5	69.2	51.8	61.3	61.3	58.9	57.5		32.2	53.2		6.5	6.9
I XIQ	Chloride	2.7	2.7	2.9	2.8	2.7	2.6	2.6	2.7	2.7	2.6		2.6	3.4		5.2	5.3
l Q	Fluoride	0.067 J	0.065 J	0.064 J	0.057 J	0.062 J	0.098 J	0.083 J	0.081 J	0.079 J	0.085 J	0.052 J	< 0.050	0.057 J	< 0.050	< 0.050	< 0.050
PE	pH (3)	7.54	7.34	7.27	7.32	7.52	7.50	7.40	7.39	7.40	7.51	6.70	6.46	7.20	5.53	5.58	5.60
AF	Sulfate	3.5	2.3	2.4	2.6	1.9	9.5	4.5	4.2	3.9	4.7		1.0	1.5		< 0.50	0.52 J
	TDS	195	229	233	199	217	224	221	239	224	204		139	207		62.0	56.0
	Antimony	< 0.00028	< 0.00028	< 0.00028	< 0.00028		0.00038 J	0.00031 J	< 0.00028	0.00042 J		< 0.00028			< 0.00028		
	Arsenic	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	0.0018 J	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078
	Barium	0.026	0.027	0.027	0.029	0.030	0.077	0.078	0.091	0.095	0.10	0.031	0.024	0.037	0.028	0.025	0.030
	Beryllium	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	0.000047 J	< 0.000046	0.00014 J	< 0.000046	< 0.000046	0.000054 J
	Cadmium	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012
1	Chromium	0.0039 J	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	0.0013 J	0.0015 J	0.00062 J	0.0013 J	0.00077 J	0.0020 J	0.0039 J	0.0037 J	0.0045 J
(DIX	Cobalt	0.00049 J	< 0.00038	< 0.00038	< 0.00038	< 0.00038	< 0.00038	< 0.00038	0.00039 J	< 0.00038	< 0.00038	< 0.00038	< 0.00038	< 0.00038	< 0.00038	< 0.00038	< 0.00038
	Fluoride	0.067 J	0.065 J	0.064 J	0.057 J	0.062 J	0.098 J	0.083 J	0.081 J	0.079 J	0.085 J	0.052 J	< 0.050	0.057 J	< 0.050	< 0.050	< 0.050
PPE	Lead	< 0.000036	< 0.000036	< 0.000036	0.000038 J	< 0.000036	< 0.000036	< 0.000036	0.00015 J	0.000056 J	0.000048 J	0.00036 J	0.00026 J	0.0011	0.00011 J	0.000065 J	0.00017 J
₹	Lithium	0.0026 J	0.0028 J	0.0026 J	0.0030 J	0.0031 J	0.0051 J	0.0036 J	0.0045 J	0.0032 J	0.0031 J	0.0033 J	0.0021 J	0.0047 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			< 0.000078		
	Molybdenum	0.0015 J	< 0.00069	< 0.00069	< 0.00069		0.0026 J	0.0012 J	0.00097 J	0.0018 J		< 0.00069			< 0.00069		
	Comb. Radium 226/228	1.11 U	0.234 U	0.529 U	0.176 U	0.000 U	1.50 U	0.776 U	1.23 U	1.35 U	0.829 U	0.570 U	0.828 U	0.354 U	0.0182 U	1.15 U	0.164 U
	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		

1 of 3

- J = Indicates the parameter was estimated and detected between the method detection limit (MDL) and the reporting limit (RL).
- = Indicates the parameter was not detected above the analytical MDL.
 TDS = Total dissolved solids

- IDS = 10tal dissolved solids
 U = Indicates the parameter was not detected above the analytical minimum detectable 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-47, HGWA-48D, and HGWC-102 were analyzed for the complete list of Appendix IV constituents to establish groundwater conditions.

Table 5
Summary of Groundwater Analytical Data
Plant Hammond AP-4, Floyd County, Georgia

	Well ID:	HGWA-113	HGWA-113	HGWA-113	HGWC-101	HGWC-101	HGWC-101	HGWC-102 ⁽⁴⁾	HGWC-102 ⁽⁴⁾	HGWC-102 ⁽⁴⁾	HGWC-102 ⁽⁴⁾	HGWC-103	HGWC-103	HGWC-103	HGWC-105	HGWC-105	HGWC-105
	Sample Date:	8/25/2020	9/22/2020	3/16/2021	8/27/2020	9/24/2020	3/17/2021	7/21/2020	8/27/2020	9/24/2020	3/17/2021	8/27/2020	9/24/2020	3/18/2021	8/27/2020	9/24/2020	3/18/2021
	Parameter (1,2)																
	Boron		0.021 J	0.011 J		0.10	0.13	3.0	2.7	2.9	2.7		2.2	2.4		1.2	1.5
Ħ	Calcium		7.9	8.6		20.3	21.8	120	106	120	111		91.3	83.7		92.9	97.7
DIX	Chloride		1.5	1.6		5.5	5.5	7.2	7.1	7.2	6.9		6.0	6.2		3.9	4.3
END	Fluoride	0.17	0.16	0.18	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PPE	pH (3)	5.95	6.10	6.14	5.32	5.48	5.41	5.72	5.70	5.82	5.78	5.82	5.60	5.51	6.45	6.63	6.57
AI	Sulfate		5.3	7.7		97.0	107	378	382	370	332		293	286		177	196
	TDS	**	84.0	99.0		170	213	669	663	696	626		517	465		411	410
	Antimony	< 0.00028			< 0.00028			< 0.00028	< 0.00028	< 0.00028		< 0.00028			< 0.00028		
	Arsenic	< 0.00078	< 0.00078	0.0011 J	< 0.00078	< 0.00078	< 0.00078	0.00083 J	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078
	Barium	0.030	0.038	0.054	0.045	0.041	0.040	0.028	0.028	0.029	0.031	0.038	0.036	0.042	0.068	0.075	0.082
	Beryllium	0.000046 J	0.000099 J	0.00018 J	0.000057 J	0.000048 J	0.000059 J	< 0.000046	< 0.000046	< 0.000046	< 0.000046	0.000050 J	0.000088 J	0.000061 J	< 0.000046	< 0.000046	< 0.000046
	Cadmium	< 0.00012	< 0.00012	< 0.00012	0.00019 J	0.00014 J	< 0.00012	0.00083 J	0.00038 J	0.00032 J	0.00094	0.00082 J	0.00076 J	0.00068	< 0.00012	< 0.00012	< 0.00012
1	Chromium	0.0031 J	0.0046 J	0.0061	< 0.00055	< 0.00055	0.00075 J	< 0.00055	< 0.00055	< 0.00055	< 0.00055	0.00069 J	0.00081 J	0.0030 J	< 0.00055	0.00064 J	0.00058 J
DIX	Cobalt	< 0.00038	0.00074 J	0.0013 J	0.0027 J	0.0021 J	0.0023 J	0.00098 J	0.0010 J	0.0011 J	0.0012 J	0.0019 J	0.0019 J	0.0021 J	< 0.00038	0.00044 J	0.00045 J
	Fluoride	0.17	0.16	0.18	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PPEN	Lead	0.00022 J	0.00096 J	0.0016	< 0.000036	< 0.000036	< 0.000036	< 0.000036	< 0.000036	< 0.000036	< 0.000036	0.00018 J	0.00028 J	0.00024 J	< 0.000036	0.000049 J	0.000058 J
A	Lithium	0.0014 J	0.0018 J	0.0026 J	< 0.00081	< 0.00081	< 0.00081	0.0013 J	0.0011 J	0.0011 J	0.0012 J	0.0016 J	0.0017 J	0.0018 J	0.0037 J	0.0038 J	0.0042 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		
	Comb. Radium 226/228	0.587 U	0.551 U	0.559 U	0.109 U	0.625 U	0.248 U	0.0938 U	1.17 U	1.42	0.401 U	0.370 U	0.804 U	0.274	0.416 U	1.11 U	0.252 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		

2 of 3

July 2021

Table 5
Summary of Groundwater Analytical Data
Plant Hammond AP-4, Floyd County, Georgia

Г	Well ID:	HGWC-107	HGWC-107	HGWC-107	HGWC-109	HGWC-109	HGWC-109	HGWC-117	HGWC-117	HGWC-117	HGWC-117	HGWC-118	HGWC-118	HGWC-118
	Sample Date:	8/27/2020	9/24/2020	3/18/2021	8/27/2020	9/25/2020	3/17/2021	8/27/2020	9/25/2020	3/19/2021	6/23/2021	8/26/2020	9/28/2020	3/18/2021
	Parameter (1,2)	0/2//2020	3/24/2020	3/10/2021	0/2//2020	3/25/2020	3/11/2021	0/27/2020	3/25/2020	3/13/2021	0/23/2021	0/20/2020	3/20/2020	3/10/2021
APPENDIX III	Boron		0.88	0.92		0.28	0.26		1.1	1.5	1.0		0.65	0.81
	Calcium		55.4	56.0		48.5	37.3		72.8	87.3	56.5		88.9	85.4
	Chloride		3.5	3.2		4.1	4.7		16.1	24.9	8.8		4.0	4.3
	Fluoride	< 0.050	0.064 J	< 0.050	0.094 J	0.091 J	0.089 J	< 0.050	< 0.050	< 0.050	< 0.050	0.072 J	0.078 J	0.079 J
	pH ⁽³⁾	6.09	6.11	6.20	6.64	6.79	6.55	5.92	6.01	6.14	5.72	6.97	7.03	7.11
AP	Sulfate		126	128		24.7	28.3		146	162	125		86.0	87.8
	TDS		253	255		188	171		340	371	325		332	328
	Antimony	< 0.00028			< 0.00028			< 0.00028				< 0.00028		
	Arsenic	< 0.00078	< 0.00078	< 0.00078	0.0011 J	0.0017 J	0.0019 J	< 0.00078	< 0.00078	< 0.00078		< 0.00078	< 0.00078	0.0010 J
	Barium	0.034	0.039	0.041	0.083	0.085	0.077	0.047	0.050	0.058		0.056	0.046	0.067
	Beryllium	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	< 0.000046	0.000049 J	0.000066 J	0.000081 J		< 0.000046	< 0.000046	0.000093 J
	Cadmium	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	< 0.00012	0.00080 J	0.00089 J	0.0010		< 0.00012	< 0.00012	< 0.00012
2	Chromium	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	0.00057 J	0.00067 J	0.0010 J		0.00098 J	0.0017 J	0.0021 J
	Cobalt	< 0.00038	< 0.00038	< 0.00038	0.00086 J	0.0010 J	0.0030 J	0.011	0.011	0.011	0.016	0.00061 J	0.00048 J	0.0012 J
APPENDIX	Fluoride	< 0.050	0.064 J	< 0.050	0.094 J	0.091 J	0.089 J	< 0.050	< 0.050	< 0.050	< 0.050	0.072 J	0.078 J	0.079 J
J. J. FE	Lead	< 0.000036	0.00034 J	0.000091 J	< 0.000036	< 0.000036	< 0.000036	0.00014 J	0.00019 J	0.00038 J		0.00036 J	0.00022 J	0.00088 J
A	Lithium	< 0.00081	0.00098 J	0.0011 J	0.0011 J	0.0010 J	< 0.00081	0.0024 J	0.0031 J	0.0035 J		0.0028 J	0.0022 J	0.0029 J
	Mercury	< 0.000078			< 0.000078			< 0.000078				< 0.000078		
	Molybdenum	< 0.00069			< 0.00069			< 0.00069				< 0.00069		
	Comb. Radium 226/228	0.264 U	0.576 U	0.145 U	0.989 U	0.584 U	0.556 U	0.193 U	0.155 U	0.0846 U		1.19	0.613 U	0.778 U
	Selenium	< 0.0016			< 0.0016			< 0.0016				< 0.0016		
	Thallium	< 0.00014			< 0.00014			< 0.00014				< 0.00014		

3 of 3

Table 6

Summary of Background Concentrations and Groundwater Protection Standards Plant Hammond AP-4, Floyd County, Georgia

Analyte	Units	Background ⁽¹⁾	State GWPS ⁽²⁾
Antimony	mg/L	0.003	0.006
Arsenic	mg/L	0.005	0.01
Barium	mg/L	0.091, 0.1	2
Beryllium	mg/L	0.003, 0.0019	0.004
Cadmium	mg/L	0.0025, 0.005	0.005
Chromium	mg/L	0.01, 0.0061	0.1
Cobalt	mg/L	0.005	0.005
Fluoride	mg/L	0.19, 0.18	4
Lead	mg/L	0.005, 0.0016	0.005, 0.0016
Lithium	mg/L	0.03	0.03
Mercury	mg/L	0.0005	0.002
Molybdenum	mg/L	0.01	0.01
Selenium	mg/L	0.01	0.05
Thallium	mg/L	0.001	0.002
Combined Radium-226/228	pCi/L	1.4	5

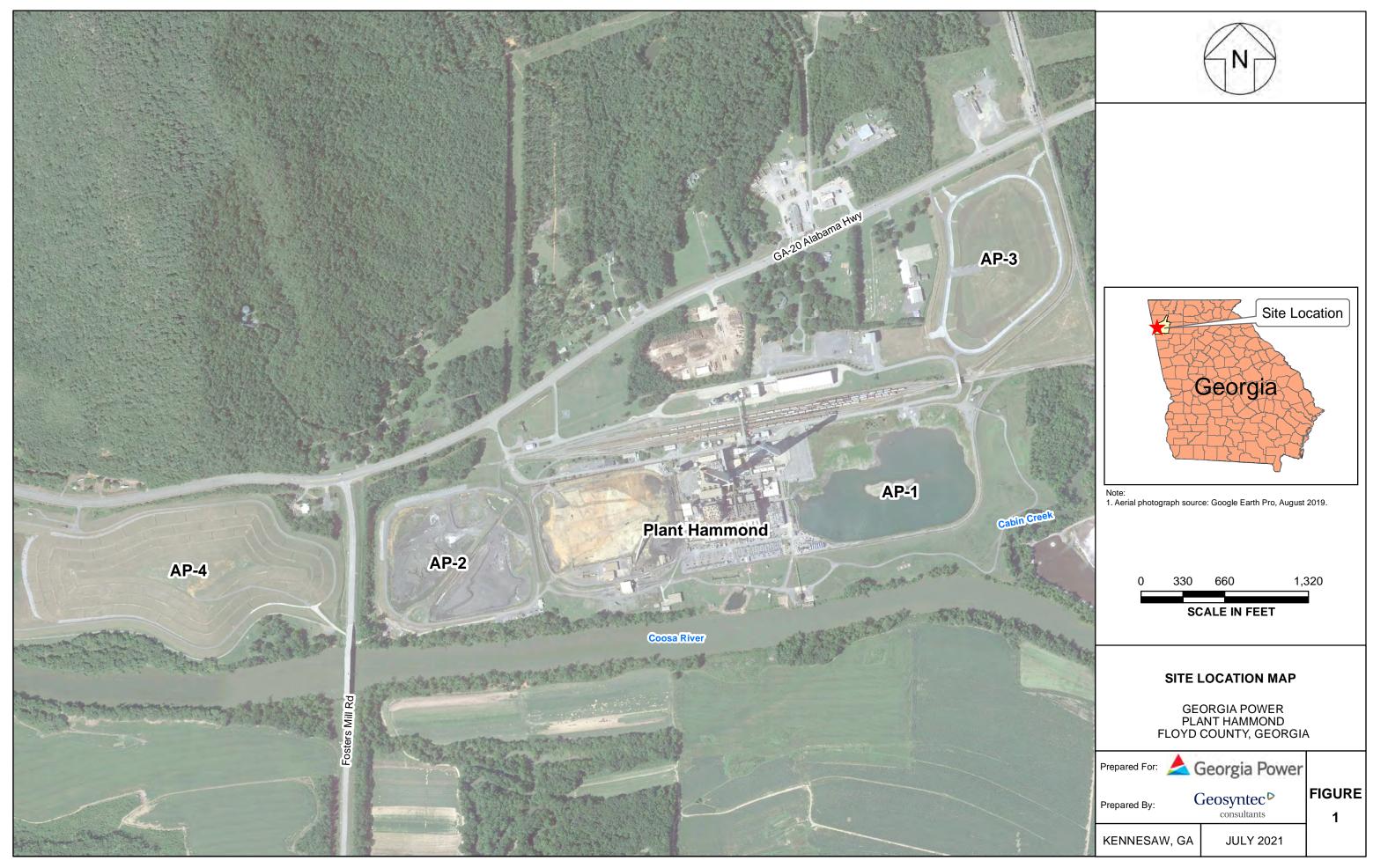
Notes:

mg/L = milligrams per liter.

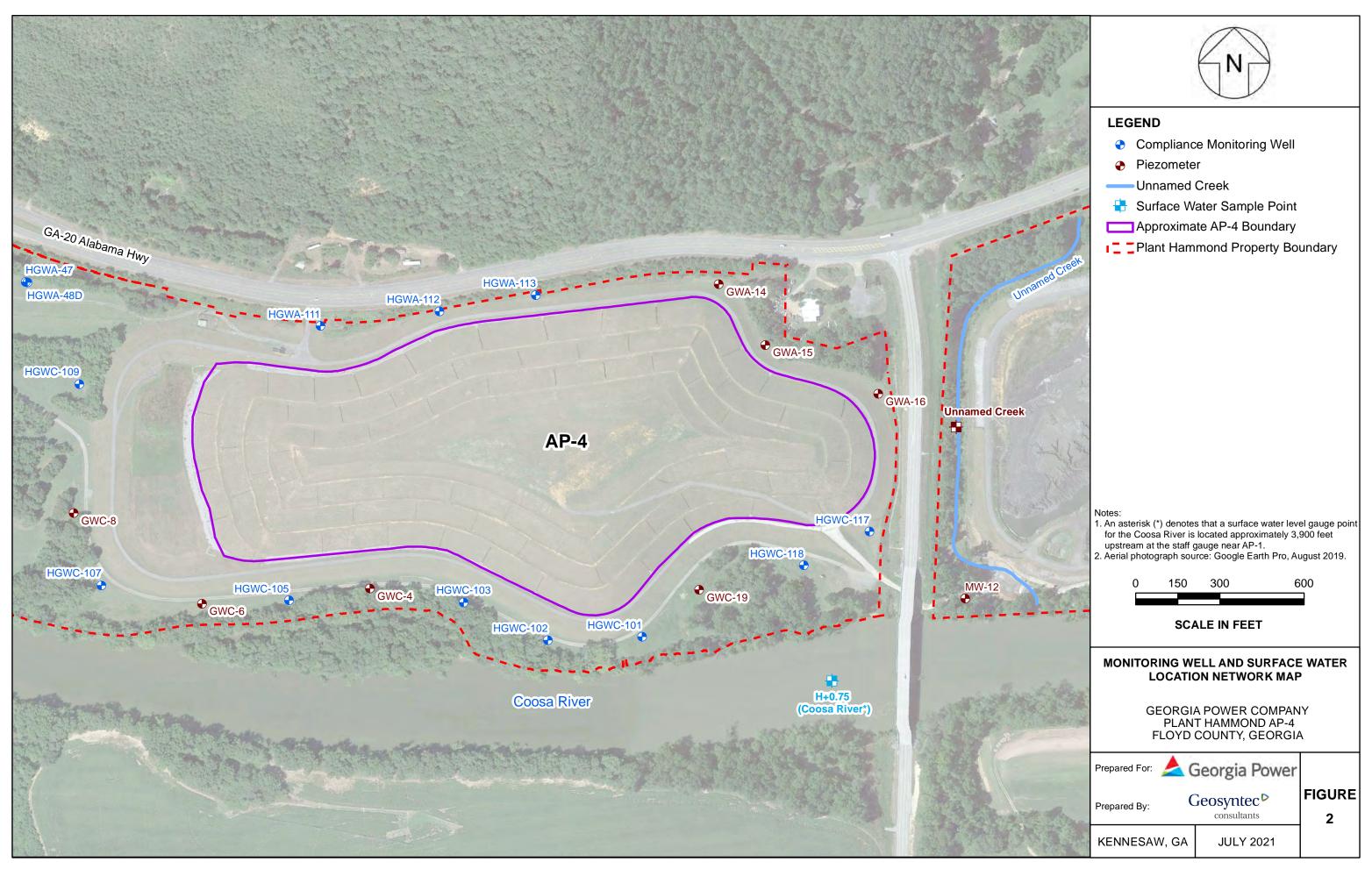
pCi/L = picocuries per liter.

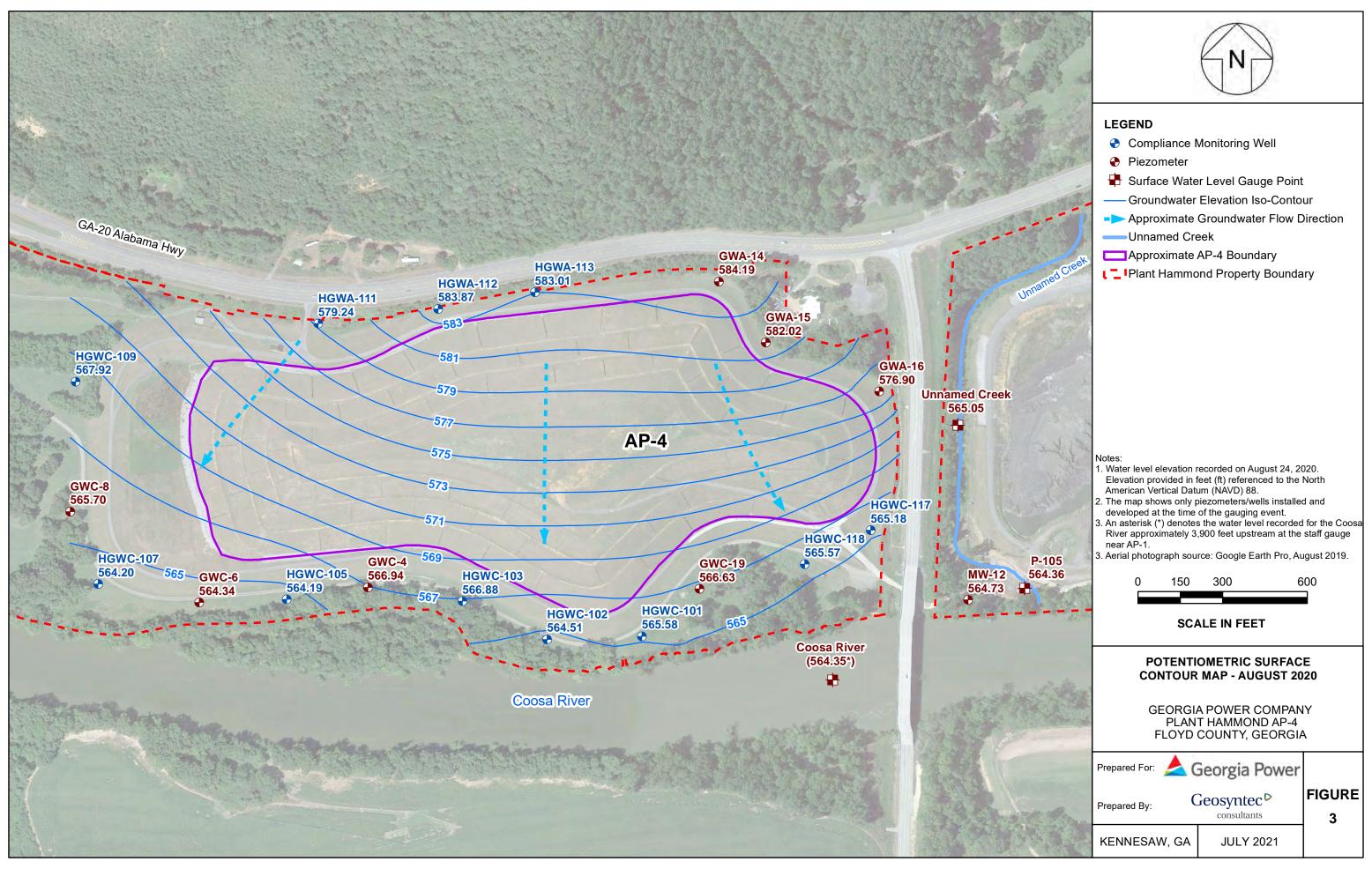
- 1. Statistical analyses were performed on semiannual monitoring event for September 2020 and March 2021.
- 2. The background limits were used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia Environmental Protection Division (EPD) Rule 391-3-4-.10(6)(a). Where two numbers are present, they denote the different background levels or State GWPS for each of the two semiannual monitoring events in the order that they were determined.
- 3. Under the existing Georgia EPD rules, the GWPS is: (i) the maximum contaminant level (MCL), (ii) where the MCL is not established, the background concentration, or (iii) background concentrations for constituents where the background level is higher than the MCL.

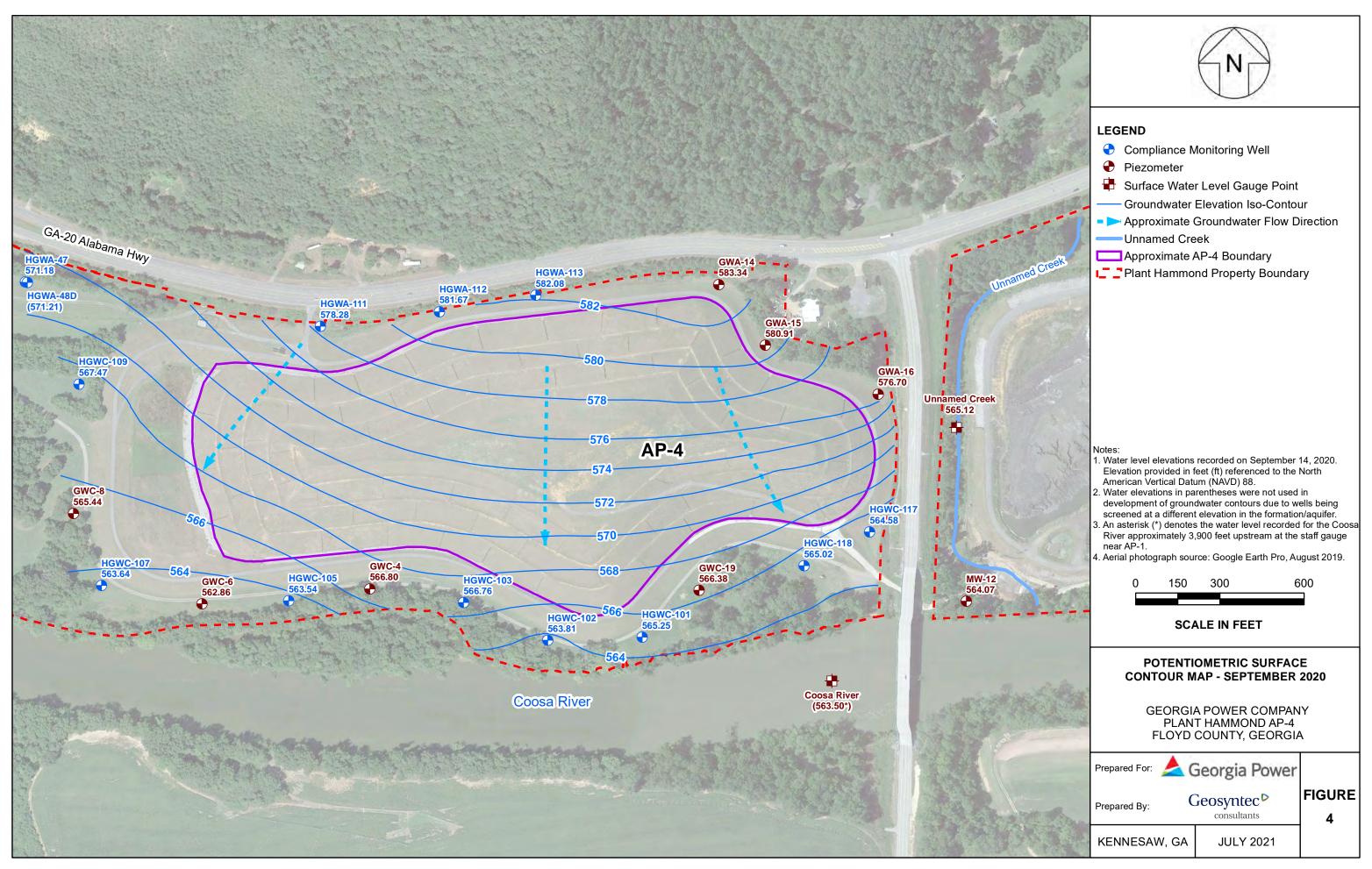
FIGURES

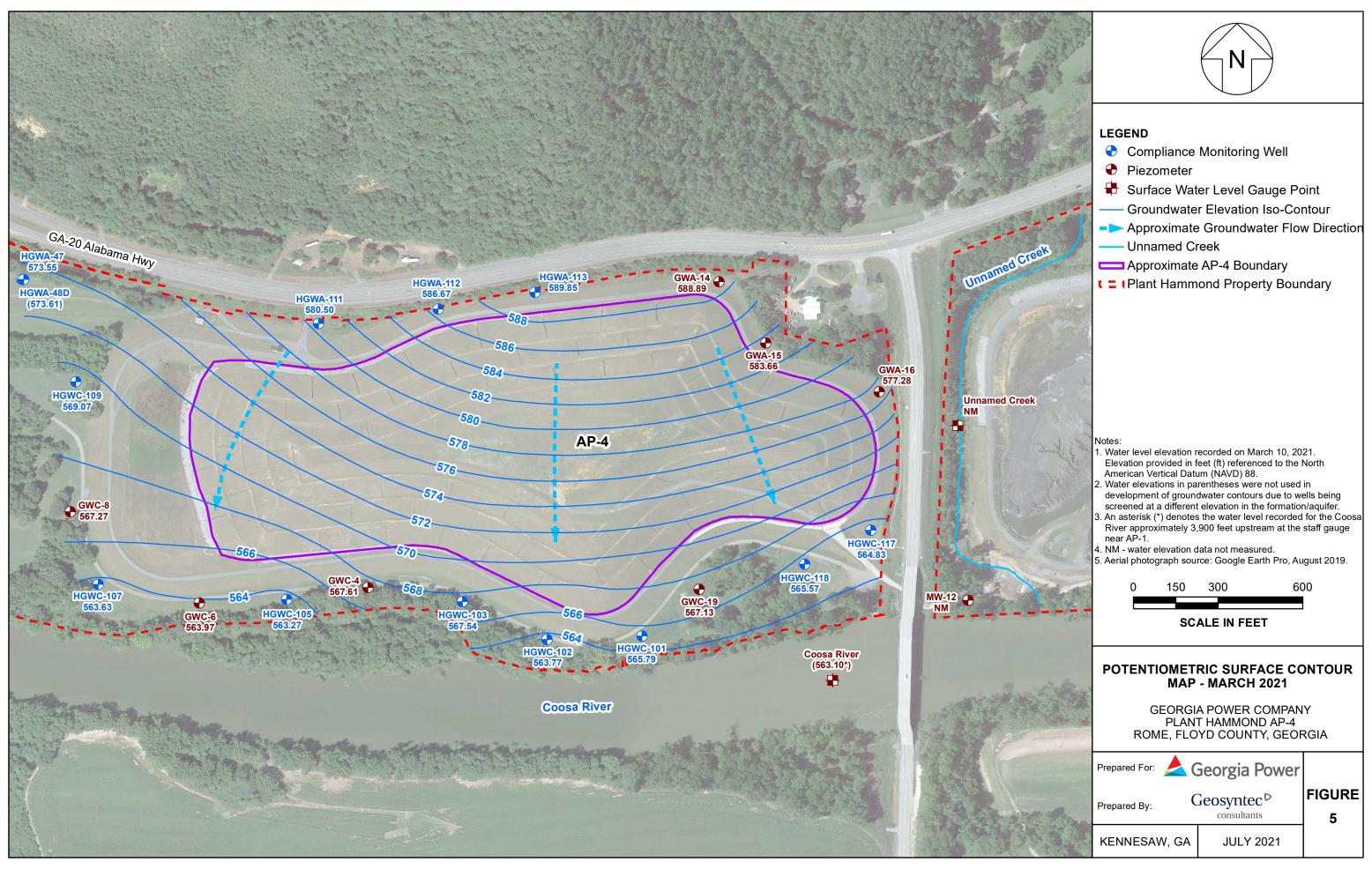


2021 Annual Groundwater Monitoring & Corrective Action Report - Hammond Ash Pond 4 (AP-4)









APPENDIX A

APPENDIX A-1

Well Design, Installation, and Development Report – Addendum, Plant Hammond Ash Pond 4 (AP-4), November 2020

Prepared for

Georgia Power Company

241 Ralph McGill Blvd NE Atlanta, Georgia 30308

WELL DESIGN, INSTALLATION, AND DEVELOPMENT REPORT - ADDENDUM PLANT HAMMOND ASH POND 4 (AP-4)

Prepared by



engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200 Kennesaw, Georgia 30144

Project Number GW6581B

November 2020



WELL DESIGN, INSTALLATION, AND DEVELOPMENT REPORT – ADDENDUM

Plant Hammond Ash Pond 3 November 5, 2020

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 Company
NAD Sorth 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 two groundwater monitoring wells to supplement the current groundwater monitoring system at Georgia Power Company (Georgia Power) Plant Hammond (Site) Ash Pond 4 (AP-4). The report was prepared as an addendum to previously submitted well design, installation, development and decommissioning reports issued for the Site (ERM, 2017), 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-4 includes 13 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**.

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-4 area wells HGWA-47 and HGWA-48D. 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. HGWA-47 is screened from approximately 547 to 537 feet, HGWA-48D is screened between approximately 518 to 508 feet (referenced to the North American Vertical Datum of 1988). Both 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. Since the two new wells were installed within 15 feet of each other, the bentonite seal at the deeper well HGWA-48D was also brought above the elevation corresponding to the screen top of nearby well HGWA-47. 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.
- 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

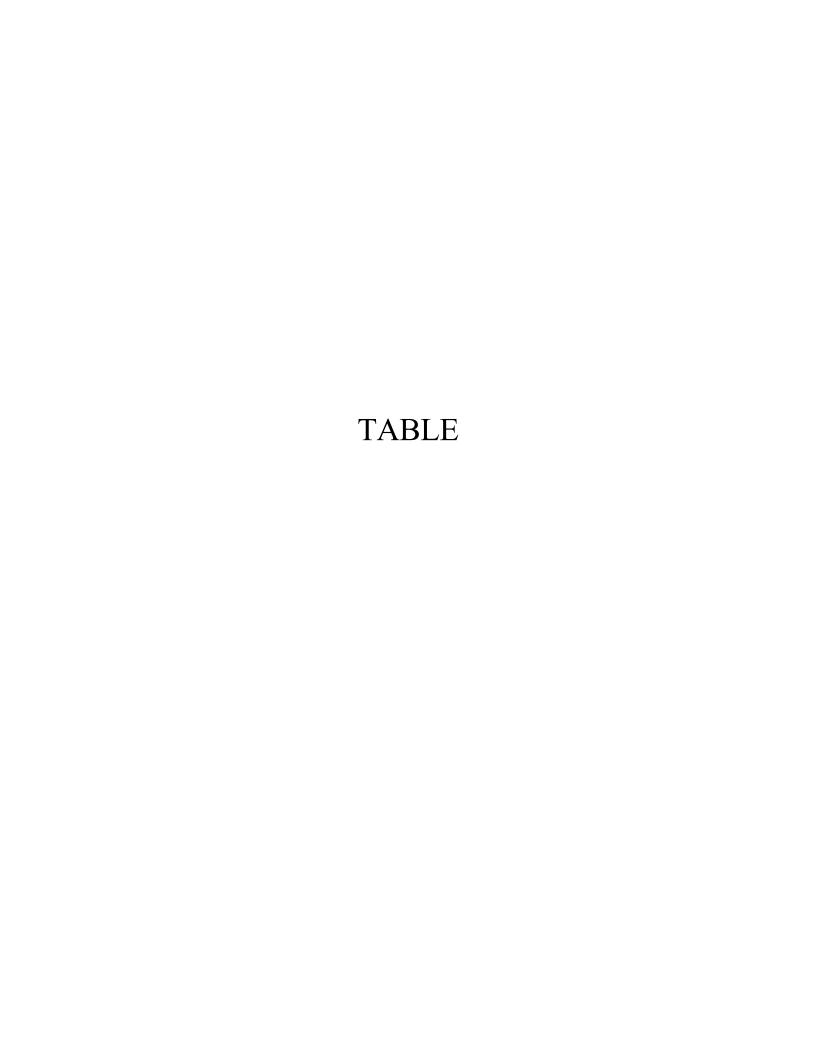


Table 1 Summary of Well Construction Details Plant Hammond AP-4, Floyd County, Georgia

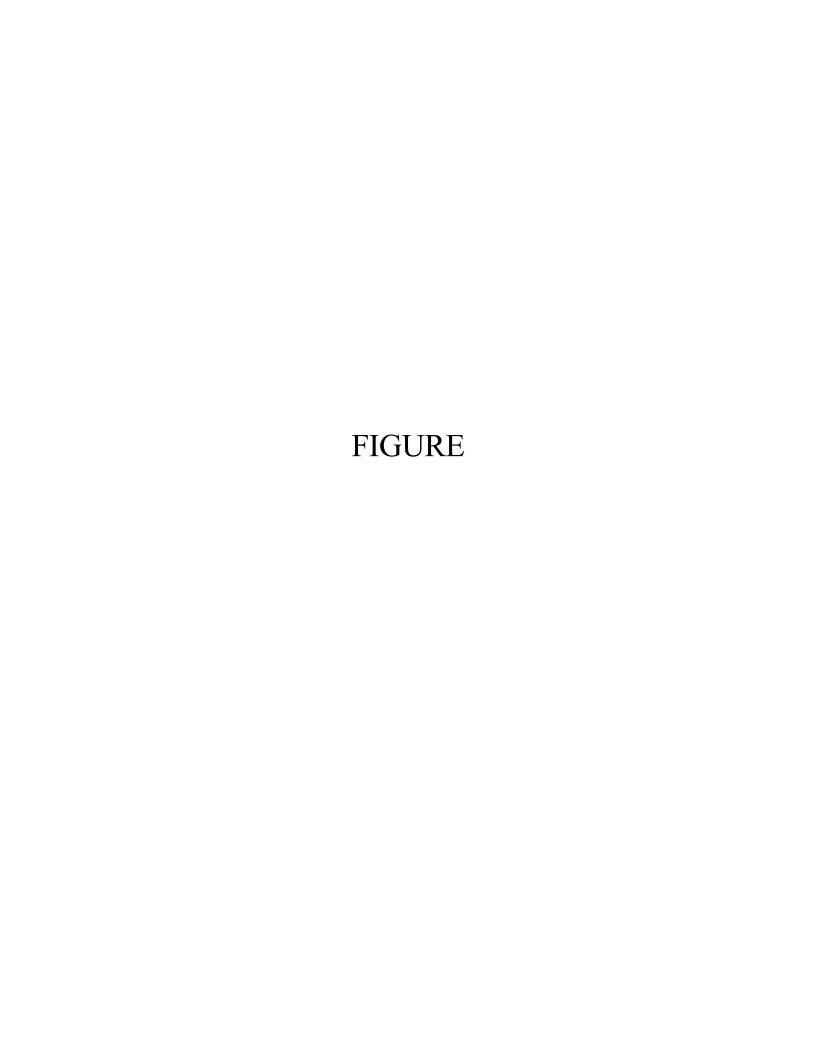
Well ID	Purpose	Installation Date	Northing (1)	Easting (1)	Ground Surface Elevation ⁽²⁾ (ft NAVD88)	Top of Casing Elevation (ft NAVD88)	Top of Screen Elevation (ft NAVD88)	Bottom of Screen Elevation (ft NAVD88)	Well Depth (ft bgs) ⁽³⁾
HGWA-47	Background	8/21/2020	1548990.96	1934171.84	577.39	580.33	546.84	536.84	40.80
HGWA-48D	Background	8/20/2020	1548989.39	1934178.15	577.29	580.26	517.54	507.54	70.00

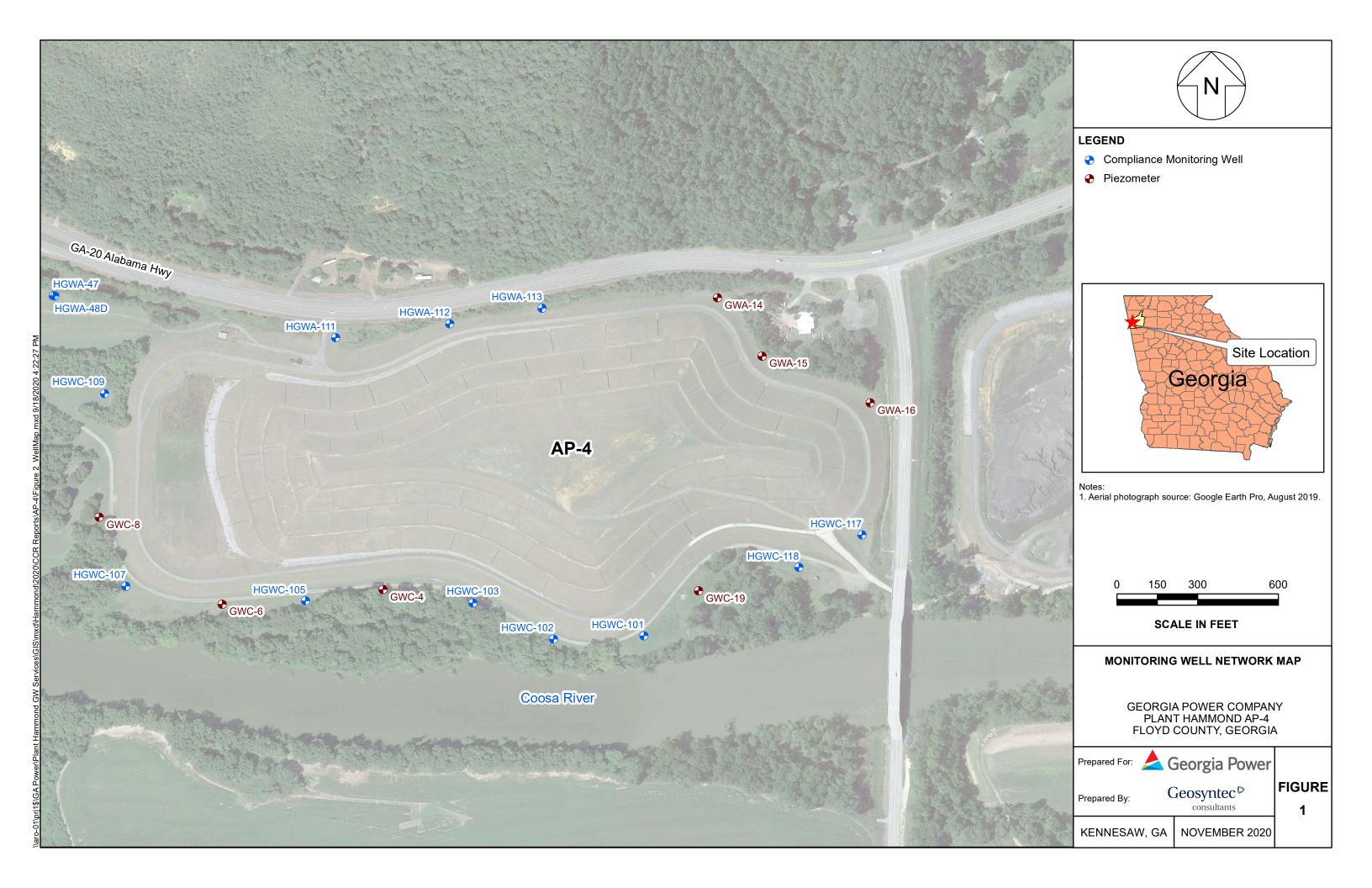
Notes:

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.

1 of 1 November 2020





APPENDIX A

Well Driller Performance Bonds

CONTINUATION CERTIFICATE

Atlantic Specialty Insurance Company

, Surety upon

Issued on 9/27/2017 Expires on 6/30/2019

Renewed on 3/4/2019

Expires on 6/30/2021

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)

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

Attorney-in-Fact Andrew P. Larser

Parker, Smith & Feek, Inc.

2233 112th Ave NE Bellevue, WA 98004

Address of Agent

425-709-3600

Telephone Number of Agent

S-0157/GE 8/08

APPENDIX B

Boring and Well Construction Logs

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

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

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

4)					6.0				
Geosyntec Consultants				WE	LL DEVELOPMEN	T LOG SHEET	•	42	
Client:	SCS/Georgia Po	wer Company	- Commence		Project No.	: GW6581B		_	Development Date: 8 30 (20
Site:	Plant Hammon					AP-4		_	Field Personnel Name: A . Rowsey
Well ID:	From 4	7 HGW	JA-47		Pump Type/Model		on	_	0
Total Depth (ft) (after purge):	43.74 ft bTOC						Polyethylene (HDPE)	_	
Depth to Water (ft):	1.726	+ btoc		Pi	ump Intake Depth (ft)	41 Ft	btoc	_	
Well Diameter (in):		n		S	Start/Stop Purge Time	11281	1419	_	
Well Volume (gal) = 0.041d ₅ h:	5.11	gal			Purge Rate (mL/min):	2333	milmin	_	
Well Volume (L) = gal * 3.785;	21.63	L		To	otal Purge Volume (L)	: 119		_	
d = well diameter (inches); h = i	length of w ater colu	mn (feet)							•
Well Type: Flush	Stick Up		#7	punqud	14L from	1828 to 13	3400 Z333 v	m/min	. *
Well Lock:	No			unuhil	clear + be	gan read	3400 2333 v Uings		
Well Cap Condition:	Replace					,	0		
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.)
1334 7.17	3.7	23.6	_	34.6	overmuner	8.22	2333	14	
1404 7.08	zaza	-166.9	-	19.1	7.13	8.38	2333	(70) 84	
1419 6.96	293.8	-177.7		14.1	1.13	8.32	2363	(35) 119	
3 2						1			
			-					-	AR
	+								
1	1								
							· Very control of the control of		

< 5 NTUs

do probe failure

0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)

Stabilizing Criteria +/- 0.1 SU

+/- 5%

Client:		SCS/Georgia Po	wer Company			Project No.:	GW6581B		_	Development Date: 780 20
Site:	esa f	Plant Hammon				Location:	AP-4			Field Personnel Name: A. Ramsuy
Well ID:	-4	PWW-4	X CS	3WA-48	D	Pump Type/Model:	Mega Monsoo	n		J
Fotal Depth (ft) (after p	purge):	72.97 ft bTOC		<u>_</u>				Polyethylene (HDPE)		
Depth to Water (ft):		4.84	ft bloc		Pt	imp Intake Depth (ft):	71 f	btoe		
Well Diameter (in):			in		S	tart/Stop Purge Time:	1130/132	.3	ul?	-
Well Volume (gal) = 0	.041d ₂ h:	11.04	and			Purge Rate (mL/min):				
Well Volume (L) = gal	1 * 3.785:	41.79			To	otal Purge Volume (L)	49	<u></u>		
d = well diameter (incl	hes); h = len	igth of water colu	ımn (feet)			_				
Well Type:	Flush	Stick Up		# Purgl	d 7L	from 1130 t	× 1138 ≈ 8-	15ml/min		
Well Lock:		No		unt	il clears	began read	agni			
Well Cap Condition:	Good	Replace				•	0 -			ø
Well Tag Present:	Yes	No							tole 1	
Time	pH (SU)	Spec. Cond.	ORP (mV)	DO	Temp. (°C)	Turbidity (NTUs)	DTW (ft btoc)	Purge Rate	Purged Volume	Notes (Purge method, water clarity, odor, purge
	7.42	(μS/cm) 345.γ	93.6	(mg/L)	20.0	62.2	19.13	(mL/min) 875	(L) 7	rate, issues with pump/well/weather/etc.)
1153	7.06	31,09	69.5		20.4	33.0	25.50	467	(7) 14	
1208	102	321.5	46.9	-	20.6	26.9	31.59	461	(1) 14	
1223	496	313.3	-13.9	-		overrange	38.52			
1238	6.90	313.0	-37.0		21.1	80°4 .	844 41.99	983	(1) 31 (14) 35	well suraid
1308	702	3160	-53.3		20.9	11.0	50.55	467	(7)42	
1323	704	315 q	-63.3	_	21.2	6.36	50.24	467	(7)49	AR
		-								N F
			4		-	-			7	
				1						
		-								
		-						4		
							4			
		-								
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						

WELL DEVELOPMENT LOG SHEET

Geosyntec Consultants

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

On RIL



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
GWA-14	1548982.5890	1936642.5820	592.14	1548981.4550	1936642.2230	589.70
GWA-15	1548766.1700	1936808.4740	591.56	1548765.2100	1936807.8670	588.37
GWA-16	1548592.7400	1937210.9880	582.55	1548592.0540	1937209.9470	579.58
GWC-19	1547892.8940	1936572.9730	579.83	1547893.7790	1936572.0390	576.90
GWC-4	1547898.3050	1935398.6960	580.65	1547899.6900	1935398.5510	577.73
GWC-6	1547843.9320	1934800.4510	581.63	1547845.1020	1934800.3890	578.55
GWC-8	1548167.1270	1934342.9370	579.99	1548167.2960	1934344.1910	577.13
HGWA-111	1548834.2570	1935222.8050	591.75	1548833.1050	1935222.9840	588.79
HGWA-112	1548885.6280	1935646.9960	596.27	1548884.5350	1935647.2640	593.46
HGWA-113	1548944.6240	1935990.0870	594.58	1548943.4750	1935990.3010	592.07
HGWC-101	1547725.4970	1936369.5810	578.85	1547726.4760	1936369.0200	575.91
HGWC-102	1547713.5040	1936033.3300	577.54	1547714.8560	1936033.7180	574.54
HGWC-103	1547848.8830	1935732.9610	580.79	1547850.1990	1935733.3030	577.76
HGWC-105	1547855.5570	1935110.3560	582.09	1547856.9860	1935110.3600	579.08
HGWC-107	1547909.9900	1934442.2410	579.31	1547911.2040	1934442.9490	576.43
HGWC-109	1548627.4120	1934362.7670	576.77	1548627.0470	1934361.5230	573.66
HGWC-117	1548100.7710	1937180.4260	581.98	1548099.5300	1937180.3100	579.31
HGWC-118	1547980.5610	1936946.3660	579.02	1547981.8380	1936946.8290	576.52
MW-12	1547853.7790	1937525.4620	583.27	1547855.2080	1937525.2430	580.59

Benchmark	Northing	Easting	Elevation
BM H-1	1547964.9650	1937219.0690	579.02

SURVEY DATA CERTIFICATION FOR SOUTHERN COMPANY TO DETERMINE NORTHING, EASTING, AND VERTICAL ELEVATION OF THE NAIL IN THE CONCRETE PAD & THE PVC WELL CASING.

DATE OF FIELD SURVEY & INSPECTION: 05/04/2020-05/06/2020.

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-1 SET BY GEL SOLUTIONS USING A TRIMBLE DINI LEVEL.



5/11/2020

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

On RIL



9/10/2020

APPENDIX B

Well Inspection Forms

August 2020

Groundwater Monitoring Well Integrity Form

e Name rmit Number	Hermond APH			
ell ID	GWA -15			
te, field conditions				
1 Location/I	dentification	yes	no	n/a
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	<u> </u>		
C	protection from traffic?			
d	Is the drainage around the well acceptable? (no standing water,			
ŭ	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			
4	secured?	/		
b -	Is the casing free of degradation or deterioration?	_	$\overline{}$	
C	Does the casing have a functioning weep hole?	<u> </u>		()
ď	Is the annular space between casings clear of debris and water,			
•	or filled with pea gravel/sand?			
е	Is the well locked and is the lock in good condition?	\overline{z}		2
3 Surface p	ad			
a	Is the well pad in good condition (not cracked or broken)?	/		
b	Is the well pad sloped away from the protective casing?	$\overline{}$		
С	Is the well pad in complete contact with the protective casing?	$\overline{}$		S
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)	/		
е	Is the pad surface clean (not covered with sediment or debris)?	_		
4 Internal ca	asing			
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)?			
С	Is the well properly vented for equilibration of air pressure?	$\overline{}$		·
d	Is the survey point clearly marked on the inner casing?	_		e
е	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?			
С	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	e actions as needed, by date:		9	
7 CONTECTIVE	s donored as necessary, by date.			
,========				

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name	Plant Hammond APM			
Permit Number	2012 C 2 1 2			
Vell ID	HGW A-C	•		
Date, field conditions	8124120 exercest 75"	1.00		1-
1 Location/I	dentification	yes	no	n/a
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 Destastiva	Contra			
2 Protective	<u>Casing</u> Is the protective casing free from apparent damage and able to be			
а	secured?		e	
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?	/		
е	Is the well locked and is the lock in good condition?	$\overline{}$		
• *************************************			—	
3 Surface pa		/		
а	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?	_		
c d	Is the well pad in complete contact with the protective casing? Is the well pad in complete contact with the ground surface and	$\overline{}$		
u	stable? (not undermined by erosion, animal burrows, and does not	6		
	move when stepped on)	/		
е	Is the pad surface clean (not covered with sediment or debris)?			
	404	_	.——:	1
4 Internal ca				
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 d	Is the well properly vented for equilibration of air pressure?	-		
	Is the survey point clearly marked on the inner casing? Is the depth of the well consistent with the original well log?	<u> </u>		34
e 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)			
F Owner the tree	O SECOND DE LA CONTROL MONTRO DE LA CONTROL			2
	Groundwater Wells Only:			
a	Does well recharge adequately when purged? If dedicated sampling equipment installed, is it in good condition		-	
b	and specified in the approved groundwater plan for the facility?			/
С	Does the well require redevelopment (low flow, turbid)?			
· ·	boos the well require redevelopment (low now, 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:		-	
, conective	actions as necucu, by date.			

Signature and Seal of PE/PG responsible for inspection

ime Number	Plant Hammons AP-4	-		
-1-1 - PC	HEVA- III			
eld conditions	V=1 and Rain 8-25-2020		no	n/a
1 Location/I	dentification	yes	no	II/a
a	Is the well visible and accessible?	1		
b	Is the well properly identified with the correct well ID?	V		
С	Is the well in a high traffic area and does the well require	1		
	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?	1		
С	Does the casing have a functioning weep hole?	_/		
ď	Is the annular space between casings clear of debris and water,	1		
	or filled with pea gravel/sand?	1		
е	Is the well locked and is the lock in good condition?			
3 Surface p	<u>ad</u>			
а	Is the well pad in good condition (not cracked or broken)?	1		
b	Is the well pad sloped away from the protective casing?	V.		
С	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	1		
_	move when stepped on)	1		-
е	Is the pad surface clean (not covered with sediment or debris)?			
4 Internal ca		-		
а	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)?	1	-	
C	Is the well properly vented for equilibration of air pressure?	1		
d	Is the survey point clearly marked on the inner casing? Is the depth of the well consistent with the original well log?	-		
e 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	1		
	couplings in construction)	1		
5 Sampling	Groundwater Wells Only:			
a <u>oamping.</u>	Does well recharge adequately when purged?	13		
b	If dedicated sampling equipment installed, is it in good condition	-		
	and specified in the approved groundwater plan for the facility?			
С	Does the well require redevelopment (low flow, turbid)?		1	
6 Based on	your professional judgement, is the well construction / location			
2 20000 011	appropriate to 1) achieve the objectives of the Groundwater			
	Monitoring Program and 2) comply with the applicable regulatory			
	requirements?			~
7.0				
/ Corrective	actions as needed, by date:			

Name nit Number	Plant Hammonz AP-4			
ID	H6VA- 112	8		
, field conditions		ei.		
, mora corratione	O AS AVAU VEF	yes	no	n/a
1 Location/	dentification	, 00	110	1170
a	Is the well visible and accessible?	./		
b	Is the well properly identified with the correct well ID?	1		
С	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	01			
2 Protective				
а	Is the protective casing free from apparent damage and able to be secured?	1		
h	Is the casing free of degradation or deterioration?	V		
b c	Does the casing have a functioning weep hole?	1		
d	Is the annular space between casings clear of debris and water,			1
u	or filled with pea gravel/sand?			
е	Is the well locked and is the lock in good condition?	-		
Ū			· //	()
3 Surface p		-		
а	Is the well pad in good condition (not cracked or broken)?	V		
b	Is the well pad sloped away from the protective casing?	1		
C	Is the well pad in complete contact with the protective casing?	V		-
d	Is the well pad in complete contact with the ground surface and			
	stable? (not undermined by erosion, animal burrows, and does not	1		
	move when stepped on)	1		
е	Is the pad surface clean (not covered with sediment or debris)?			
4 Internal ca	asing			
<u></u> а	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)?			
С	Is the well properly vented for equilibration of air pressure?	V		
d	Is the survey point clearly marked on the inner casing?	N		
е	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 has taken apart by hand due to lack of grout or use of align			
	or can it be taken apart by hand due to lack of grout or use of slip couplings in construction)	1		
	couplings in construction)			
5 Sampling:	Groundwater Wells Only:	16		
а	Does well recharge adequately when purged?	V		
b	If dedicated sampling equipment installed, is it in good condition			
	and specified in the approved groundwater plan for the facility?			
С	Does the well require redevelopment (low flow, turbid)?			
6 Basadan	your professional judgement is the well construction / leasting			
o based off	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			<u></u>
	requirements?			1
	, oqui, oo.			
	actions as needed, by date:			

nit Number ID , field conditions	H6VA-113			
, nela conditions	8.25-2020 Vzt	VOE	no	n/a
1 Location/	Identification	yes	no	II/a
a <u>Eccation</u>	Is the well visible and accessible?	1		
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			
J	protection from traffic?		1	
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	1		
-	secured?	V		
b	Is the casing free of degradation or deterioration?	To		
c	Does the casing have a functioning weep hole?	1		
d	Is the annular space between casings clear of debris and water,			
	or filled with pea gravel/sand?	1/		
е	Is the well locked and is the lock in good condition?	J		
3 Surface p	pad			
a	Is the well pad in good condition (not cracked or broken)?	J.		
b	Is the well pad sloped away from the protective casing?	1		
С	Is the well pad in complete contact with the protective casing?	7		
d	Is the well pad in complete contact with the ground surface and			
	stable? (not undermined by erosion, animal burrows, and does not	1		
	move when stepped on)	1,		
е	Is the pad surface clean (not covered with sediment or debris)?	/_		
4 Internal c	<u>asing</u>	1		
а	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)?	1		
С	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? Is the casing stable? (or does the pvc move easily when touched			
f	or can it be taken apart by hand due to lack of grout or use of slip			
	couplings in construction)			
5 Samnling	: Groundwater Wells Only:			
a <u>eampiing</u>	Does well recharge adequately when purged?	1		
b	If dedicated sampling equipment installed, is it in good condition			2
	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?			

	Hawc-101			
eld conditio		e «		
1 Location	n/Identification	yes	no	n/a
a	Is the well visible and accessible?	1		
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			-
Ü	protection from traffic?	es.		
d	Is the drainage around the well acceptable? (no standing water,			
ű	nor is well located in obvious drainage flow path)	/		
2 Protecti	ve 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?	1		
е	Is the well locked and is the lock in good condition?			
3 Surface	pad			
<u>——</u> —	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?	1		
С	Is the well pad in complete contact with the protective casing?	/	:	1
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)	/		
е	Is the pad surface clean (not covered with sediment or debris)?		_	
4 <u>Internal</u>	casing			
а	Does the cap prevent entry of foreign material into the well?	1		
b	Is the casing free of kinks or bends, or any obstructions from			
	foreign objects (such as bailers)?	_		
С	Is the well properly vented for equilibration of air pressure?			
d	Is the survey point clearly marked on the inner casing?	1		
е	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 Samplin	g: Groundwater Wells Only:			
а	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?	/		
С	Does the well require redevelopment (low flow, turbid)?			
6 Based o	n 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?			

ame	-tlammond AP-4			
Number		* S		
) = - - -	MGWC 102	3 9		
field conditions	graizo, clear, hot	yes	no	n/a
1 Location/	dentification	yes	no	11/4
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			
ŭ	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?			
е	Is the well locked and is the lock in good condition?	/	_	
3 Surface p	ad			
a <u>ounace p</u>	ls 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			
ű	stable? (not undermined by erosion, animal burrows, and does not			
	move when stepped on)			
е	Is the pad surface clean (not covered with sediment or debris)?	-		
4 Internal ca	acina	··	·	
a internar ca	Does the cap prevent entry of foreign material into the well?	1		
b	Is the casing free of kinks or bends, or any obstructions from			
D	foreign objects (such as bailers)?			
С	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			
est.	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:			
а	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?			
С	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	1		
	requirements?	/		
7 Corrective	actions as pooded by date:			
Conective	actions as needed, by date:			

	WWW HWCG W3	5		
eld conditio	ns 5/27/20 clear hut			
		yes	no	n/a
	n/Identification			
a	Is the well visible and accessible?			-
b	Is the well properly identified with the correct well ID?	-		
С	Is the well in a high traffic area and does the well require			
لم	protection from traffic?			
d	Is the drainage around the well acceptable? (no standing water,	/		
	nor is well located in obvious drainage flow path)			
2 Protect	ive Casing			
а	Is the protective casing free from apparent damage and able to be			
	secured?			
b	Is the casing free of degradation or deterioration?			
С	Does the casing have a functioning weep hole?	/		
d	Is the annular space between casings clear of debris and water,	1		
	or filled with pea gravel/sand?			
е	Is the well locked and is the lock in good condition?			
3 Surface		1		
а	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?	1		
d	Is the well pad in complete contact with the ground surface and			
	stable? (not undermined by erosion, animal burrows, and does not			
0	move when stepped on) Is the pad surface clean (not covered with sediment or debris)?			
е	is the pad surface clean (not covered with sediment of debits):			-
4 Internal	-	/		
а	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?			
a e	Is the survey point clearly marked on the inner casing? Is the depth of the well consistent with the original well log?			
e f	Is the casing stable? (or does the pvc move easily when touched			
ı	or can it be taken apart by hand due to lack of grout or use of slip			
	couplings in construction)	/		
5 Samplin	ng: Groundwater Wells Only:	-		
a <u>Sampiii</u>	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?			-
С	Does the well require redevelopment (low flow, turbid)?			
6 Paged a	on your profossional judgement is the well sensetweeties. He settles			
o Dased (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?			

lame	Hammond Apry			
t Number	20 1 100H2 1822			
D	HGWC-105			
field conditions	ENTITION SUNNY	_		
	2	yes,	no	n/a
1 Location/	<u>Identification</u>			
а	Is the well visible and accessible?	<u> </u>		
b	Is the well properly identified with the correct well ID?			
С	Is the well in a high traffic area and does the well require protection from traffic?		1	
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	<u> </u>		
2 Protective	- Cacina			
a	Is the protective casing free from apparent damage and able to be			
u	secured?	1	0	
b	Is the casing free of degradation or deterioration?	\rightarrow		-
C	Does the casing have a functioning weep hole?	-	-	
ď	Is the annular space between casings clear of debris and water,		-	
4	or filled with pea gravel/sand?			
е	Is the well locked and is the lock in good condition?	$\overline{}$		=
3 Surface p	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?	-		
q	Is the well pad in complete contact with the ground surface and		:)	
ū	stable? (not undermined by erosion, animal burrows, and does no	t /	·	
	move when stepped on)			
е	Is the pad surface clean (not covered with sediment or debris)?	7		
				*
4 Internal c		1		
а	Does the cap prevent entry of foreign material into the well?	$\underline{\mathcal{L}}$		
b	Is the casing free of kinks or bends, or any obstructions from	. /		
	foreign objects (such as bailers)?			
С	Is the well properly vented for equilibration of air pressure?	<u> </u>		
d	Is the survey point clearly marked on the inner casing?	1		
е	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?	V		
b	If dedicated sampling equipment installed, is it in good condition		()	
	and specified in the approved groundwater plan for the facility?	/		
С	Does the well require redevelopment (low flow, turbid)?		\perp	
6.0			-)	
o Based or	your professional judgement, is the well construction / location		1	
	appropriate to 1) achieve the objectives of the Groundwater	/		
	Monitoring Program and 2) comply with the applicable regulatory	./		
	requirements?	$\frac{\nu}{}$		
7 Corrective	e actions as needed, by date:			
, COLLECTIV	e actions as needed, by date.			

Number	116wc - 107	•		
eld conditions		•		
cia containone	GUETCOST, MOT VIEITE	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?	/		
С	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	Cacina			
a	Is the protective casing free from apparent damage and able to be			
u	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,		-	8
	or filled with pea gravel/sand?	/		
е	Is the well locked and is the lock in good condition?	_		
3 Surface p	nad			
a <u>Surface r</u>	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)	_		
е	Is the pad surface clean (not covered with sediment or debris)?	/		
4 Internal c	acina			
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		8====	
	foreign objects (such as bailers)?	/		
С	Is the well properly vented for equilibration of air pressure?			-
d	Is the survey point clearly marked on the inner casing?	/		
е	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 <u>Sampling</u>	: Groundwater Wells Only:			
а	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?			
С	Does the well require redevelopment (low flow, turbid)?			
6 Based or	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?	/		
	e actions as needed, by date:			

Name	Hammond AP4			
nit Numb	per	e) E		
IID	H 6WC-109			
e, field co	onditions 3/29/2020 SULNY			
		yes	no	n/a
1, <u>L</u>	ocation/Identification	./		
а		V		
b	' ' '			
С	·		,	
	protection from traffic?			
d		/		
	nor is well located in obvious drainage flow path)			
2 P	rotective Casing			
a	100			
<u> </u>	secured?	1		
b		\rightarrow		
C		-,		
d				
•	or filled with pea gravel/sand?			
е		/		-
				-
3 <u>s</u>	urface pad	,		
а				-
b	Is the well pad sloped away from the protective casing?	<u> </u>		-
C	Is the well pad in complete contact with the protective casing?			
d	Is the well pad in complete contact with the ground surface and			
	stable? (not undermined by erosion, animal burrows, and does no	,		
	move when stepped on)	4		
е	Is the pad surface clean (not covered with sediment or debris)?			
4 Ir	nternal casing	1		
a	5 11 11 11 11 11 11 11 11 11 11 11 11 11	1		
b				
	foreign objects (such as bailers)?			
С	Is the well properly vented for equilibration of air pressure?	\overline{Z}		
d	Is the survey point clearly marked on the inner casing?		=	
е	Is the depth of the well consistent with the original well log?	<u></u>		
f	Is the casing stable? (or does the pvc move easily when touched			
	or can it be taken apart by hand due to lack of grout or use of slip			
	couplings in construction)			
5.5	ampling: Groundwater Wells Only:	0		
a	Does well recharge adequately when purged?			
b	If dedicated sampling equipment installed, is it in good condition			
D	and specified in the approved groundwater plan for the facility?	/		
С			7	
6 B	ased 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 0	corrective actions as needed, by date:			
, (entodivo adilono ao necaca, by date.			

Name	Hammold APY			
it Number				
ID	16WG-117			
field conditions	8/27/2020 runny			1-
1 Location/le	dentification	yes	no	n/a
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,		_	
u	nor is well located in obvious drainage flow path)	1		
2 Destactive				
2 Protective	<u>Casing</u> Is the protective casing free from apparent damage and able to be			
а	secured?			
h	Is the casing free of degradation or deterioration?			
b	Does the casing have a functioning weep hole?			-
c d	Is the annular space between casings clear of debris and water,	<u>1</u>	-	-
u	or filled with pea gravel/sand?	ノ		
е	Is the well locked and is the lock in good condition?	1/		-
3 Surface pa				
а	Is the well pad in good condition (not cracked or broken)?	<u> </u>	-	
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	3		
	stable? (not undermined by erosion, animal burrows, and does not	1		
_	move when stepped on) Is the pad surface clean (not covered with sediment or debris)?			
е	is the pad surface clear (not covered with sediment or debits)?			
4 Internal ca		_		
а	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)?	_/_		
С	Is the well properly vented for equilibration of air pressure?	~		
d	Is the survey point clearly marked on the inner casing?	V		-
е	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)			-
	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? Does the well require redevelopment (low flow, turbid)?	*		
С	boes the well require redevelopment (low now, turbid)?		Y	
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	e actions as needed, by date:		9	

lame	Henrymond AP-4			
t Number				
D	HGWC-118			
field conditions	8/16/1000 OVENCERST, 80°F			-/-
1 Location/I	dentification	yes	no	n/a
a	Is the well visible and accessible?	1/		
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			
Ü	protection from traffic?			
d	Is the drainage around the well acceptable? (no standing water,			
J	nor is well located in obvious drainage flow path)			
2.5				
2 Protective		9.5		
а	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?	$\overline{}$		
d	Is the annular space between casings clear of debris and water,	7		
-	or filled with pea gravel/sand?	/		
е	Is the well locked and is the lock in good condition?	_		
3 Surface pa	ad			
a 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?		·	
q	Is the well pad in complete contact with the ground surface and		::	
ď	stable? (not undermined by erosion, animal burrows, and does not			
	move when stepped on)			
е	Is the pad surface clean (not covered with sediment or debris)?	7	-	
4 Internal or	2100			
4 Internal ca	Does the cap prevent entry of foreign material into the well?	1		
b b	Is the casing free of kinks or bends, or any obstructions from	 ,		
b	foreign objects (such as bailers)?			
С	Is the well properly vented for equilibration of air pressure?	\rightarrow		
d	Is the survey point clearly marked on the inner casing?	\rightarrow		
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	<u> </u>	/	
	and specified in the approved groundwater plan for the facility?			
С	Does the well require redevelopment (low flow, turbid)?		\overline{Z}	=
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?	/		
	•	100		
- .	actions as needed, by date:	170		

Site Name Permit Number	Plant Hummand Apy			
Well ID	GWC-4			
Date, field conditions	8/24/20 overent 75°			
,	0,-9,0	yes	no	n/a
1 Location/I	dentification			
а	Is the well visible and accessible?	_		
b	Is the well properly identified with the correct well ID?	_		
С	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			
ŭ	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?	-		
е	Is the well locked and is the lock in good condition?		-	
0.5	.6.			
3 Surface pa				
a	Is the well pad in good condition (not cracked or broken)?	<u> </u>		
b	Is the well pad sloped away from the protective casing?			
C	Is the well pad in complete contact with the protective casing? Is the well pad in complete contact with the ground surface and			
d	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)?	<u> </u>	:	
C	13 the pad samade clean (not covered with scannent or debits):			
4 Internal ca	asing	150		
а	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?			
T	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)			
	osapinigo in osnorazoron,			
5 Sampling:	Groundwater Wells Only:			
а	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?		-	
С	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?	(5)		
7 A September 200	A. C.			14 01
3.5	actions as needed, by date:	1	100.0	1. m
tire	and need to be address	75	LEN	دواد روا

me Number	Hammond AP4			
	GWC-6			
eld conditions	8/24/20 coverned 750	5 5	20	n/o
1 Location/lo	dentification	yes	no	n/a
а	Is the well visible and accessible?			
b	Is the well properly identified with the correct well ID?			
С	Is the well in a high traffic area and does the well require	١.,		
	protection from traffic?	<u> </u>		
d	Is the drainage around the well acceptable? (no standing water,	-		
	nor is well located in obvious drainage flow path)			
2 Protective	Casing			
а	Is the protective casing free from apparent damage and able to be			
	secured?			
b	Is the casing free of degradation or deterioration?			
С	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?	_		s -
е	Is the well locked and is the lock in good condition?			
3 Surface pa				
а	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?			
С	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)			-
е	Is the pad surface clean (not covered with sediment or debris)?			-
4 Internal ca		_		
а	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)?			
С	Is the well properly vented for equilibration of air pressure?			
d	Is the survey point clearly marked on the inner casing? Is the depth of the well consistent with the original well log?	<u> </u>		
e f	Is the depth of the well consistent with the original well log? Is the casing stable? (or does the pvc move easily when touched	$\overline{}$		
ı	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 <u>Sampling.</u>	Does well recharge adequately when purged?			
a b	If dedicated sampling equipment installed, is it in good condition	—		
	and specified in the approved groundwater plan for the facility?			_
С	Does the well require redevelopment (low flow, turbid)?	=		
6 Racad on	your professional judgement, is the well construction / location			Y
o based off	appropriate to 1) achieve the objectives of the Groundwater			
	Monitoring Program and 2) comply with the applicable regulatory			
	requirements?	1		
			ž	
7 Corrective	actions as needed, by date:			

lame it Number	Hemmond AP4	£2		
D	GWC - 8	•6		
field conditions	8/24/20 overcust 75°	E.		
	ALC II CO COURTS 13	yes	no	n/a
1 Location/I	dentification	•		
а	Is the well visible and accessible?			
b	Is the well properly identified with the correct well ID?			
С	Is the well in a high traffic area and does the well require			
	protection from traffic?			_
ď	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			
ű	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?	/		
е	Is the well locked and is the lock in good condition?		*	·
	·		-	
3 Surface pa				
a	Is the well pad in good condition (not cracked or broken)? Is the well pad sloped away from the protective casing?			
b	Is the well pad sloped away from the protective casing? Is the well pad in complete contact with the protective casing?		$\overline{}$	
c d	Is the well pad in complete contact with the protective casing?			
u	stable? (not undermined by erosion, animal burrows, and does not			
	move when stepped on)			
е	Is the pad surface clean (not covered with sediment or debris)?			
4 Internal ca				
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?			
е	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)	_	_	
	coapinings in construction)	—	-	
5 Sampling:	Groundwater Wells Only:			
а	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?			
С	Does the well require redevelopment (low flow, turbid)?			_
6 Based on	your professional judgement, is the well construction / location			
- 20000 011	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:			

ime Number	flesmand AP4	g		
Number	C. 1 114			
	GW4-14 overest 8/24/20 75°	별		
ela conditions	overest 8/24/20 75°	yes	no	n/a
1 Location/Id	dentification	yes	110	11/4
а	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 Duatactive	Continu			
2 Protective				
а	Is the protective casing free from apparent damage and able to be secured?	-	•	
h				
b	Is the casing free of degradation or deterioration? Does the casing have a functioning weep hole?			
c d	Is the annular space between casings clear of debris and water,			
u	or filled with pea gravel/sand?	_		
е	Is the well locked and is the lock in good condition?			
C	is the well locked and is the lock in good condition:			
3 Surface pa		_		
а	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?			
С	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)			
е	Is the pad surface clean (not covered with sediment or debris)?			
4 Internal ca	sing			
а	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)?	\leq		
С	Is the well properly vented for equilibration of air pressure?			
d	Is the survey point clearly marked on the inner casing?	_		
е	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)	<u> </u>	_	<u></u>
5 Sampling:	Groundwater Wells Only:			
а	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?	-		
С	Does the well require redevelopment (low flow, turbid)?			
6 Based on	your professional judgement, is the well construction / location			
- Dasca off	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:			

Site Name	Hammand AP4			
Permit Number		•		
Well ID	GW 4-15			
Date, field conditions	8/24/20 overcest	ě		
1 Location/I	Nontification	yes	no	n/a
a	Is the well visible and accessible?	/		
b	Is the well properly identified with the correct well ID?		\leftarrow	
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?			
е	Is the well locked and is the lock in good condition?			
3 Surface pa	a <u>d</u>			
а	Is the well pad in good condition (not cracked or broken)?	_		
b	Is the well pad sloped away from the protective casing?			
С	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)	_		
е	Is the pad surface clean (not covered with sediment or debris)?		_	
4 Internal ca	sing			
а	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)?			
С	Is the well properly vented for equilibration of air pressure?			
d	Is the survey point clearly marked on the inner casing?			
е	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:			
	Does well recharge adequately when purged?			
	If dedicated sampling equipment installed, is it in good condition			
	and specified in the approved groundwater plan for the facility?			
	Does the well require redevelopment (low flow, turbid)?			_
6 Based on v	our professional judgement, is the well construction / location			
	appropriate to 1) achieve the objectives of the Groundwater	ú	6	
	Monitoring Program and 2) comply with the applicable regulatory requirements?			122
-				
/ Corrective	actions as needed, by date:			

Name it Number	A. Hammond APM	ē		
ID	GWA-16	•		
field conditions				
		yes	no	n/a
1 Location/I	dentification	•		
а	Is the well visible and accessible?	-		
b	Is the well properly identified with the correct well ID?			
С	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	Casina			
a	Is the protective casing free from apparent damage and able to be			
a	secured?	_		
b	Is the casing free of degradation or deterioration?			-
C	Does the casing have a functioning weep hole?			
ď	Is the annular space between casings clear of debris and water,			
J	or filled with pea gravel/sand?	_		
е	Is the well locked and is the lock in good condition?			
	TO THE HEIR CONTROL OF THE CONTROL O			
3 Surface p				
а	Is the well pad in good condition (not cracked or broken)?	_		
b	Is the well pad sloped away from the protective casing?			
С	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)			
е	Is the pad surface clean (not covered with sediment or debris)?			
4 Internal ca	asina			
а	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)?			
С	Is the well properly vented for equilibration of air pressure?			
d	Is the survey point clearly marked on the inner casing?		==	
е	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		===	1
	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 <u>Sampining.</u>	Does well recharge adequately when purged?			
b	If dedicated sampling equipment installed, is it in good condition		$\overline{}$	
S	and specified in the approved groundwater plan for the facility?			
С	Does the well require redevelopment (low flow, turbid)?			_
			5)	
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?	-		
	requirements:			

Site Name	Plant Hammond Spy			
Permit Number	, , , , , , , , , , , , , , , , , , , ,	<u>.</u>		
Well ID	GWC - 19	2		
Date, field conditions		2		
		yes	no	n/a
1 Location/I				
a	Is the well visible and accessible?			
b	Is the well properly identified with the correct well ID?			
С	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			
а	Is the protective casing free from apparent damage and able to be secured?			
b	Is the casing free of degradation or deterioration?			
С	Does the casing have a functioning weep hole?			7
d	Is the annular space between casings clear of debris and water,		3	2
	or filled with pea gravel/sand?			
е	Is the well locked and is the lock in good condition?			
3 Surface pa	ad			
a a	Is the well pad in good condition (not cracked or broken)?	سسن		
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)			
е	Is the pad surface clean (not covered with sediment or debris)?			
A BUSINESSONIA THE				
4 Internal ca		_		
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)? Is the well properly vented for equilibration of air pressure?			
C	Is the survey point clearly marked on the inner casing?			-
d 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			.
r	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?			
С	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?			
_	'			9
7 Corrective	e actions as needed, by date:			

Number)	MW-17			
ield conditions				,_ 1 ₌
1 Location/l	dentification	yes	no	n/a
a	Is the well visible and accessible?	-		
b	Is the well properly identified with the correct well ID?			
С	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				
а	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?	_		
е	Is the well locked and is the lock in good condition?		-	
	-			
3 Surface p	ad 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?			
ď	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)			
е	Is the pad surface clean (not covered with sediment or debris)?			
4 Internal c	asing			
а	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)?		-	
С	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)	_/	G	
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?			OFC
С	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?	_		
	e actions as needed, by date:			

September 2020

	Croundwater monitoring wen integrity form				
Site Name	Hammonia AD4				
Permit Number					
Well ID	MA 47 1161W.4-417				
Date, field conditions	s 787, CUMM				
		yes	no	n/a	
1 Location	/Identification	,			
а	Is the well visible and accessible?	V	,		
b	Is the well properly identified with the correct well ID?	-DV	$\overline{\checkmark}$		10 ON EXTERNAL
С	Is the well in a high traffic area and does the well require	-			MING.
	protection from traffic?		د		0/4
d	Is the drainage around the well acceptable? (no standing water,				
	nor is well located in obvious drainage flow path)	<u>√</u>			
2 Protectiv	e Casing				
a	Is the protective casing free from apparent damage and able to be	. ,			
ŭ	secured?	1/			
b	Is the casing free of degradation or deterioration?	-/	_		
c	Does the casing have a functioning weep hole?	V/			
d	Is the annular space between casings clear of debris and water,	~			
•	or filled with pea gravel/sand?	/			
е	Is the well locked and is the lock in good condition?	1/		0	
				.(
3 Surface i		/			
a	Is the well pad in good condition (not cracked or broken)?	-			
b	Is the well pad sloped away from the protective casing?	<u>-</u>			
C	Is the well pad in complete contact with the protective casing?	<u> </u>			
d	Is the well pad in complete contact with the ground surface and				
	stable? (not undermined by erosion, animal burrows, and does no	τ ./			
	move when stepped on) Is the pad surface clean (not covered with sediment or debris)?				
е	is the pad surface clean (not covered with sediment or debits)?	<u> </u>			
4 Internal of	casing	/			
а	Does the cap prevent entry of foreign material into the well?	1/_			
b	Is the casing free of kinks or bends, or any obstructions from	/		.====0	
	foreign objects (such as bailers)?	V			
С	Is the well properly vented for equilibration of air pressure?				
d	Is the survey point clearly marked on the inner casing?				
е	Is the depth of the well consistent with the original well log?	1/_			
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)			:===0	
5 Sampling	: Groundwater Wells Only:	_			
а	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?	<u> </u>			
С	Does the well require redevelopment (low flow, turbid)?		1		
6 Resed on	your professional judgement, is the well construction / location		-		
o based On	appropriate to 1) achieve the objectives of the Groundwater				
	Monitoring Program and 2) comply with the applicable regulatory	3			
	requirements?	/			
	·				
7 Corrective	e actions as needed, by date:				

ame	Hammond AP-4	_				
Number		_				
1.1 80	MW-487 1 GW A-481)	_				
eld conditions	3/18/15059 800 ZUVDX	- ,,,,,,	no	n/a		
1 Location/le	dentification	yes /	no	II/a		
а	Is the well visible and accessible?	1/				
b	Is the well properly identified with the correct well ID?		1		being	
c	Is the well in a high traffic area and does the well require				Der 9	
O	protection from traffic?					
Al.	Is the drainage around the well acceptable? (no standing water,					
d	nor is well located in obvious drainage flow path)					
0.0	•					
2 Protective						
а	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?					
ď	Is the annular space between casings clear of debris and water,		$\overline{}$			
J	or filled with pea gravel/sand?					
е	Is the well locked and is the lock in good condition?					
	•	4	-			
3 Surface pa)				
	Is the well pad in good condition (not cracked or broken)?					
b	Is the well pad sloped away from the protective casing?	1				
С	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 no	t .				
	move when stepped on)					
	Is the pad surface clean (not covered with sediment or debris)?			_		
4 Internal ca	eina	-7-	\$*************************************	(
	Does the cap prevent entry of foreign material into the well?					
	Is the casing free of kinks or bends, or any obstructions from		=====			
	foreign objects (such as bailers)?					
	Is the well properly vented for equilibration of air pressure?					
	Is the survey point clearly marked on the inner casing?					
	Is the depth of the well consistent with the original well log?					
	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)					
	couplings in construction)					
	Groundwater Wells Only:					
	Does well recharge adequately when purged?					
	If dedicated sampling equipment installed, is it in good condition					
	and specified in the approved groundwater plan for the facility?					
С	Does the well require redevelopment (low flow, turbid)?		/			
6 Based on v	our 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?					
	oganomonto:					

ite Name	AP-4			
ermit Number	A17-91	-		
Vell ID	HOWA III	=		
ate, field conditions	The state of the s	-		
ato, noid conditions	9118, sunny	yes	no	n/a
1 Location/	Identification	yes	110	11/4
a	Is the well visible and accessible?	-		
b	Is the well properly identified with the correct well ID?	_	-	
С	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 Door out				
2 Protective				
а	Is the protective casing free from apparent damage and able to be secured?			
b		$\overline{}$		
b	Is the casing free of degradation or deterioration? Does the casing have a functioning weep hole?			
c d	Is the annular space between casings clear of debris and water,			
u	or filled with pea gravel/sand?			
е	Is the well locked and is the lock in good condition?		-	
C	to the well looked and is the look in good condition:		-	
3 Surface p				
а	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?			
С	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)			
е	Is the pad surface clean (not covered with sediment or debris)?			
4 Internal ca	asing			
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)?	_/		
С	Is the well properly vented for equilibration of air pressure?	-		
d	Is the survey point clearly marked on the inner casing?	/		
е	Is the depth of the well consistent with the original well log?	\supset		
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	72		
	couplings in construction)			
5 Sampling:	Groundwater Wells Only:	1		
a	Does well recharge adequately when purged?			
b	If dedicated sampling equipment installed, is it in good condition			
<u>.</u>	and specified in the approved groundwater plan for the facility?	/		
С	Does the well require redevelopment (low flow, turbid)?		_	
6.5			/	
b Based on	your professional judgement, is the well construction / location			
	appropriate to 1) achieve the objectives of the Groundwater	0.00	129	
	Monitoring Program and 2) comply with the applicable regulatory	/	2	
	requirements?			
7 Corrective	actions as needed, by date:			
<u></u>	$\mathcal{N}_{\mathcal{L}}$			
	1 4			

	l =			
Site Name	AP-4			
Permit Number				
Well ID	1-1GWA-112			
Date, field conditions	9118 Sunny			
		yes	no	n/a
1 Location/I	<u>dentification</u>	-		
а	Is the well visible and accessible?	_		
b	Is the well properly identified with the correct well ID?			8=
С	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 5 4 4				
2 Protective				
а	Is the protective casing free from apparent damage and able to be	-		
1-	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?			
е	Is the well locked and is the lock in good condition?			·
3 Surface pa	ad			
a	Is the well pad in good condition (not cracked or broken)?	1		
b	Is the well pad sloped away from the protective casing?	$\overline{}$		3
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			1 (1
	stable? (not undermined by erosion, animal burrows, and does not			
	move when stepped on)	/		
е	Is the pad surface clean (not covered with sediment or debris)?			
■ WOODSTREE WOOD	· ·			
4 Internal ca		1		
a	Does the cap prevent entry of foreign material into the well?			
ь	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?	<u> </u>		1 2 18
e	Is the depth of the well consistent with the original well log? Is the casing stable? (or does the pvc move easily when touched			
f	or can it be taken apart by hand due to lack of grout or use of slip			
	couplings in construction)			
	oodpinigo in oonot donon)			
5 Sampling:	Groundwater Wells Only:	/		
а	Does well recharge adequately when purged?	1000		
b	If dedicated sampling equipment installed, is it in good condition		-	
	and specified in the approved groundwater plan for the facility?			
С	Does the well require redevelopment (low flow, turbid)?		_1/	
6 D				
o 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?			
	requirements:			
7 Corrective	actions as needed, by date:			
	M/a			

	Ordinawater monitoring well integrity i orni				
Site Name Permit Number	KAMMONIO AP4	3			
Well ID	HENA 113				
Date, field conditions	9-72-20, 65°F CLWINY				
		yes	no	n/a	
1 Location/le	<u>dentification</u>				
а	Is the well visible and accessible?	V.			
b	Is the well properly identified with the correct well ID?	$\overline{}$	-	-	
С	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	20			
а	Is the protective casing free from apparent damage and able to be	/			
	secured?	V,			
b	Is the casing free of degradation or deterioration?	\overline{V}			
С	Does the casing have a functioning weep hole?	1			
d	Is the annular space between casings clear of debris and water,	~	77	-	
	or filled with pea gravel/sand?	V,			
e ·	Is the well locked and is the lock in good condition?				
_ 161 8	W.				
3 Surface pa	<u>ad</u>				
а	Is the well pad in good condition (not cracked or broken)?	V			
b	Is the well pad sloped away from the protective casing?	_//_			
С	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)		$ \longrightarrow $		- 0 0 /
е	Is the pad surface clean (not covered with sediment or debris)?			\mathref{y}\text{\text{\$\exititt{\$\text{\$\exititt{\$\texitit{\$\text{\$\text{\$\text{\$\text{\$\text{\$\}}}}}\\$\text{\$\text{	E PERPUS
4 Internal ca	asina				
a	Does the cap prevent entry of foreign material into the well?	V			
b	Is the casing free of kinks or bends, or any obstructions from				
	foreign objects (such as bailers)?	//			
С	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)	~			
F 123 (3)	22 NO 10 JUDIN 2011				
5 Sampling:	Groundwater Wells Only:				
а	Does well recharge adequately when purged?	V			
b	If dedicated sampling equipment installed, is it in good condition				
	and specified in the approved groundwater plan for the facility?		\longrightarrow		
С	Does the well require redevelopment (low flow, turbid)?		<u> </u>		
6 Rased on	your professional judgement, is the well construction / location				
- 50000 011	appropriate to 1) achieve the objectives of the Groundwater				
	Monitoring Program and 2) comply with the applicable regulatory	- 2			
	requirements?	/			
	' 			-	
7 Corrective	e actions as needed, by date:				

Site Name Permit Number	HGNC-101 phymnous APM	_		
Well ID	17.4.16	-		
Date, field conditions	HGWC-101	_		
Date, held conditions	ou'F, Dhay		Page and	-1-
1 Location/	Identification	yes	no	n/a
a	Is the well visible and accessible?	./		
b	Is the well properly identified with the correct well ID?	<u>~</u>		
	Is the well in a high traffic area and does the well require	<u>v</u>		
С	protection from traffic?		./	
	·			
d	Is the drainage around the well acceptable? (no standing water,	/		
	nor is well located in obvious drainage flow path)	\sim		
2 Protective	e Casing			
a	Is the protective casing free from apparent damage and able to be			
_	secured?	1/.		
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,			
u	or filled with pea gravel/sand?	./		
2	Is the well locked and is the lock in good condition?			
е	is the well locked and is the lock in good condition?	<u></u>		
3 Surface p	ad			
a	Is the well pad in good condition (not cracked or broken)?	1/		
b	Is the well pad sloped away from the protective casing?	1		
С	Is the well pad in complete contact with the protective casing?			
d	Is the well pad in complete contact with the ground surface and	<u> </u>		
-	stable? (not undermined by erosion, animal burrows, and does no	t		
	move when stepped on)	•		
е	Is the pad surface clean (not covered with sediment or debris)?			PTBRIS ON IA
				PCD9G ONTHE
4 Internal ca				
а	Does the cap prevent entry of foreign material into the well?	<u> </u>		
b	Is the casing free of kinks or bends, or any obstructions from			
	foreign objects (such as bailers)?			
С	Is the well properly vented for equilibration of air pressure?	1		· · · · · · · · · · · · · · · · · · ·
d	Is the survey point clearly marked on the inner casing?		1/	
е	Is the depth of the well consistent with the original well log?	<u>./</u>		
f	Is the casing stable? (or does the pvc move easily when touched			
	or can it be taken apart by hand due to lack of grout or use of slip			
	couplings in construction)			
E Camalian	Construction (Mallo Code)			
7	Groundwater Wells Only:	./		
a	Does well recharge adequately when purged?			
b	If dedicated sampling equipment installed, is it in good condition	11		
_	and specified in the approved groundwater plan for the facility?			
С	Does the well require redevelopment (low flow, turbid)?			
6 Based on	your professional judgement, is the well construction / location			
5 Basea on	appropriate to 1) achieve the objectives of the Groundwater			
	Monitoring Program and 2) comply with the applicable regulatory			
	requirements?	_		
	roquiromonto:			
7 Corrective	actions as needed, by date:			
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Groundwater Monitoring Well Integrity Form

te Name	Jummend AP-4	ŧy		
ermit Number /ell ID	11/4 (10)	47		
ate, field conditions	HGWC 108	. 0		
ate, neid conditions	10/4	yes	no	n/a
1 Location/I	dentification	,	110	
a	Is the well visible and accessible?	1		
b	Is the well properly identified with the correct well ID?			
С	Is the well in a high traffic area and does the well require			
	protection from traffic?	1		
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?	7		():
С	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?		<u></u>	
е	Is the well locked and is the lock in good condition?			
3 Surface p	ad			
a	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?	$\overline{}$,	
С	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)			
е	Is the pad surface clean (not covered with sediment or debris)?			
4 Internal ca	asing			
<u>а</u>	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)?	_		2
С	Is the well properly vented for equilibration of air pressure?	$\overline{}$		
d	Is the survey point clearly marked on the inner casing?			
е	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	سس		
	couplings in construction)			<u> </u>
5 Sampling:	Groundwater Wells Only:			
а	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? Does the well require redevelopment (low flow, turbid)?			
С	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?			- 4
7 Corrective	actions as needed, by date:			
. 55,,550,76				

(II)

t Number	he mmond APT			
D	HGWC-103	_		
field conditions	9/24 cool Rainy	-	no	n/a
1 Location/	Identification	yes	TIO	II/a
а	Is the well visible and accessible?			
b	Is the well properly identified with the correct well ID?	$\overline{}$		
С	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,	-	5	
	nor is well located in obvious drainage flow path)	$\overline{}$		
2 Protective	e Casing			
а	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?			
е	Is the well locked and is the lock in good condition?			
3 Surface p				
а	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?	_		
С	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 no			
_	move when stepped on)			
е	Is the pad surface clean (not covered with sediment or debris)?		? 	
4 Internal c				
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	agence.		
_	foreign objects (such as bailers)?			
C	Is the well properly vented for equilibration of air pressure? Is the survey point clearly marked on the inner casing?	1		
d	Is the depth of the well consistent with the original well log?	<u></u>		
e 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:			
а	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?	_/		
С	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		2	
	Monitoring Program and 2) comply with the applicable regulatory	,		
	requirements?	_		

ime Namela an	hammone UP 4			
Number	Appliant on whate	•		
ald aspelitions	16-wc-105	-		
eld conditions	9/24 cool Raing			n/o
1 Location/le	dentification	yes	no	n/a
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			
J	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?	_		
е	Is the well locked and is the lock in good condition?	_		
3 Surface pa				
а	Is the well pad in good condition (not cracked or broken)?	_		
b	Is the well pad sloped away from the protective casing?	_		
С	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)			
е	Is the pad surface clean (not covered with sediment or debris)?			·
4 Internal ca	asing			
а	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? Is the casing stable? (or does the pvc move easily when touched			
f	or can it be taken apart by hand due to lack of grout or use of slip			
	couplings in construction)	_/		18
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?	/		
С	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		25	
	requirements?			
7 Corrective	actions as needed, by date:			

	Cround water monitoring won miceging rom				
te Name ermit Number	HAMADONO APU	 -0			
ell ID	HGWL-107	-:3			
ate, field conditions	COT, RAINY				
	- 02 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	_ yes	no	n/a	
1 Location/	<u>Identification</u>	,			
а	Is the well visible and accessible?	\checkmark			
b	Is the well properly identified with the correct well ID?				
С	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)	$\overline{\mathcal{L}}$	-		
2 Protective	e Casing				
a	Is the protective casing free from apparent damage and able to be secured?	1/			
b	Is the casing free of degradation or deterioration?	<u> </u>			
С	Does the casing have a functioning weep hole?	1			
ď	Is the annular space between casings clear of debris and water,				
	or filled with pea gravel/sand?	1			
е	Is the well locked and is the lock in good condition?	V			
3 Surface p	<u>ad</u>	OF I			
а	Is the well pad in good condition (not cracked or broken)?	V			
b	Is the well pad sloped away from the protective casing?	V			
С	Is the well pad in complete contact with the protective casing?	V			
d	Is the well pad in complete contact with the ground surface and		3	0=====	
	stable? (not undermined by erosion, animal burrows, and does no	t ,			
	move when stepped on)	V	,		
е	Is the pad surface clean (not covered with sediment or debris)?		$\sqrt{}$		DEPPLY ON THE
4 Internal ca	asing				VM
а	Does the cap prevent entry of foreign material into the well?	./			
b	Is the casing free of kinks or bends, or any obstructions from	7			
	foreign objects (such as bailers)?	1			
С	Is the well properly vented for equilibration of air pressure?	1			
d	Is the survey point clearly marked on the inner casing?		.1/		
е	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	1			
	couplings in construction))()(
5 Sampling:	Groundwater Wells Only:				
а	Does well recharge adequately when purged?	W/			
b	If dedicated sampling equipment installed, is it in good condition				
	and specified in the approved groundwater plan for the facility?		,		
С	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?	-			
	roquiromonia;				
7 Corrective	actions as needed, by date:				

Site Name	henmond / AP4	_		
Permit Number	*****	-		
Well ID	+16-WC-109	<u> </u>		
Date, field conditions	9125, coverest	_		
1 Location/I	dentification	yes	no	n/a
a	Is the well visible and accessible?	U		
b	Is the well properly identified with the correct well ID?	\sim	_	
С	Is the well in a high traffic area and does the well require			
	protection from traffic?	0		
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?	0		
b	Is the casing free of degradation or deterioration?	\overline{V}		(
С	Does the casing have a functioning weep hole?	-1/		· · · · · · · · · · · · · · · · · · ·
ď	Is the annular space between casings clear of debris and water,			
	or filled with pea gravel/sand?	0		·
е	Is the well locked and is the lock in good condition?	\supset		
2 Cumfana	- ii			(
3 Surface p	ad Is the well pad in good condition (not cracked or broken)?	11		
a b	Is the well pad sloped away from the protective casing?	-		0
C	Is the well pad in complete contact with the protective casing?	$\stackrel{\sim}{\rightarrow}$		0
d	Is the well pad in complete contact with the ground surface and			()'
ď	stable? (not undermined by erosion, animal burrows, and does not			
	move when stepped on)	1/		
е	Is the pad surface clean (not covered with sediment or debris)?	2		·—(
4 Internal ca	esina			
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)?	V		
С	Is the well properly vented for equilibration of air pressure?	<i></i>	_	· · · · · ·
d	Is the survey point clearly marked on the inner casing?			
е	Is the depth of the well consistent with the original well log?	V		
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	. 1		
	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?			
С	Does the well require redevelopment (low flow, turbid)?			
0.5				
o 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?	./		
	roquiromonia:	-		
7 Corrective	actions as needed, by date:			
N	1/1/4			
	· <i>V</i> ·			

Site Name Permit Number Well ID Date, field conditions	HAMMOND 1P-41 HENC-117 1-25-2020, 70'F ONERCHSS			
1 Location/	dentification	yes	no	n/a
a	Is the well visible and accessible?	./		
b	Is the well properly identified with the correct well ID?	<u></u>		
C	Is the well in a high traffic area and does the well require			-
Ü	protection from traffic?		. /	
d	Is the drainage around the well acceptable? (no standing water,		<u>V</u>	
ď	nor is well located in obvious drainage flow path)	/		
	nor is well located in obvious drainage now patri)	$\overline{}$		-
2 Protective	: Casing			
а	Is the protective casing free from apparent damage and able to be	e /		
	secured?	V,		
b	Is the casing free of degradation or deterioration?	1/1	·	
С	Does the casing have a functioning weep hole?	V	()	
d	Is the annular space between casings clear of debris and water,			
	or filled with pea gravel/sand?			
е	Is the well locked and is the lock in good condition?			
2.0	es É			
3 Surface p				
a	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?	1/2	-	
c d	Is the well pad in complete contact with the protective casing?			
u	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does no	. /		
	move when stepped on)			
е	Is the pad surface clean (not covered with sediment or debris)?			
C	is the pad surface clear (not covered with sediment of debris)?			
4 Internal ca	asing	,		
а	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)?	V		
С	Is the well properly vented for equilibration of air pressure?	1/1		
d	Is the survey point clearly marked on the inner casing?	7,		
е	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?	Δ/		
b	If dedicated sampling equipment installed, is it in good condition			
	and specified in the approved groundwater plan for the facility?	/	,	
С	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	250		
	requirements?	_		
7 Corrective	actions as needed, by date:			
. 0011001140				

Site Name	hammond / AP4	ē		
Permit Number				
Well ID	HGWC-118	· 5		
Date, field conditions	9178 sunny			1
1 Location/I	dentification	yes	no	n/a
a	Is the well visible and accessible?	V		
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			 -
v	protection from traffic?	1/		
d	Is the drainage around the well acceptable? (no standing water,	<u> </u>		
•	nor is well located in obvious drainage flow path)	/		
3 1457-727-138	•			
2 Protective				
а	Is the protective casing free from apparent damage and able to be	. /		
	secured?	<u> </u>		
b	Is the casing free of degradation or deterioration?	<u> </u>		
C	Does the casing have a functioning weep hole?			/
ď	Is the annular space between casings clear of debris and water,	1		
	or filled with pea gravel/sand?			
е	Is the well locked and is the lock in good condition?			
3 Surface pa	ad			
a	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?	اسسسا		
С	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)			
е	Is the pad surface clean (not covered with sediment or debris)?	<u> </u>		
4 Internal ca	rsing			
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)?	-		
С	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?	<u>ー</u>		
f	Is the casing stable? (or does the pvc move easily when touched			
	or can it be taken apart by hand due to lack of grout or use of slip			
	couplings in construction)	<u> </u>		
5 Sampling	Groundwater Wells Only:			
a <u>Samping.</u>	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?	/		
С	Does the well require redevelopment (low flow, turbid)?		V	
•				
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	V		
	requirements?	<u> </u>		
7 Corrective	actions as needed, by date:			
	Ma	.,.		
C.				

ite Name	Hammond AP-4			
ermit Number		- 1		
Vell ID	G164-14	<u>-</u> .		
ate, field conditions	9/14 sunny, werem	Vec	20	n/a
1 Location/l	dentification	yes	no	ri/a
a	Is the well visible and accessible?	~		
b	Is the well properly identified with the correct well ID?			
С	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?			
С	Does the casing have a functioning weep hole?			2
d	Is the annular space between casings clear of debris and water,			
	or filled with pea gravel/sand?			======
е	Is the well locked and is the lock in good condition?			
3 Surface pa	ad			
a	Is the well pad in good condition (not cracked or broken)?	-		
b	Is the well pad sloped away from the protective casing?			;——;
С	Is the well pad in complete contact with the protective casing?			
d	Is the well pad in complete contact with the ground surface and			5=
	stable? (not undermined by erosion, animal burrows, and does not	:		
	move when stepped on)	_		/ <u></u> 11
е	Is the pad surface clean (not covered with sediment or debris)?	=	0	
4 Internal ca	asing			
а	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)?	_		
С	Is the well properly vented for equilibration of air pressure?	$\overline{}$		
d	Is the survey point clearly marked on the inner casing?			
е	Is the depth of the well consistent with the original well log?	$\overline{}$		10
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:			
а	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?			
С	Does the well require redevelopment (low flow, turbid)?			
6 Based on	your professional judgement, is the well construction / location			
	appropriate to 1) achieve the objectives of the Groundwater			
	Monitoring Program and 2) comply with the applicable regulatory			
	requirements?			
7 Corrective	actions as needed, by date:			
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e Name	Mcmmond AP-4)		
rmit Number ell ID		 :		
te, field conditions	<u>awa-16</u>			
te, neid conditions	9/211 sunny succes	yes	no	n/a
1 Location/I	dentification	,00	110	11/4
a	Is the well visible and accessible?	~		
b	Is the well properly identified with the correct well ID?			
С	Is the well in a high traffic area and does the well require			
	protection from traffic?			
ď	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	1		
u	secured?			
b	Is the casing free of degradation or deterioration?	_		₹ 7/
c	Does the casing have a functioning weep hole?			9
ď	Is the annular space between casings clear of debris and water,			
-	or filled with pea gravel/sand?			
е	Is the well locked and is the lock in good condition?	$\overline{}$	_	
	_			
3 Surface pa				
a	Is the well pad in good condition (not cracked or broken)? Is the well pad sloped away from the protective casing?			·
b				: 0
c d	Is the well pad in complete contact with the protective casing? Is the well pad in complete contact with the ground surface and	$\overline{}$		
ď	stable? (not undermined by erosion, animal burrows, and does no			
	move when stepped on)	•		
е	Is the pad surface clean (not covered with sediment or debris)?	_	·——·	00
				· · · · · · · · · · · · · · · · · · ·
4 Internal ca				
а	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)?	$\overline{}$		
C	Is the well properly vented for equilibration of air pressure?			
đ	Is the survey point clearly marked on the inner casing?			
e	Is the depth of the well consistent with the original well log? Is the casing stable? (or does the pvc move easily when touched			
f	or can it be taken apart by hand due to lack of grout or use of slip			
	couplings in construction)			
	oodpiiilge iii oorloaddaari)	$\overline{}$		
5 Sampling:	Groundwater Wells Only:			
а	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?			
С	Does the well require redevelopment (low flow, turbid)?			
6 Based on	your professional judgement, is the well construction / location			
- 20000 011	appropriate to 1) achieve the objectives of the Groundwater			
	Monitoring Program and 2) comply with the applicable regulatory			
	requirements?	/		
7 Corrective	actions as needed, by date:			
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Hammenel AP-4	2		
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9/14 warm scorry			,
dontification	yes	no	n/a
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nor is well located in obvious drainage flow path)			
Cacina			
The state of the s	-		
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The state of the s			
is the pad surface clean (not covered with sediment or debris)?			
nsing .			
Does the cap prevent entry of foreign material into the well?			
Is the casing free of kinks or bends, or any obstructions from			: /
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	_		
• • • • • • • • • • • • • • • • • • • •			
Is the depth of the well consistent with the original well log?			
			_
couplings in construction)			_
Does well recharge adequately when purged?			_/
If dedicated sampling equipment installed, is it in good condition			:
Does the well require redevelopment (low flow, turbid)?			_
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?	N		
9			1
actions as needed, by date:			
	dentification Is the well visible and accessible? Is the well properly identified with the correct well ID? Is the well in a high traffic area and does the well require protection from traffic? Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) Casing Is the protective casing free from apparent damage and able to be secured? Is the casing free of degradation or deterioration? Does the casing have a functioning weep hole? Is the annular space between casings clear of debris and water, or filled with pea gravel/sand? Is the well locked and is the lock in good condition? ad Is the well pad in good condition (not cracked or broken)? Is the well pad in complete contact with the protective casing? 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) Is the pad surface clean (not covered with sediment or debris)? Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)? Is the depth of the well consistent with the original well log? Is the esury point clearly marked on the inner casing? Is the bull properly vented for equilibration of air pressure? Is the survey point clearly marked on the inner casing? Is the survey point clearly marked on the inner casing? Is the depth of the well consistent with the original well log? Is the asing 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) Groundwater Wells Only: Does well recharge adequately when purged? If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility? Does the well require redevelopment (low flow, turbid)?	dentification Is the well properly identified with the correct well ID? Is the well properly identified with the correct well in a high traffic area and does the well require protection from traffic? Is the well in a high traffic area and does the well require protection from traffic? Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) Casing Is the protective casing free from apparent damage and able to be secured? Is the casing free of degradation or deterioration? Does the casing have a functioning weep hole? Is the annular space between casings clear of debris and water, or filled with pea gravel/sand? Is the well pad in good condition (not cracked or broken)? Is the well pad sloped away from the protective casing? Is the well pad in complete contact with the protective casing? 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) Is the pad surface clean (not covered with sediment or debris)? Is the easing free of kinks or bends, or any obstructions from foreign objects (such as bailers)? Is the easing free of kinks or bends, or any obstructions from foreign objects (such as bailers)? Is the easing 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) Groundwater Wells Only: Does well recharge adequately when purged? If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility? Does well recharge adequately when purged? If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility? Does well recharge adequately when purged? If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility? Does the well require redevelopment (low flow	dentification Is the well visible and accessible? Is the well properly identified with the correct well ID? Is the well in a high traffic area and does the well require protection from traffic? Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) Casing Is the protective casing free from apparent damage and able to be secured? Is the casing free of degradation or deterioration? Does the casing have a functioning weep hole? Is the annular space between casings clear of debris and water, or filled with pea gravel/sand? Is the well pad in good condition (not cracked or broken)? Is the well pad in good condition (not cracked or broken)? Is the well pad in complete contact with the protective casing? 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) Is the pad surface clean (not covered with sediment or debris)? Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)? Is the examing free of kinks or bends, or any obstructions from foreign objects (such as bailers)? Is the well properly vented for equilibration of air pressure? Is the survey point clearly marked on the inner casing? Is the depth of the well consistent with the original well log? Is the depth of the well consistent with the original well log? 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) Croundwater Wells Only: Does well recharge adequately when purged? If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater plan for the facility? Does the well require redevelopment (low flow, turbid)? 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

Name	Hammond AP 41	<u></u>		
it Number	A L. C. /	4		
ID	GWC-6	-		
field conditions	9/14 warm summ			2/2
1 Location/le	Ventification	yes	no	n/a
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			
C	protection from traffic?			4
d	Is the drainage around the well acceptable? (no standing water,			:
u	nor is well located in obvious drainage flow path)			
	Tior is well located in obvious drainage now path)			
2 Protective	Casing			
а	Is the protective casing free from apparent damage and able to be			
	secured?			
b	Is the casing free of degradation or deterioration?	_	_	
С	Does the casing have a functioning weep hole?	$\overline{}$	_	-
d	Is the annular space between casings clear of debris and water,		$\overline{}$	
	or filled with pea gravel/sand?			
е	Is the well locked and is the lock in good condition?			
				:====0;
3 Surface pa				
а	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?			
ď	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)			
е	Is the pad surface clean (not covered with sediment or debris)?			
4 Internal ca	eina			
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	-		
Ь	foreign objects (such as bailers)?			
	Is the well properly vented for equilibration of air pressure?			
c d	Is the survey point clearly marked on the inner casing?			<u>. </u>
e	Is the depth of the well consistent with the original well log?			()
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)			
	NAT			
5 Sampling:	Groundwater Wells Only:			
а	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?			
С	Does the well require redevelopment (low flow, turbid)?			
6.0				
o Based on	your professional judgement, is the well construction / location			
	appropriate to 1) achieve the objectives of the Groundwater			
	Monitoring Program and 2) comply with the applicable regulatory	/		
	requirements?	<u> </u>		-
7 Corrective	actions as needed, by date:			
. 55,,550,46	and the state of t			

Groundwater Monitoring Well Integrity Form Site Name Permit Number Well ID Date, field conditions 9/14 amny n/a 1 Location/Identification Is the well visible and accessible? а Is the well properly identified with the correct well ID? b Is the well in a high traffic area and does the well require С protection from traffic? Is the drainage around the well acceptable? (no standing water, d nor is well located in obvious drainage flow path) 2 Protective Casing а Is the protective casing free from apparent damage and able to be secured? b Is the casing free of degradation or deterioration? Does the casing have a functioning weep hole? С Is the annular space between casings clear of debris and water, d or filled with pea gravel/sand? Is the well locked and is the lock in good condition? е 3 Surface pad Is the well pad in good condition (not cracked or broken)? а Is the well pad sloped away from the protective casing? b Is the well pad in complete contact with the protective casing? С Is the well pad in complete contact with the ground surface and d stable? (not undermined by erosion, animal burrows, and does not move when stepped on) Is the pad surface clean (not covered with sediment or debris)? е 4 Internal casing Does the cap prevent entry of foreign material into the well? а b Is the casing free of kinks or bends, or any obstructions from foreign objects (such as bailers)? Is the well properly vented for equilibration of air pressure? С Is the survey point clearly marked on the inner casing? d Is the depth of the well consistent with the original well log? е Is the casing stable? (or does the pvc move easily when touched f 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: Does well recharge adequately when purged? а If dedicated sampling equipment installed, is it in good condition b and specified in the approved groundwater plan for the facility? Does the well require redevelopment (low flow, turbid)? С 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:

a C

ame	Hymmand AP-4			
Number		S:		
)	GWC-19			
Teld conditions	9/14 simmy isen			-1-
1 Location/L	dentification	yes	no	n/a
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	_		-
Ü	protection from traffic?			
d	Is the drainage around the well acceptable? (no standing water,			
ū	nor is well located in obvious drainage flow path)			
2 Protoctivo	Cooling			
2 Protective				
а	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?		$\overline{}$	
d	Is the annular space between casings clear of debris and water,		$\overline{}$	
	or filled with pea gravel/sand?			
е	Is the well locked and is the lock in good condition?	_		
3 Surface pa	ad.			
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			
ď	stable? (not undermined by erosion, animal burrows, and does not			
	move when stepped on)			
е	Is the pad surface clean (not covered with sediment or debris)?	_	_	_
4 Internal ca	sing	,		
	Does the cap prevent entry of foreign material into the well?			
a b	Is the casing free of kinks or bends, or any obstructions from	$\overline{}$		—
b	foreign objects (such as bailers)?			
•	Is the well properly vented for equilibration of air pressure?		$\overline{}$	_
c d	Is the survey point clearly marked on the inner casing?			
_	Is the depth of the well consistent with the original well log?	<u> </u>		
e f	Is the casing stable? (or does the pvc move easily when touched			
ı	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 <u>Samping.</u>	Does well recharge adequately when purged?			
b	If dedicated sampling equipment installed, is it in good condition			
b	and specified in the approved groundwater plan for the facility?			_
С	Does the well require redevelopment (low flow, turbid)?		_	
	, , , , , ,			
o 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:			
, 0011601176	actions as necueu, by uate.			

Groundwater Monitoring Well Integrity Form Site Name Permit Number Well ID Date, field conditions ves no n/a 1 Location/Identification Is the well visible and accessible? а b Is the well properly identified with the correct well ID? Is the well in a high traffic area and does the well require С protection from traffic? Is the drainage around the well acceptable? (no standing water, d nor is well located in obvious drainage flow path) 2 Protective Casing Is the protective casing free from apparent damage and able to be а secured? b Is the casing free of degradation or deterioration? Does the casing have a functioning weep hole? С Is the annular space between casings clear of debris and water, d or filled with pea gravel/sand? Is the well locked and is the lock in good condition? е 3 Surface pad Is the well pad in good condition (not cracked or broken)? а Is the well pad sloped away from the protective casing? b Is the well pad in complete contact with the protective casing? С Is the well pad in complete contact with the ground surface and d stable? (not undermined by erosion, animal burrows, and does not move when stepped on) Is the pad surface clean (not covered with sediment or debris)? e 4 Internal casing Does the cap prevent entry of foreign material into the well? а Is the casing free of kinks or bends, or any obstructions from b foreign objects (such as bailers)? Is the well properly vented for equilibration of air pressure? С Is the survey point clearly marked on the inner casing? d Is the depth of the well consistent with the original well log? е Is the casing stable? (or does the pvc move easily when touched f 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: Does well recharge adequately when purged? а If dedicated sampling equipment installed, is it in good condition b

and specified in the approved groundwater plan for the facility? Does the well require redevelopment (low flow, turbid)? С 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?

Signature and Seal of PE/PG responsible for inspection

7 Corrective actions as needed, by date:

March 2021

Name nit Number	Plant Hummond	- 33		
ID	H(nw1 47	- 76		
, field conditions				
1 ti/	Laboration and	yes	no	n/a
	Identification Is the well visible and accessible?	_		
a			77	
b	Is the well properly identified with the correct well ID?			
С	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	e 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?		W 	
d	Is the annular space between casings clear of debris and water,			
	or filled with pea gravel/sand?	_		
е	Is the well locked and is the lock in good condition?			
3 Surface p				
а	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?			
С	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	t		
	move when stepped on)	_		
е	Is the pad surface clean (not covered with sediment or debris)?			
4 Internal of	asing			
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)?	-		
С	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		1)	
'	or can it be taken apart by hand due to lack of grout or use of slip			
	couplings in construction)	-		
	0 1 1 10 11 0 1			
3.25-55-5379-55-55	: Groundwater Wells Only:			
a	Does well recharge adequately when purged?			
b	If dedicated sampling equipment installed, is it in good condition			1
	and specified in the approved groundwater plan for the facility?		——	
С	Does the well require redevelopment (low flow, turbid)?			
6 Based or	your professional judgement, is the well construction / location			
2000 01	appropriate to 1) achieve the objectives of the Groundwater			
	Monitoring Program and 2) comply with the applicable regulatory			
	requirements?	_		
7.0	e actions as needed, by date:			

	Ordinawater monitoring went integrity i offin			
Site Name Permit Number	Plant Hammond AP-4			
Well ID	410 1.11 1.05			
	HGWA-48D			
Date, field conditions	3110/21, 40°, sunny		20	nla
1 ti//	doutification	yes	no	n/a 🗈
1 Location/I		-		
a	Is the well visible and accessible?			
b	Is the well properly identified with the correct well ID?			
С	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			
a	secured?			
b	Is the casing free of degradation or deterioration?			
	Does the casing have a functioning weep hole?			
C				
d	Is the annular space between casings clear of debris and water,			
	or filled with pea gravel/sand?	<u> </u>		
е	is the well locked and is the lock in good condition?	_=		
3 Surface pa	ad			
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?			}
ď	Is the well pad in complete contact with the ground surface and			
u	stable? (not undermined by erosion, animal burrows, and does not			
	move when stepped on)			
	Is the pad surface clean (not covered with sediment or debris)?			
е	to the pad ballage disall (not covered with ocalillant of desire).			
4 Internal ca				
а	Does the cap prevent entry of foreign material into the well?			+1
b	Is the casing free of kinks or bends, or any obstructions from			
	foreign objects (such as bailers)?	-		
С	Is the well properly vented for equilibration of air pressure?			
d	Is the survey point clearly marked on the inner casing?			
е	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)	-		
F 0 "	0 1 1 1 1 1 1 1 1 1	-		
	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?			
С	Does the well require redevelopment (low flow, turbid)?			
6 Based on	your professional judgement, is the well construction / location			
- 50500 011	appropriate to 1) achieve the objectives of the Groundwater			
	Monitoring Program and 2) comply with the applicable regulatory	/		
	requirements?	/		
	requirements:		· 	 00
7 Corrective	e actions as needed, by date:			-

me Number	Hammond			
14111501	HGW A. 14	,		
eld conditions	Flores GSOP CURNY			
4	5.07	yes	no	n/a
	dentification			
a	Is the well visible and accessible?			
ь	Is the well properly identified with the correct well ID?			
С	Is the well in a high traffic area and does the well require		_	
.1	protection from traffic?			
d	Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path)	_		
1 (95 V 16)				
2 Protective				
а	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?			
_	Is the well locked and is the lock in good condition?			
е	is the well locked and is the lock in good condition?			
3 Surface p				
а	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?			
С	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)			
е	Is the pad surface clean (not covered with sediment or debris)?	$\overline{}$		
4 Internal ca	asing			
а	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)?	_		
С	Is the well properly vented for equilibration of air pressure?			
d	Is the survey point clearly marked on the inner casing?			
е	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)	70.00		
	couplings in construction)		-	
5 Sampling	: Groundwater Wells Only:			
а	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?			
С	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:			
/ Corrective	e actions as needed, by date:			

Site Name Permit Number	Plant Hammond	1		
Well ID	HGW4112	-11		
Date, field conditions	3/10/21, 700 40° sunny			
Date, noid conditions	STICTET , TO, TO SCHARY	yes	no	n/a
1 Location/I	dentification	,	110	.,,
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)			
	Sar 190			
2 Protective				
а	Is the protective casing free from apparent damage and able to be			
	secured?	$\overline{}$		
b	Is the casing free of degradation or deterioration?		a	
C	Does the casing have a functioning weep hole?	$\overline{}$		
d	Is the annular space between casings clear of debris and water,			
	or filled with pea gravel/sand?	_		
е	Is the well locked and is the lock in good condition?	$\overline{}$: :
3 Surface p	ad			
a	Is the well pad in good condition (not cracked or broken)?	_		
b	Is the well pad sloped away from the protective casing?			
С	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)			
е	Is the pad surface clean (not covered with sediment or debris)?	_		
4 To Longon Area	- Augusta		\\	
4 Internal ca				
а	Does the cap prevent entry of foreign material into the well?			
_e 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?	$\overline{}$));
d	Is the survey point clearly marked on the inner casing? Is the depth of the well consistent with the original well log?	$\overline{}$		T
e f	Is the casing stable? (or does the pvc move easily when touched	Ti-	·	
l	or can it be taken apart by hand due to lack of grout or use of slip			
	couplings in construction)	_		
	осыр			()
5 Sampling:	Groundwater Wells Only:	/		
а	Does well recharge adequately when purged?			
b	If dedicated sampling equipment installed, is it in good condition	5		
	and specified in the approved groundwater plan for the facility?	_		
С	Does the well require redevelopment (low flow, turbid)?			
6 Rosed on	your professional judgement, is the well construction / location			
o Dased Off	appropriate to 1) achieve the objectives of the Groundwater			
	Monitoring Program and 2) comply with the applicable regulatory			
	requirements?			
				8
7 Corrective	e actions as needed, by date:			

ame	Plant Hammon J	9 00		
Number	11/11/11/11/2	-00		
) iold conditions	HGWA-113	= 0g		
ield conditions	3110/21 40°, Sunny	- VAC	no	n/a
1 Location/Id	tentification	yes	no	11/4
	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	$\overline{}$		
C	protection from traffic?			
ď	Is the drainage around the well acceptable? (no standing water,			
u	nor is well located in obvious drainage flow path)	-		
	-			
2 Protective				
а	Is the protective casing free from apparent damage and able to be			
	secured?			
b	Is the casing free of degradation or deterioration?	_		
С	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?			
е	Is the well locked and is the lock in good condition?			
3 Curfoss	and and			
3 Surface pa	ad Is the well pad in good condition (not cracked or broken)?			
a	Is the well pad sloped away from the protective casing?			_
b	Is the well pad in complete contact with the protective casing?	_		
c d	Is the well pad in complete contact with the protective casing:	\sim		_
u	stable? (not undermined by erosion, animal burrows, and does not			
	move when stepped on)	_		
е	Is the pad surface clean (not covered with sediment or debris)?	100	N 2	
C	to the pad barrage death (not devoted with beamlett of debits).		: -	-
4 Internal ca	sing			
а	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)?			
С	Is the well properly vented for equilibration of air pressure?			
d	Is the survey point clearly marked on the inner casing?	_	7	
е	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 <u>Sampling.</u>	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?			
С	Does the well require redevelopment (low flow, turbid)?	$\overline{}$		
_	= 111 1.0 1.01. (og 1.0 1.00 1.00 1.00 1.00 1.00 1.00 1.00			-
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?	_	·	
	actions as needed, by date:			
7.0				

me	Hammond			
Number	<u> </u>			
	NGUC-101			
eld conditions	3/10/2021 USOF SUNNY			
	***	yes	no	n/a
1 Location/I				
а	Is the well visible and accessible?			
b	Is the well properly identified with the correct well ID?			
С	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			
<u>-</u>	secured?	/		
b	Is the casing free of degradation or deterioration?	$\overline{}$	-	
c	Does the casing have a functioning weep hole?	7	-	(2
d	is the annular space between casings clear of debris and water,			-
	or filled with pea gravel/sand?			
е	Is the well locked and is the lock in good condition?	<u> </u>		
2 C	~d			
3 Surface pa	ad Is the well pad in good condition (not cracked or broken)?			
a	Is the well pad sloped away from the protective casing?			
b	Is the well pad in complete contact with the protective casing?	/		-
c d	Is the well pad in complete contact with the ground surface and		$\overline{}$	
u	stable? (not undermined by erosion, animal burrows, and does not			
	move when stepped on)			
е	Is the pad surface clean (not covered with sediment or debris)?			-
				-
4 Internal ca		/		
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)?	4	-	-
С	Is the well properly vented for equilibration of air pressure?	/	-	
d	Is the survey point clearly marked on the inner casing? Is the depth of the well consistent with the original well log?			
e f	Is the depth of the well consistent with the original well log? Is the casing stable? (or does the pvc move easily when touched			
1	or can it be taken apart by hand due to lack of grout or use of slip	1004		
	couplings in construction)			
The second second	Groundwater Wells Only:			
a	Does well recharge adequately when purged?			
b	If dedicated sampling equipment installed, is it in good condition	1		
_	and specified in the approved groundwater plan for the facility?	P		
С	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	1		
	requirements?	/		
7 Cameati	actions as needed, by date:			

lame	Plant Hammond			
it Number		•• 		
D	HC2WC-102			
field conditions	3/10/21 40° SUNNY			
1 Location/Id	dentification	yes	no	n/a
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?	\mathbf{x}	_	
d	Is the drainage around the well acceptable? (no standing water,		$\overline{}$	$\overline{}$
ŭ	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			
а	secured?	-		
b	Is the casing free of degradation or deterioration?			
С	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?	1		
е	Is the well locked and is the lock in good condition?			
3 Surface pa	ad			
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?			3
d	Is the well pad in complete contact with the ground surface and	-	::	
u	stable? (not undermined by erosion, animal burrows, and does not			
	move when stepped on)	2222		
е	Is the pad surface clean (not covered with sediment or debris)?		·——	-
				3
4 Internal ca				
а	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)?			-
С	Is the well properly vented for equilibration of air pressure?			
d	Is the survey point clearly marked on the inner casing?	\sim		
е	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)	_		
	Groundwater Wells Only:			
а	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?			<u> </u>
С	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?	_	, <u> </u>	
			$\overline{}$	
7 Commontino	actions as needed, by date:			

Site Name	Plant Hammon J AP-4			
Permit Number				
Well ID	416WC-103			
Date, field conditions				
Date, held conditions	3/10/21 40°, Surmy	1400		n/o
1 Leastien/L	doutification	yes	no	n/a
1 Location/le		_		
а	Is the well visible and accessible?	74		
b	Is the well properly identified with the correct well ID?			
С	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,		—	
J	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			
a	secured?			
I-		_		
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?	_		
е	Is the well locked and is the lock in good condition?	_		
- New York Control of the			_	
3 Surface pa				
а	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?	_		-
С	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)			
е	Is the pad surface clean (not covered with sediment or debris)?			
C	to the pad surface clear (not severed with secument of debrie).	A		
4 Internal ca	esing			
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			-
U	foreign objects (such as bailers)?			
•	Is the well properly vented for equilibration of air pressure?			
C				
d	Is the survey point clearly marked on the inner casing?			
е	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 Compling	Groundwater Wells Only:			
2. 3.3.00 (E.E.E.E.E.E.E.E.E.E.E.E.E.E.E.E.E.E.E.		,		
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?			
С	Does the well require redevelopment (low flow, turbid)?			
6 Dasad	rough management is the result of the section the extreme			
o 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?	_		
7.0				
/ Corrective	actions as needed, by date:			

	~:			
Site Name Permit Number	Plant Hummond AP-4			
Well ID	11/11/2 11-6			
	+16WC+10S			
Date, field conditions	3110171, 40°, Sunny			n/o
1 Location/le	dentification	yes	no	n/a
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 Protoctivo	Cooling			·
2 <u>Protective</u> a	Is the protective casing free from apparent damage and able to be			
a	secured?			
b	Is the casing free of degradation or deterioration?	$\overline{}$		
C	Does the casing have a functioning weep hole?)
d	Is the annular space between casings clear of debris and water,		.——	9
•	or filled with pea gravel/sand?	_		
е	Is the well locked and is the lock in good condition?		8	
3 Surface pa				
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)			
е	Is the pad surface clean (not covered with sediment or debris)?	<u></u>	:	
	To the page darked death (Not develop with addition of debtie).	_		
4 Internal ca				
а	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? Is the casing stable? (or does the pvc move easily when touched			
f	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:	/		
а	Does well recharge adequately when purged?	_	-	
b	If dedicated sampling equipment installed, is it in good condition	1		
	and specified in the approved groundwater plan for the facility?	/	—	
С	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:			
7 Corrective	. dollone de necucu, by date.			

lame t Number	HGrto- Plant Hammond AP-4	e,		
D	+1 GWC-107	e.i		
field condition		s. C		
1 Lagatio	- // dentification	yes	no	n/a
1	n/Identification			
a	Is the well visible and accessible?			
b	Is the well properly identified with the correct well ID?			
С	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)	_		
_0= e 5	2 2	-		
2 Protect	ve Casing			
а	Is the protective casing free from apparent damage and able to be			
_	secured?			
b	Is the casing free of degradation or deterioration?	_		0
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?	_		
е	Is the well locked and is the lock in good condition?	_		~
3 Surface				
а	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?			
С	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)			
е	Is the pad surface clean (not covered with sediment or debris)?			
4 Interna	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)?			
С	Is the well properly vented for equilibration of air pressure?			
d	Is the survey point clearly marked on the inner casing?			
е	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)	$\overline{}$		
5 Samplii	ng: Groundwater Wells Only:	,		
а	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?			
С	Does the well require redevelopment (low flow, turbid)?	war		
6 Based	on your professional judgement, is the well construction / location			
- Dasca	appropriate to 1) achieve the objectives of the Groundwater			
	Monitoring Program and 2) comply with the applicable regulatory			
	requirements?			
7.0	·			
/ Correct	ive actions as needed, by date:			

Name	Plant Hammond AP-41	í		
nit Number				
ID	HGWC-109			
, field conditions	3110121 40°, sunny	yes	no	n/a
1 Location/l	dentification	yes	110	TI/G
a	Is the well visible and accessible?	-		
b	Is the well properly identified with the correct well ID?	\equiv		
С	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?			
е	Is the well locked and is the lock in good condition?			
3 Surface p	od.			
	ls the well pad in good condition (not cracked or broken)?	-		
a b	Is the well pad sloped away from the protective casing?			
-	Is the well pad in complete contact with the protective casing?		:	
c d	Is the well pad in complete contact with the ground surface and		; /	-
u	stable? (not undermined by erosion, animal burrows, and does not			
	move when stepped on)			
е	Is the pad surface clean (not covered with sediment or debris)?		S 	
				-
4 Internal c				
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? Is the casing stable? (or does the pvc move easily when touched			
f	or can it be taken apart by hand due to lack of grout or use of slip			
	couplings in construction)			
outpool and a little				
	: Groundwater Wells Only:	1		
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? Does the well require redevelopment (low flow, turbid)?		7	
С	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?	<u>_</u>		1.
7 Corrective	e actions as needed, by date:			
, COLLECTIV	o actions as needed, by date.			

Site Name	Plant Hammond	•		
Permit Number		•		
Well ID	HGWC-117	•00		
Date, field conditions	3110/21, 40°, sunny	0		-1-
1 Location/le	dontification	yes	no	n/a
	Is the well visible and accessible?			
a b	Is the well visible and accessible? Is the well properly identified with the correct well ID?			
C	Is the well in a high traffic area and does the well require		·	
C	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	Caeing	7	-	
a	Is the protective casing free from apparent damage and able to be			
ŭ	secured?	_		
b	Is the casing free of degradation or deterioration?			
Č	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?	_		
е	Is the well locked and is the lock in good condition?			
3 Surface pa				
a	Is the well pad in good condition (not cracked or broken)?	$\overline{}$		
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) Is the pad surface clean (not covered with sediment or debris)?		SS	
е	is the pad surface dean (not covered with sediment or debits)?		: <u></u> 2	:
4 Internal ca				
а	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)?		.——	
С	Is the well properly vented for equilibration of air pressure?		8	
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)			
	· -		0	.——.
	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? Does the well require redevelopment (low flow, turbid)?	4		
С	boes the well require redevelopment (low now, turblu)?	<u>/</u>		
6 Based on	your professional judgement, is the well construction / location			
	appropriate to 1) achieve the objectives of the Groundwater			
	Monitoring Program and 2) comply with the applicable regulatory			
	requirements?	_		
7 Corrective	actions as needed, by date:			
/ Corrective	actions as needed, by date:			

Site Name Permit Number	HGW Pland Hammond AP24			
Well ID	HG, WC-118			
Date, field conditions	3/10/21, 40°, Sunny			
		yes	no	n/a
1 Location/le				
а	Is the well visible and accessible?	_=		
b	Is the well properly identified with the correct well ID?	=		
С	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			
ū	secured?			
b	Is the casing free of degradation or deterioration?	$\overline{}$		
C	Does the casing have a functioning weep hole?		13	
d	Is the annular space between casings clear of debris and water,			
_	or filled with pea gravel/sand?	-		
е	Is the well locked and is the lock in good condition?			
3 Surface pa				
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?			i j
d	Is the well pad in complete contact with the ground surface and stable? (not undermined by erosion, animal burrows, and does not	٠		
	move when stepped on)			
•	Is the pad surface clean (not covered with sediment or debris)?		::	-
е	15 the pad surface clean (not covered with sediment of debits):	<u> </u>		
4 Internal ca	asing			
а	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)?			
С	Is the well properly vented for equilibration of air pressure?			
d	Is the survey point clearly marked on the inner casing?			
е	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:	1		
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?	_		
С	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	e actions as needed, by date:			

ite Name	Plant Hammond			
Permit Number	11GM+ +16MMON C)	-		
Vell ID	GW(-4)	-		
ate, field conditions				
		yes	no	n/a
1 Location/I				
а	Is the well visible and accessible?			
b	Is the well properly identified with the correct well ID?			
С	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)	_		-
	and the second of the second o			
2 Protective				
а	Is the protective casing free from apparent damage and able to be secured?	_		
b	Is the casing free of degradation or deterioration?	$\overline{}$		
С	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?	~		
е	Is the well locked and is the lock in good condition?			
3 Surface p	ad			
a <u>Suriace p</u>	ls 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		=	-
u	stable? (not undermined by erosion, animal burrows, and does no	ŀ		
	move when stepped on)	_		
е	Is the pad surface clean (not covered with sediment or debris)?	$\dot{-}$		
			· :	
4 Internal ca				
а	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)?		ss	
С	Is the well properly vented for equilibration of air pressure?			
d	Is the survey point clearly marked on the inner casing?			
е	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?			1
b	If dedicated sampling equipment installed, is it in good condition		$\overline{}$	
	and specified in the approved groundwater plan for the facility?			
С	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?	_		
7.0 "				
/ Corrective	e actions as needed, by date:			

Name	Plant Hammone AP-41			
nit Number		-0.		
IID	GW(-6	-0		
e, field conditions	3/10/71 40° shuny	-0		
4.1	44:54:	yes	no	n/a
1 Location/le	<u>เอยกเพิ่วสนิดก</u> Is the well visible and accessible?			
a				
b	Is the well properly identified with the correct well ID?			
С	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			
ŭ	secured?			
b	Is the casing free of degradation or deterioration?	<u> </u>		
C	Does the casing have a functioning weep hole?	_		
d	Is the annular space between casings clear of debris and water,			-
u	or filled with pea gravel/sand?	_		
е	Is the well locked and is the lock in good condition?			
G	15 the Well looked did is the look in good condition:			
3 Surface pa	<u>ad</u>			
а	Is the well pad in good condition (not cracked or broken)?	_		
b	Is the well pad sloped away from the protective casing?			
С	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 no	t		
	move when stepped on)	_		
е	Is the pad surface clean (not covered with sediment or debris)?			
4 Internal ca	eina			
73	Does the cap prevent entry of foreign material into the well?			
a b	Is the casing free of kinks or bends, or any obstructions from			
U	foreign objects (such as bailers)?	_		
С	Is the well properly vented for equilibration of air pressure?			
ď	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 deput of the well consistent with the original well log! Is the casing stable? (or does the pvc move easily when touched			—
1	or can it be taken apart by hand due to lack of grout or use of slip			
	couplings in construction)			
- concentration of the control				
	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?			
С	Does the well require redevelopment (low flow, turbid)?			_
6 Based on	your professional judgement, is the well construction / location			
22302 311	appropriate to 1) achieve the objectives of the Groundwater			
	Monitoring Program and 2) comply with the applicable regulatory			
	requirements?			

lame	Plant Hammon JAP-41			
t Number D	GWC-8	4		
field conditions		-		
neia conditions	3/10/1 40° sunny	yes	no	n/a
1 Location/I	<u>dentification</u>	yes	110	11/4
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			
u	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?	~		
е	Is the well locked and is the lock in good condition?		-	
2 Curfana n	o.ř			
3 Surface p	ad Is the well pad in good condition (not cracked or broken)?	_		
a b	Is the well pad sloped away from the protective casing?			
	Is the well pad in complete contact with the protective casing?	<u> — </u>		-
c d	Is the well pad in complete contact with the ground surface and			
ŭ	stable? (not undermined by erosion, animal burrows, and does not	•		
	move when stepped on)	_		
е	Is the pad surface clean (not covered with sediment or debris)?		(
			·	
4 Internal c				
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)? Is the well properly vented for equilibration of air pressure?			
C				
d	Is the survey point clearly marked on the inner casing? Is the depth of the well consistent with the original well log?	-		
e f	Is the casing stable? (or does the pvc move easily when touched			
f	or can it be taken apart by hand due to lack of grout or use of slip			
	couplings in construction)			
5 Compline	Groundwater Wells Only:			
a <u>Sampling</u>	Does well recharge adequately when purged?			/
a b	If dedicated sampling equipment installed, is it in good condition		·	-
b	and specified in the approved groundwater plan for the facility?			
С	Does the well require redevelopment (low flow, turbid)?			/
				-
p 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	20		
	requirements?		-	-

Name	Plant Hammand AP-4	8		
nit Number		e		
ID	CoW4-14	<u>s</u>		
, field conditions	3110/21 40° sunny		no	nla
1 Location/	Identification	yes	no	n/a
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			
C	protection from traffic?		_	
d	Is the drainage around the well acceptable? (no standing water,			
ū	nor is well located in obvious drainage flow path)	_		
2 Protective				
а	Is the protective casing free from apparent damage and able to be secured?			
b	Is the casing free of degradation or deterioration?			
С	Does the casing have a functioning weep hole?			
d	Is the annular space between casings clear of debris and water,		n	
	or filled with pea gravel/sand?			
е	Is the well locked and is the lock in good condition?			
3 Surface p	24			
Company of the compan	Is the well pad in good condition (not cracked or broken)?	_		
a b	Is the well pad sloped away from the protective casing?		$\overline{}$	
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			
ŭ	stable? (not undermined by erosion, animal burrows, and does not			
	move when stepped on)	_		
е	Is the pad surface clean (not covered with sediment or debris)?			===
4 Internal c				
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)? Is the well properly vented for equilibration of air pressure?			
c 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?			
С	Does the well require redevelopment (low flow, turbid)?			
6 Based or	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?		-	
	•			

ame Number	Plant Hammond	5 3		
)	6001-15	3 3		
ield conditions		• 22		
	Mod	yes	no	n/a
1 Location/l	dentification	•		
а	Is the well visible and accessible?	-		
b	Is the well properly identified with the correct well ID?			
С	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 Destantive	Carles			
2 Protective	s casing Is the protective casing free from apparent damage and able to be			
а	secured?			
L				
b	Is the casing free of degradation or deterioration? Does the casing have a functioning weep hole?			
C	Is the annular space between casings clear of debris and water,			
d	or filled with pea gravel/sand?			
е	Is the well locked and is the lock in good condition?			:
C	13 the Well locked and 13 the lock in good condition:	_		
3 Surface p				
а	Is the well pad in good condition (not cracked or broken)?			
b	Is the well pad sloped away from the protective casing?	_		
С	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)			
е	Is the pad surface clean (not covered with sediment or debris)?	_		
4 Internal c	asing			
а	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)?			
С	Is the well properly vented for equilibration of air pressure?			
d	Is the survey point clearly marked on the inner casing?			
е	Is the depth of the well consistent with the original well log?	$\overline{}$		
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 <u>odmpini</u> g	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?			
С	Does the well require redevelopment (low flow, turbid)?			\overline{Z}
ნ 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 Correctiv	e actions as needed, by date:			
7 Correctiv	requirements? e actions as needed, by date:	<u> </u>	_	

ame	Plant Hammond AP-4	-2		
Number		-:		
) -	6WA-16	-:		
field conditions	3/10121 Jumy, 400	æ		
1 Location/L	dontification	yes	no	n/a
1 Location/Id	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			
C	protection from traffic?			
d	Is the drainage around the well acceptable? (no standing water,	$\overline{}$	$\overline{}$	$\overline{}$
u	nor is well located in obvious drainage flow path)			
	The te well leaded in obvious drainings now pauly			S
2 Protective				
а	Is the protective casing free from apparent damage and able to be			
	secured?			
b	Is the casing free of degradation or deterioration?			
С	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?	_		
е	Is the well locked and is the lock in good condition?			
3 Surface pa	ad			
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	t		
	move when stepped on)	-		
е	Is the pad surface clean (not covered with sediment or debris)?			9
	2004-30040			
4 Internal ca				
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)? Is the well properly vented for equilibration of air pressure?			
c d	Is the survey point clearly marked on the inner casing?	_		
_	Is the depth of the well consistent with the original well log?	$\overline{}$		—
e f	is the casing stable? (or does the pvc move easily when touched		$\overline{}$	
1	or can it be taken apart by hand due to lack of grout or use of slip			
	couplings in construction)	_		
-	,			
	Groundwater Wells Only:	5 -2		
a ·	Does well recharge adequately when purged? If dedicated sampling equipment installed, is it in good condition		-	\angle
b	and specified in the approved groundwater plan for the facility?	_		
C	Does the well require redevelopment (low flow, turbid)?	10	_	5/
С	boos the well require redevelopment (low now, turblu):			-6-
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?			0
7.0- "	actions as needed, by date:			
	actions as beened by date.			

ame	Plant Hammond AP-4	- 0		
Number		. €0		
)	GWC-19	-0		
ield conditions	3110171, 40°, SUNNY	yes	no	n/a
1 Location/I	dentification	yes	110	11/4
а	Is the well visible and accessible?			
b	Is the well properly identified with the correct well ID?			
С	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			
а	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?	-		
е	Is the well locked and is the lock in good condition?			
3 Surface p	ad			
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?			
ď	Is the well pad in complete contact with the ground surface and			3.5
_	stable? (not undermined by erosion, animal burrows, and does not			
	move when stepped on)	_		
е	Is the pad surface clean (not covered with sediment or debris)?			
4 Internal ca	seing			
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)?	_		
С	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:			
а	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?			
С	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?			
	e actions as needed, by date:			
7 6				

lame	Plant Hemmand AP4			
t Number				
D	mw-12			
field conditions	3110121 , sunny 700	Vec	no	n/a
1 Location/I	dentification	yes	110	11/4
a	Is the well visible and accessible?	_		
b	Is the well properly identified with the correct well ID?			
С	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	Cacina			
a	Is the protective casing free from apparent damage and able to be			
a	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?	_		
е	Is the well locked and is the lock in good condition?			
20.	- i			
3 Surface pa	ad Is the well pad in good condition (not cracked or broken)?	_		
a b	Is the well pad in good condition (not cracked or bloken)? Is the well pad sloped away from the protective casing?		$\overline{}$	
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		=	-
ŭ	stable? (not undermined by erosion, animal burrows, and does not			
	move when stepped on)	_		
е	Is the pad surface clean (not covered with sediment or debris)?			
A listance las	tatus.			
4 Internal ca	Does the cap prevent entry of foreign material into the well?			
a b	Is the casing free of kinks or bends, or any obstructions from			
D	foreign objects (such as bailers)?	_		
С	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:			
а	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?			
С	Does the well require redevelopment (low flow, turbid)?			
6 Based on	your professional judgement, is the well construction / location			
- 20000 011	appropriate to 1) achieve the objectives of the Groundwater			
	Monitoring Program and 2) comply with the applicable regulatory			
	requirements?	_		
	·			
	e actions as needed, by date:			

APPENDIX C

Laboratory Analytical and Field Sampling Reports

LABORATORY ANALYTICAL RESULTS

July 2020





September 14, 2020

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

RE: Project: HAMMOND AP-4 BACKGROUND

Pace Project No.: 92487354

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 22, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,

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

Ken Lung

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.





CERTIFICATIONS

Project: HAMMOND AP-4 BACKGROUND

Pace Project No.: 92487354

Pace Analytical Services Charlotte

9800 Kincey Ave. Ste 100, Huntersville, NC 28078 Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706 North Carolina Field Services Certification #: 5342 North Carolina Wastewater Certification #: 12

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804 Florida/NELAP Certification #: E87648 Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

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

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

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

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

Virginia Certification #: 460204





SAMPLE SUMMARY

Project: HAMMOND AP-4 BACKGROUND

Pace Project No.: 92487354

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92487354001	HGWC-102	Water	07/21/20 15:17	07/22/20 11:41



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 BACKGROUND

Pace Project No.: 92487354

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92487354001	HGWC-102	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	JRS	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



SUMMARY OF DETECTION

Project: HAMMOND AP-4 BACKGROUND

Pace Project No.: 92487354

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers	
92487354001	HGWC-102			-			
	рH	5.72	Std. Units		07/22/20 15:50		
EPA 6010D	Calcium	120	mg/L	1.0	07/28/20 16:18	M1	
EPA 6020B	Arsenic	0.00083J	mg/L	0.0050	07/27/20 20:12		
EPA 6020B	Barium	0.028	mg/L	0.010	07/27/20 20:12		
EPA 6020B	Boron	3.0	mg/L	0.10	07/27/20 20:12		
EPA 6020B	Cadmium	0.00083J	mg/L	0.0025	07/27/20 20:12		
EPA 6020B	Cobalt	0.00098J	mg/L	0.0050	07/27/20 20:12		
EPA 6020B	Lithium	0.0013J	mg/L	0.030	07/27/20 20:12		
SM 2450C-2011	Total Dissolved Solids	669	mg/L	10.0	07/24/20 14:12		
EPA 300.0 Rev 2.1 1993	Chloride	7.2	mg/L	1.0	07/26/20 03:00		
EPA 300.0 Rev 2.1 1993	Sulfate	378	mg/L	8.0	07/26/20 08:12		



ANALYTICAL RESULTS

Project: HAMMOND AP-4 BACKGROUND

Pace Project No.: 92487354

Date: 09/14/2020 05:10 PM

Sample: HGWC-102	Lab ID:	92487354001	Collecte	d: 07/21/20	15:17	Received: 07/	22/20 11:41 M	latrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical	Method:							
	Pace Analytical Services - Charlotte								
рН	5.72	Std. Units			1		07/22/20 15:50)	
6010D ATL ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
	Pace Ana	lytical Services	- Peachtree	Corners, C	SA.				
Calcium	120	mg/L	1.0	0.070	1	07/24/20 14:29	07/28/20 16:18	7440-70-2	M1
6020 MET ICPMS	Analytical	Method: EPA 6	020B Prep	aration Met	hod: EF	PA 3005A			
	Pace Ana	lytical Services	- Peachtree	Corners, G	SA.				
Antimony	ND	mg/L	0.0030	0.00028	1	07/23/20 14:15	07/27/20 20:12	7440-36-0	
Arsenic	0.00083J	mg/L	0.0050	0.00078	1	07/23/20 14:15			
Barium	0.028	mg/L	0.010	0.00071	1	07/23/20 14:15	07/27/20 20:12	7440-39-3	
Beryllium	ND	mg/L		0.000046	1	07/23/20 14:15			
Boron	3.0	mg/L	0.10	0.0052	1	07/23/20 14:15			
Cadmium	0.00083J	mg/L	0.0025	0.00012	1	07/23/20 14:15			
Chromium	ND	mg/L	0.010	0.00055	1	07/23/20 14:15	07/27/20 20:12	7440-47-3	
Cobalt	0.00098J	mg/L	0.0050	0.00038	1	07/23/20 14:15	07/27/20 20:12	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	07/23/20 14:15	07/27/20 20:12	7439-92-1	
Lithium	0.0013J	mg/L	0.030	0.00081	1	07/23/20 14:15	07/27/20 20:12	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	07/23/20 14:15	07/27/20 20:12	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	07/23/20 14:15	07/27/20 20:12	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	07/23/20 14:15	07/27/20 20:12	7440-28-0	
7470 Mercury	Analytical	Method: EPA 7	470A Prep	aration Met	hod: EF	PA 7470A			
	Pace Ana	lytical Services	- Peachtree	Corners, G	SA.				
Mercury	ND	mg/L	0.00050	0.000078	1	07/23/20 08:00	07/23/20 14:14	7439-97-6	
2540C Total Dissolved Solids	Analytical	Method: SM 24	450C-2011						
	Pace Ana	lytical Services	- Peachtree	Corners, C	SA.				
Total Dissolved Solids	669	mg/L	10.0	10.0	1		07/24/20 14:12	2	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993								
-	Pace Ana	lytical Services	- Asheville						
Chloride	7.2	mg/L	1.0	0.60	1		07/26/20 03:00	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		07/26/20 03:00		
Sulfate	378	mg/L	8.0	4.0	8		07/26/20 08:12		



QUALITY CONTROL DATA

Project: HAMMOND AP-4 BACKGROUND

Pace Project No.: 92487354

Date: 09/14/2020 05:10 PM

QC Batch: 555656 Analysis Method: EPA 6010D QC Batch Method: EPA 3010A Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92487354001

METHOD BLANK: 2950945 Matrix: Water

Associated Lab Samples: 92487354001

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Calcium mg/L ND 1.0 0.070 07/28/20 15:56

LABORATORY CONTROL SAMPLE: 2950946

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Calcium mg/L 0.99J 99 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2950947 2950948

MS MSD

92487354001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Conc. Result Result % Rec % Rec **RPD** RPD Qual Result Limits 120 20 M1 Calcium mg/L 118 126 -236 541 75-125

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.



Project: HAMMOND AP-4 BACKGROUND

Pace Project No.: 92487354

QC Batch: 555325 QC Batch Method: EPA 3005A Analysis Method: EPA 6020B

Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92487354001

METHOD BLANK: 2949548

Date: 09/14/2020 05:10 PM

Matrix: Water

Associated Lab Samples: 92487354001

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	07/27/20 18:23	
Arsenic	mg/L	ND	0.0050	0.00078	07/27/20 18:23	
Barium	mg/L	ND	0.010	0.00071	07/27/20 18:23	
Beryllium	mg/L	ND	0.0030	0.000046	07/27/20 18:23	
Boron	mg/L	ND	0.10	0.0052	07/27/20 18:23	
Cadmium	mg/L	ND	0.0025	0.00012	07/27/20 18:23	
Chromium	mg/L	ND	0.010	0.00055	07/27/20 18:23	
Cobalt	mg/L	ND	0.0050	0.00038	07/27/20 18:23	
₋ead	mg/L	ND	0.0050	0.000036	07/27/20 18:23	
Lithium	mg/L	ND	0.030	0.00081	07/27/20 18:23	
Molybdenum	mg/L	ND	0.010	0.00069	07/27/20 18:23	
Selenium	mg/L	ND	0.010	0.0016	07/27/20 18:23	
Γhallium	mg/L	ND	0.0010	0.00014	07/27/20 18:23	

LABORATORY CONTROL SAMPLE:	2949549					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Antimony	mg/L	0.1	0.092	92	80-120	_
Arsenic	mg/L	0.1	0.093	93	80-120	
Barium	mg/L	0.1	0.091	91	80-120	
Beryllium	mg/L	0.1	0.090	90	80-120	
Boron	mg/L	1	0.92	92	80-120	
Cadmium	mg/L	0.1	0.093	93	80-120	
Chromium	mg/L	0.1	0.094	94	80-120	
Cobalt	mg/L	0.1	0.093	93	80-120	
Lead	mg/L	0.1	0.096	96	80-120	
Lithium	mg/L	0.1	0.091	91	80-120	
Molybdenum	mg/L	0.1	0.091	91	80-120	
Selenium	mg/L	0.1	0.095	95	80-120	
Thallium	mg/L	0.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX S	PIKE DUPLI	ICATE: 2949	550		2949551							
		92487388015	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.093	0.095	92	95	75-125	3	20	
Arsenic	mg/L	ND	0.1	0.1	0.097	0.097	96	96	75-125	0	20	

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



Project: HAMMOND AP-4 BACKGROUND

Pace Project No.: 92487354

Date: 09/14/2020 05:10 PM

MATRIX SPIKE & MATRIX	SPIKE DUPLIC	CATE: 2949	550		2949551							
Parameter	9 Units	2487388015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.19	0.1	0.1	0.28	0.28	90	97	75-125	3	20	
Beryllium	mg/L	ND	0.1	0.1	0.096	0.10	96	100	75-125	3	20	
Boron	mg/L	ND	1	1	0.97	1.0	96	102	75-125	6	20	
Cadmium	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	2	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.099	98	97	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	1	20	
Lead	mg/L	ND	0.1	0.1	0.095	0.095	95	95	75-125	0	20	
Lithium	mg/L	ND	0.1	0.1	0.10	0.11	98	103	75-125	5	20	
Molybdenum	mg/L	ND	0.1	0.1	0.094	0.096	94	96	75-125	2	20	
Selenium	mg/L	ND	0.1	0.1	0.093	0.093	93	93	75-125	0	20	
Thallium	mg/L	ND	0.1	0.1	0.096	0.095	96	95	75-125	0	20	

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



Project: HAMMOND AP-4 BACKGROUND

Pace Project No.: 92487354

Date: 09/14/2020 05:10 PM

QC Batch: 555226 Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92487354001

METHOD BLANK: 2949041 Matrix: Water

Associated Lab Samples: 92487354001

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Mercury mg/L ND 0.00050 0.000078 07/23/20 14:00

LABORATORY CONTROL SAMPLE: 2949042

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2949043 2949044

MSD MS 92487287001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Result ND 0.0025 0.0026 103 20 Mercury mg/L 0.0025 0.0025 99 75-125

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.



Project: HAMMOND AP-4 BACKGROUND

Pace Project No.: 92487354

QC Batch: 555676 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: 92487354001

METHOD BLANK: 2951046 Matrix: Water

Associated Lab Samples: 92487354001

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 10.0 07/24/20 14:07

LABORATORY CONTROL SAMPLE: 2951047

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units **Total Dissolved Solids** 400 413 103 84-108 mg/L

SAMPLE DUPLICATE: 2951048

92487411001 Dup Max Parameter Units Result Result **RPD RPD** Qualifiers 73.0 **Total Dissolved Solids** 3 mg/L 75.0 10

SAMPLE DUPLICATE: 2951049

Date: 09/14/2020 05:10 PM

92487420002 Dup Max RPD RPD Parameter Units Result Result Qualifiers Total Dissolved Solids 100 110 10 mg/L 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.



Project: HAMMOND AP-4 BACKGROUND

Pace Project No.: 92487354

Date: 09/14/2020 05:10 PM

QC Batch: 555626

QC Batch Method: EPA 300.0 Rev 2.1 1993

Analysis Method: EPA 300.0 Rev 2.1 1993

Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92487354001

METHOD BLANK: 2950807 Matrix: Water

Associated Lab Samples: 92487354001

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND ND	1.0	0.60	07/25/20 21:31	
Fluoride	mg/L	ND	0.10	0.050	07/25/20 21:31	
Sulfate	mg/L	ND	1.0	0.50	07/25/20 21:31	

LABORATORY CONTROL SAMPLE:	2950808					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	50	52.7	105	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	52.9	106	90-110	

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 2950	809		2950810							
			MS	MSD								
		92487589001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	61.5	50	50	100	103	77	83	90-110	3	10	M6
Fluoride	mg/L	1.2	2.5	2.5	3.8	3.8	105	106	90-110	0	10	
Sulfate	mg/L	573	50	50	618	635	91	125	90-110	3	10	M6

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 2950	811		2950812							
			MS	MSD								
		92487550002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	108	50	50	156	156	96	96	90-110	0	10	
Fluoride	mg/L	0.48	2.5	2.5	3.2	3.2	108	107	90-110	1	10	
Sulfate	mg/L	34.6	50	50	86.8	86.5	105	104	90-110	0	10	

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



QUALIFIERS

Project: HAMMOND AP-4 BACKGROUND

Pace Project No.: 92487354

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

Date: 09/14/2020 05:10 PM

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.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 BACKGROUND

Pace Project No.: 92487354

Date: 09/14/2020 05:10 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92487354001	HGWC-102				
92487354001	HGWC-102	EPA 3010A	555656	EPA 6010D	555730
92487354001	HGWC-102	EPA 3005A	555325	EPA 6020B	555361
92487354001	HGWC-102	EPA 7470A	555226	EPA 7470A	555285
92487354001	HGWC-102	SM 2450C-2011	555676		
92487354001	HGWC-102	EPA 300.0 Rev 2.1 1993	555626		

Project Manager Review:

Sample Condition Upon Receipt

. Pace Analytical Client Name:	9/11/0		
ourier: Fed Ex UPS USPS Clien	Commercial	Grace Oth	7384
racking #:		9240	(304 FTO]. Namo.
ustody Seal on Cooler/Box Present: 🔲 yes	no Seal	s intact:	no
acking Material: Bubble Wrap Bubble	Bags 🗌 None	Wother ZIDIO	<u></u>
hermometer Used	Type of Ice: We	Blue None	100
ooler Temperature 2.5	Biological Tissue	e is Frozen: Yes No	Date and initials of person examining contents: KRW 7/22/20
emp should be above freezing to 6°C		Comments:	1 1
hain of Custody Present:	dayes □No □N/	1,	
hain of Custody Filled Out:	Ores DNo DNA	A 2.	
hain of Custody Relinquished:	AYes CINO ON	4 3.	
ampler Name & Signature on COC:	ØYes □No □NI		
amples Arrived within Hold Time:	Wes DNo DN	A 5.	
hort Hold Time Analysis (<72hr):	□Yes ₩ □NI		
Rush Turn Around Time Requested:	□Yes GNo □N	A 7. 10 Day	
Sufficient Volume:	Ores DNo DN	A 8.	
Correct Containers Used:	Gres DNo DN	A 9.	
-Pace Containers Used:	ØYes □No □N	A	
Containers Intact:	Cares □No □N	A 10.	
Filtered volume received for Dissolved tests	Dyes DNo ZX	Á 11.	
Sample Labels match COC:	Ores □No □N	A 12.	
-Includes date/time/ID/Analysis Matrix:	WT_		
All containers needing preservation have been checked.	Elves ONO ON	/A 13.	
All containers needing preservation are found to be in	Øyes □No □N	/A	
compliance with EPA recommendation.	3 13 13 13 13 13 13 13 13 13 13 13 13 13	Initial when	Lot # of added
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	completed	preservative
Samples checked for dechlorination:	Dyes Dino Di	ĨA 14.	
Headspace in VOA Vials (>6mm):	□Yes □No ☑n	7A 15.	
Trip Blank Present:	□Yes □No Ø	/A 16.	
Trip Blank Custody Seals Present	□Yes □No Z	7A	
Pace Trip Blank Lot # (if purchased):			
			Field Data Deswired 2 V / N
Client Notification/ Resolution:	Da	te/Time:	Field Data Required? Y / N
Person Contacted:		Let Time.	
Comments/ Resolution:			

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

F-ALLC003rev.3, 11September2006

Date:

Soo multier plastic unpreserved (N/A) (G+) 250 multier amber unpreserved (N/A) 250 multier amber unpreserved (N/A) 250	1		-	7 ace A	nalyt	ical*	i	?		Bot	tle le	Doc	ment tificat cum	nt N	Form o.:	(BIF)		and the second	D	_	ISSI	Page ling A	1 of 1		office	9			
10-125 mt Plastic Unpreserved (N/A) (G-) 10-125 mt Plastic Unpreserved (N/A) 20-250 mt Plastic Unpreserved (N/A) 20-500 mt Plastic Unpreserved (N/A) 110-1 liter Plastic Unpreserved (N/A) 110-1 liter Plastic HN03 (pH < 2) (G-) 145-125 mt Plastic HN03 (pH < 2) 161-1 liter Amber Lunpreserved (N/A) (G-) 1610-1 liter Amber HCI (pH < 2) 1610-1 liter Amber HCI (N/A) (G-) 1629-250 mt Amber HCI (N/A) 1639-250 mt Amber HCI (N/A) 1699-40 mt VOA HCI (N/A) 1699-40 mt VO	ifie npl	d an	d wit	hin th	roc	ceb	denc	e i a	DRO/8	015	rese	ervi	ion i	5			ojec	t #	PM	: KL	H1		1	Due	Date	54	8/0	5/2	.0
	Bot	(N/A) (G-)	1			-		(6<) HOEN		pan		AG10-1 liter com-	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 int Amber Unpreserved (NATION)	AG15-1 liter Amber H25O4 (pH < 2)	AG35-250 mL Amber H2504 (pH < 2)	AG3A[DG3A]-250 mL Amber NH4Cl (N/A)[Cl-]	ACEH 40 mt VOA HGI (N/A)	VG9T-40 mL VOA Na2S203 (N/A)	VG9U-40 mL VOA Unp (N/A)	ACOP 40 ML VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	COMPANY STATE OF KIT -VPH/Gas kit (N/A)	V/on 12 ML Sterile Plastic (N/A - lab)	spar-250 mL Sterile Plastic (N/A – lab)	1	-	Acoustion mt Amber Unpreserved vials (N/A)	Addonos

		pH Ad	justment Log for Pres	Time preservation	Amount of Preservative	ı
ample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	adjusted	added	
						1
-						1

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 Cut of hold, incorrect preservative, out of temp, incorrect containers.

Pace Analytical

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

			00 00 00 00 00 00 00 00 00 00 00 00 00		Please not note when		12	11	10	9	œ	7	o,	ch	4	u	2	7	ITEM#	ī	, v		Requested Due Date/TAT:	Phone	Email to		Address	Company	Required Client lot
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			ace and the circle waiting		Please note dry wells, stinke thorugh any wells not sampled, and note when the tast pumple for the event has been taken.	ADDITIONAL COMMENTS		The second secon										HGWC-102	SAMPLE ID (A-Z 0-9/-) Sample IDS MUST BE UNIQUE	Cle of Intermation			ste/TAT: 10 Day		SCS Contacts		Allanta, GA	Power	bonahon
			the se on Eur		not sampled and (on taken.													02	ANTER WITH ANTER CONTROL WAS INCOME. WAS INCOME. S. U.S. U.S. U.S. U.S. U.S. U.S. U.S.	ACOD RIVERSIAN	atrix Co		Project	Project	Putcha		Сору То	Report	Requir
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3	B		h	1	Codia	Ì													NaOH	- nevat			2-10	Kevin Herring				Southern Co	
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August 12, 2020

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

RE: Project: HAMMOND AP-4 BACKGROUND RADS

Pace Project No.: 92487351

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on July 22, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

• Pace Analytical Services - Greensburg

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

Sincerely,

Kevin Herring

kevin.herring@pacelabs.com

Kan Den

1(704)875-9092

HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc.

Kristen Jurinko

Whitney Law, Geosyntec Consultants Noelia Muskus, Geosyntec Consultants Ms. Lauren Petty, Southern Co. Services

Nardos Tilahun, GeoSyntec

Dawit Yifru, Geosyntec Consultants, Inc.





CERTIFICATIONS

Project: HAMMOND AP-4 BACKGROUND RADS

Pace Project No.: 92487351

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

Guam Certification

Florida: Cert E871149 SEKS WET

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

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





SAMPLE SUMMARY

Project: HAMMOND AP-4 BACKGROUND RADS

Pace Project No.: 92487351

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92487351001	HGWC-102	Water	07/21/20 15:17	07/22/20 11:41



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 BACKGROUND RADS

Pace Project No.: 92487351

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92487351001	HGWC-102	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



Project: HAMMOND AP-4 BACKGROUND RADS

Pace Project No.: 92487351

Lab Sample ID	Client Sample ID	5 "		5		0 115
Method	Parameters —	Result	Units	Report Limit	Analyzed	Qualifiers
92487351001	HGWC-102					
EPA 9315	Radium-226	0.0938 ± 0.128 (0.271) C:96% T:NA	pCi/L		08/03/20 07:11	
EPA 9320	Radium-228	-0.119 ± 0.345 (0.823) C:77% T:86%	pCi/L		08/07/20 12:13	
Total Radium Calculation	Total Radium	0.0938 ± 0.473 (1.09)	pCi/L		08/11/20 13:19	



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 BACKGROUND RADS

Pace Project No.: 92487351

Sample: HGWC-102 PWS:	Lab ID: 92487 3 Site ID:	351001 Collected: 07/21/20 15:17 Sample Type:	Received:	07/22/20 11:41	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	ervices - Greensburg				
Radium-226	EPA 9315	0.0938 ± 0.128 (0.271) C:96% T:NA	pCi/L	08/03/20 07:1	1 13982-63-3	
	Pace Analytical S	ervices - Greensburg				
Radium-228	EPA 9320	-0.119 ± 0.345 (0.823) C:77% T:86%	pCi/L	08/07/20 12:13	3 15262-20-1	
	Pace Analytical S	ervices - Greensburg				
Total Radium	Total Radium Calculation	0.0938 ± 0.473 (1.09)	pCi/L	08/11/20 13:19	7440-14-4	



QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 BACKGROUND RADS

Pace Project No.: 92487351

QC Batch: 407104

Analysis Method:

EPA 9315

QC Batch Method:

EPA 9315

Analysis Description:

9315 Total Radium

Laboratory:

Pace Analytical Services - Greensburg

Associated Lab Samples: 92487351001

METHOD BLANK: 1970100

Matrix: Water

Associated Lab Samples: 92487351001

Parameter

Act ± Unc (MDC) Carr Trac

Units

Analyzed

Qualifiers

Radium-226

-0.00350 ± 0.0895 (0.259) C:99% T:NA pCi/L 08/03/20 07:11

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.



QUALITY CONTROL - RADIOCHEMISTRY

EPA 9320

Project: HAMMOND AP-4 BACKGROUND RADS

Pace Project No.: 92487351

QC Batch: 407458

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92487351001

METHOD BLANK: 1971639 Matrix: Water

Associated Lab Samples: 92487351001

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-228
 0.631U ± 0.411 (0.776) C:75% T:78%
 pCi/L
 08/07/20 12:07

Analysis Method:

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.



QUALIFIERS

Project: HAMMOND AP-4 BACKGROUND RADS

Pace Project No.: 92487351

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

Date: 08/12/2020 11:10 AM

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.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 BACKGROUND RADS

Pace Project No.: 92487351

Date: 08/12/2020 11:10 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92487351001	HGWC-102	EPA 9315	407104		
92487351001	HGWC-102	EPA 9320	407458		
92487351001	HGWC-102	Total Radium Calculation	408885		

Pace Analytical

Sample Condition Upon Rece

Client Name: GA Power

W0#:92487351



Courier. Feath in the Livers Cite	an — Commercial	SE Pace Offic	[Prof. Due Date:
Tracking #: Custody \$eal on Cooler/Box Present: ☐ yes	no Seals		Proj. Name:
			no L
	e Bags 🔲 None 🕹		<u>c</u>
hermometer Used	Type of Ice: Wet		Samples on ice, cooling process has begun Date and initials of person,examining
Cooler Temperature 2.5	Biological Tissue i		contents: KRW 7/20/20
emp should be above freezing to 6°C	4.0	Comments:	
Chain of Custody Present:	-	1.	
Chain of Custody Filled Out:	OYes DNo DN/A		
Chain of Custody Relinquished:	GYes □No □N/A	***************************************	
Sampler Name & Signature on COC:	ØYes □No □N/A		
Samples Arrived within Hold Time:	ØYes □No □N/A		1.0.0
Short Hold Time Analysis (<72hr):	□Yes &No □N/A	-	
Rush Turn Around Time Requested:	□Yes GNO □N/A	7.10 Day	
Sufficient Volume:	CYes ONO ON/A	8. 0	1-1
Correct Containers Used:	Gres DNo DNA	9.	
-Pace Containers Used:	ØYes □No □N/A		
Containers Intact:	CAYes []No []N/A	10.	
Filtered volume received for Dissolved tests	□Yes □No Zada	11.	
Sample Labels match COC:	Tres ONO ONIA	12.	
-Includes date/time/ID/Analysis Matrix:	WT_		
All containers needing preservation have been checked	Ø¥es □No □N/A	13.	
All containers needing preservation are found to be in	Alvos ONO ONA		
compliance with EPA recommendation.		Soitial when	Total Codes
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	□Yes □No	completed	Lot # of added
Samples checked for dechlorination:	CIYOS CINO CHIA	14.	
Headspace in VOA Vials (>6mm):	DYes DNo ZMA	15.	
Trip Blank Present:	□Yes □No ØN/A	16.	
Trip Blank Custody Seals Present	LIYES LINO ZINIA		
Pace Trip Blank Lot # (if purchased):			
Client Notification/ Resolution:			Field Data Descinate V / V
Person Contacted:	Date/	Time:	Field Data Required? Y / N
Comments/ Resolution:		10000	
Commission recognitions		****	
	100		
D. J. L. M			Data
Project Manager Review:	-		Date:

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

F-ALLC003rev,3, 11September2006

	1	Check man rerified and amples. exceptions: VC	k top h	the acc	ox if pl	nce ra	DRO/8	O1 P	lorin rese water	ation	J.,	Rev.M		ojec	t#	PM:	KL ENT	H1	92	24)ue	73	51	8/1		
The second street is a second street in the second	Sample ID Type of Preservative pri upon receiption adjusted added	1 12 12 14 (G-) (A/A) (G-) 15 14 16 17 17 17 17 17 17 17 17 17 17 17 17 17	BP3U-250 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP45-125 mL Plastic H2504 (pH < 2) [Ci-]	BP3N-250 mL plastic finous pro-	BP4C-125 mt Plastic NaOH (pH > 12) (Gt-)	wGFU-Wide-mouthed Glass Jar Unpreserved	H AG1U-1 liter Amber Unpreserved (N/A) (Cl.)	djus	tme	nt Lo	la gio	Pr	ese	rved	Sam	nple	25			, c of Pre	Sec. 12.		AGOU-100 mL Amber Unpreserved vials (IV/A)	

Pace Analytical

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

			CS:skiew.	note when the	2	12	=	10	9	6 7	7	øı	ch	4	C1	2	7	ITEM#		F S	1	Requested Due Date/TAT:	1	Email 10		vogress	Company	Required Chert Information
	_		œ F	the tast so	2											,	1	Sample S		Section D	1	Due Da		SCS		Alla	GA CA	heat hit
		and the second	Be B. Ca Ca Cr. Ca Pb, U Hg No Se	mease note try wells sinke moragn any wells not sampled and note when the last sumple for the event has been taken	ADDITIONAL COMMENTS			THE COLUMN TWO IS NOT	The state of the s								HGWC-102	AMPLE ID (A-Z 0-97-) DS MUST BE UNIQUE	Charles and the Alle	Valid Matrix Codes MATRIX CODE		IdTAT: 10 Day		Contacts		Atlanta, GA	Power	imation
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Throughof Hote By signing the form you are accepted Parch's RET 30 day payment terms and agreens to late charges of 1.5%, per mouth for any another not paid within 30 days

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

Quality Control Sample Performance Assessment

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Pace Analytical"

Ra-226 JJY 7/31/2020 55323 DW Test: Analyst: Date: Worklist: Matrix:

	Sample Collection Date:	1.00
	Sample 1.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):	
5323	Sample Result:	
20	Sample Result Counting Uncertainty (pCi/L, g, F):	
<u>జ</u>	Sample Matrix Spike Result:	
9	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:	
5%	MSD Status vs Numerical Indicator:	
	MS Status vs Recovery:	
	MSD Status vs Recovery:	
	MS/MSD Upper % Recovery Limits:	
	MS/MSD Lower % Recovery Limits:	

LCSD (Y or N)?

Laboratory Control Sample Assessment

N/A Pass

MB Numerical Performance Indicator:
MB Status vs Numerical Indicator:
MB Status vs. MDC:

1970100 -0.004 0.089 0.259 -0.08

MB MDC:

MB Sample ID MB concentration: M/B Counting Uncertainty:

Method Blank Assessment

		25%	% RPD Limit:
M /SW		Pass	Duplicate Status vs RPD:
MS/ MSD Duplicate		A/N	Duplicate Status vs Numerical Indicator:
Based on the Percent Recoveri		6.51%	 (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD;
Duplicate Nun		-0.762	Duplicate Numerical Performance Indicator:
Matrix Spike Duplicate Result Cour		9	Are sample and/or duplicate results below RL?
Sample		0.647	Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):
Matrix Spike Result Cour	the space below.	5.001	Sample Duplicate Result (pCi/L, g, F):
	LCS/LCSD in	0.619	Sample Result Counting Uncertainty (pCi/L, g, F):
	other than	4.653	Sample Result (pCl/L, g, F):
	sample IDs if	LCSD55323	Duplicate Sample I.D.
	Enter Duplicate	LCS55323	Sample I.D.:
Matrix Spike/Matrix Spike Duplicate			Duplicate Sample Assessment
MS/W	75%	75%	Lower % Recovery Limits:
WSW	125%	125%	Upper % Recovery Limits:
	Pass	Pass	Status vs Recovery:
	A/A	Y/N	Status vs Numerical Indicator:
MSD	106.02%	99.34%	Percent Recovery:
WSW	0.86	-0.10	Numerical Performance Indicator:
	0.647	0.619	LCS/LCSD Counting Uncertainty (pCi/L, g, F):
	5.001	4.653	Result (pCi/L, g, F):
IN OSM	0.057	0.056	Uncertainty (Calculated);
UN SW	4.717	4.684	Target Conc. (pCi/L, g, F):
Matrix Spike Duplicate Result Cou	0.510	0.513	Aliquot Volume (L, g, F):
Sample	0.10	0.10	Volume Used (mL):
Matrix Spike Result Cou	24.046	24.046	Decay Corrected Spike Concentration (pCi/mL);
	19-033	19-033	Spike I.D.:
Sample Result Cou	8/3/2020	8/3/2020	Count Date:
	LCSD55323	LCS55323	

	Matrix Spike/Matrix Spike Duplicate Sample Assessment	
ŧ	Sample 1.D.	
×	Sample MS I.D.	
	Sample MSD I.D.	
_	Sample Matrix Spike Result:	
ě	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
_	Sample Matrix Spike Duplicate Result:	
	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F);	
Г	Duplicate Numerical Performance Indicator:	
	(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	
Ì	MS/ MSD Duplicate Status vs Numerical Indicator:	
	MS/ MSD Duplicate Status vs RPD:	
	##: - Caa %	

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

Comments:

AN8/3/200

TAR_55323_W.xls Total Alpha Radium (R104-3 11Feb2019).xls

TAR DW QC Printed: 8/3/2020 8:57 AM

1 of 1

Quality Control Sample Performance Assessment

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Ra-228

Test

Face Analytical

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100 ct 1	Sample I.D. 20160199009 20159953007 Sample MS I.D. 20160199015 20159953017 Sample MS I.D. 20160199015 20159953011 Sample MS I.D. 20160199016 20159953011 Sample MS I.D. 20160199016 20159953011 Sample MS I.D. 20160199016 Result: 8.783 7.692 Duplicate Result: 8.964 7.692 Duplicate Result: 1.954 1.959 II.0% II.0% II.0% II.0% II.0% III.0% II	10/1000 Ra-228 (R096
MSD Status vs Numerical indicator. MSD Status vs Numerical Indicator. MSD Status vs Recovery. MSD Status vs Recovery. MSMSD Upper vs Recovery Limits: MS/MSD Lower vs Recovery Limits:	Matrix Spike/Matrix Spike Duplicate Sample Assessment Sample I.D. Sample MSI.D. Sample MSI.D. Sample Matrix Spike Result 2 Sigma CSU (pC/M., g. F): Sample Matrix Spike Result 2 Sigma CSU (pC/M., g. F): Duplicate Result 2 Sigma CSU (pC/M., g. F): Duplicate Nesult 2 Sigma CSU (pC/M., g. F): Duplicate Nesult 2 Sigma CSU (pC/M., g. F): MS/ MSD Duplicate Status vs Numerical Indicator: MS/ MSD Duplicate Status vs Numerical Indicator: MS/ MSD Duplicate Status vs RDD Limit. % RPD Limit.	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. If the lowest activity sample in this batch must be re-prepped. If the lowest acceptable; otherwise this batch must be re-prepped. If the lowest acceptable; otherwise this batch must be re-prepped. If the lowest acceptable; otherwise this batch must be re-prepped. If the lowest acceptable; otherwise this batch must be re-prepped. If the lowest acceptable; otherwise this batch must be re-prepped. If the lowest acceptable; otherwise this batch must be re-prepped.
	Enter Duplicate sample 10s if other than LCS/LCSD in the space below.	e blank is acceptable.
1.84 127.48% N/A Pass 135% 60%	See Beiow ##	re błank value, g
Numerical Performance Indicator: Status vs Numerical Indicator: Status vs Recovery: Upper % Recovery Limits: Lower % Recovery Limits:	Duplicate Sample Assessment Sample I.D.: Sample Result (pCiV., g. F): Sample Result (pCiV., g. F): Sample Duplicate Result (pCiV., g. F): Are sample and/or duplicate Result below RL? Duplicate Numerical Performance Indicator: 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.	activity, sample in this batch is greater than ten times the
	Duplicate Sa ## Evaluati	If the lowest. 72 3:05 AM

Ra-228_55375_W.xls Ra-228 (R086-8 04Sep2019).xls

Ra-228 NELAC DW2 Printed: 8/10/2020 8:05 AM

August 2020





September 08, 2020

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

RE: Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 26, 2020 and August 28, 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

Ken Hung

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.





CERTIFICATIONS

Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Pace Analytical Services Charlotte

9800 Kincey Ave. Ste 100, Huntersville, NC 28078 Louisiana/NELAP Certification # LA170028 North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342 North Carolina Wastewater Certification #: 12

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804 Florida/NELAP Certification #: E87648 Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

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

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

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

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

Virginia Certification #: 460204



SAMPLE SUMMARY

Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92492563001	HGWA-111	Water	08/25/20 10:03	08/26/20 12:00
92492563002	HGWA-112	Water	08/25/20 12:10	08/26/20 12:00
92492563003	HGWA-113	Water	08/25/20 15:17	08/26/20 12:00
92492563004	HGWC-118	Water	08/26/20 15:36	08/27/20 08:56
92492563005	HGWC-102	Water	08/27/20 15:45	08/28/20 11:08
92492563006	FB-02	Water	08/27/20 15:30	08/28/20 11:08
92492563007	FD-02	Water	08/27/20 00:00	08/28/20 11:08
92492563008	HGWC-101	Water	08/27/20 11:30	08/28/20 11:08
92492563009	HGWC-103	Water	08/27/20 13:40	08/28/20 11:08
92492563010	HGWC-107	Water	08/27/20 17:30	08/28/20 11:08
92492563011	HGWC-105	Water	08/27/20 13:43	08/28/20 11:08
92492563012	HGWC-109	Water	08/27/20 15:42	08/28/20 11:08
92492563013	HGWC-117	Water	08/27/20 17:48	08/28/20 11:08



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Lab ID Sample ID 92492563001 HGWA-111 92492563002 HGWA-112 92492563003 HGWA-113 92492563004 HGWC-118 92492563005 HGWC-102		Method	Analysts	Analytes Reported	
92492563001	HGWA-111	EPA 6020B	CW1	12	
		EPA 7470A	VB	1	
		EPA 300.0 Rev 2.1 1993	BRJ	1	
92492563002	HGWA-112	EPA 6020B	CW1	12	
		EPA 7470A	VB	1	
		EPA 300.0 Rev 2.1 1993	BRJ	1	
92492563003	HGWA-113	EPA 6020B	CW1	12	
		EPA 7470A	VB	1	
		EPA 300.0 Rev 2.1 1993	BRJ	1	
92492563004	HGWC-118	EPA 6020B	CW1	12	
		EPA 7470A	VB	1	
		EPA 300.0 Rev 2.1 1993	CDC	1	
92492563005	HGWC-102	EPA 6020B	CW1	14	
		EPA 7470A	VB	1	
		SM 2450C-2011	ALW	1	
		EPA 300.0 Rev 2.1 1993	BRJ	3	
92492563006	FB-02	EPA 6020B	CW1	14	
		EPA 7470A	VB	1	
		SM 2450C-2011	ALW	1	
		EPA 300.0 Rev 2.1 1993	BRJ	3	
92492563007	FD-02	EPA 6020B	CW1	14	
		EPA 7470A	VB	1	
		SM 2450C-2011	ALW	1	
		EPA 300.0 Rev 2.1 1993	BRJ	3	
92492563008	HGWC-101	EPA 6020B	CW1	12	
		EPA 7470A	VB	1	
		EPA 300.0 Rev 2.1 1993	BRJ	1	
92492563009	HGWC-103	EPA 6020B	CW1	12	
		EPA 7470A	VB	1	
		EPA 300.0 Rev 2.1 1993	BRJ	1	
92492563010	HGWC-107	EPA 6020B	CW1	12	
		EPA 7470A	VB	1	
		EPA 300.0 Rev 2.1 1993	BRJ	1	
92492563011	HGWC-105	EPA 6020B	CW1	12	
		EPA 7470A	VB	1	
		EPA 300.0 Rev 2.1 1993	BRJ	1	
92492563012	HGWC-109	EPA 6020B	CW1	12	

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Lab ID	Sample ID	Method Analysts	Analytes Reported
		EPA 7470A VB	1
		EPA 300.0 Rev 2.1 1993 BRJ	1
92492563013	HGWC-117	EPA 6020B CW1	12
		EPA 7470A VB	1
		EPA 300.0 Rev 2.1 1993 BRJ	1

PASI-A = Pace Analytical Services - Asheville PASI-C = Pace Analytical Services - Charlotte

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



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2492563001	HGWA-111					
	рН	6.70	Std. Units		09/01/20 07:51	
PA 6020B	Barium	0.031	mg/L	0.010	08/28/20 17:23	
PA 6020B	Beryllium	0.000047J	mg/L	0.0030	08/28/20 17:23	
EPA 6020B	Chromium	0.0013J	mg/L	0.010	08/28/20 17:23	
EPA 6020B	Lead	0.00036J	mg/L	0.0050	08/28/20 17:23	
EPA 6020B	Lithium	0.0033J	mg/L	0.030	08/28/20 17:23	
EPA 300.0 Rev 2.1 1993	Fluoride	0.052J	mg/L	0.10	08/27/20 17:56	
2492563002	HGWA-112					
	рН	5.53	Std. Units		09/01/20 07:51	
PA 6020B	Barium	0.028	mg/L	0.010	08/28/20 17:29	
EPA 6020B	Chromium	0.0039J	mg/L	0.010	08/28/20 17:29	
EPA 6020B	Lead	0.00011J	mg/L	0.0050	08/28/20 17:29	
2492563003	HGWA-113					
	рН	5.95	Std. Units		09/01/20 07:51	
EPA 6020B	Barium	0.030	mg/L	0.010	08/28/20 17:35	
EPA 6020B	Beryllium	0.000046J	mg/L	0.0030	08/28/20 17:35	
EPA 6020B	Chromium	0.0031J	mg/L	0.010	08/28/20 17:35	
EPA 6020B	Lead	0.00022J	mg/L	0.0050	08/28/20 17:35	
PA 6020B	Lithium	0.0014J	mg/L	0.030	08/28/20 17:35	
EPA 300.0 Rev 2.1 1993	Fluoride	0.17	mg/L	0.10	08/27/20 18:26	
2492563004	HGWC-118					
	рН	6.97	Std. Units		09/01/20 07:51	
EPA 6020B	Barium	0.056	mg/L	0.010	09/02/20 11:41	
PA 6020B	Chromium	0.00098J	mg/L	0.010	09/02/20 11:41	
PA 6020B	Cobalt	0.00061J	mg/L	0.0050	09/02/20 11:41	
PA 6020B	Lead	0.00036J	mg/L	0.0050	09/02/20 11:41	
PA 6020B	Lithium	0.0028J	mg/L	0.030	09/02/20 11:41	
PA 300.0 Rev 2.1 1993	Fluoride	0.072J	mg/L	0.10	08/29/20 01:38	
2492563005	HGWC-102					
	рН	5.7	Std. Units		09/01/20 07:51	
PA 6020B	Barium	0.028	mg/L	0.010	09/01/20 20:50	
EPA 6020B	Boron	2.7	mg/L	0.10	09/01/20 20:50	
EPA 6020B	Cadmium	0.00038J	mg/L	0.0025	09/01/20 20:50	
PA 6020B	Calcium	106	mg/L	0.10	09/02/20 18:01	
PA 6020B	Cobalt	0.0010J	mg/L	0.0050	09/01/20 20:50	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	09/01/20 20:50	
SM 2450C-2011	Total Dissolved Solids	663	mg/L	10.0	08/31/20 18:03	
PA 300.0 Rev 2.1 1993	Chloride	7.1	mg/L	1.0	08/29/20 20:56	
EPA 300.0 Rev 2.1 1993	Sulfate	382	mg/L	1.0	08/29/20 20:56	
2492563006	FB-02					
EPA 6020B	Barium	0.0020J	mg/L	0.010	09/01/20 20:56	
EPA 6020B	Boron	0.013J	mg/L	0.10	09/01/20 20:56	
2492563007	FD-02					
PA 6020B	Barium	0.027	mg/L	0.010	09/01/20 21:02	
			•			

REPORT OF LABORATORY ANALYSIS

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Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2492563007	FD-02					
PA 6020B	Boron	2.8	mg/L	0.10	09/01/20 21:02	
PA 6020B	Cadmium	0.00034J	mg/L	0.0025	09/01/20 21:02	
PA 6020B	Calcium	105	mg/L	0.10	09/01/20 21:02	
PA 6020B	Cobalt	0.0011J	mg/L	0.0050	09/01/20 21:02	
PA 6020B	Lithium	0.0011J	mg/L	0.030	09/01/20 21:02	
M 2450C-2011	Total Dissolved Solids	661	mg/L	10.0	08/31/20 18:04	
PA 300.0 Rev 2.1 1993	Chloride	7.0	mg/L	1.0	08/29/20 21:26	
PA 300.0 Rev 2.1 1993	Sulfate	381	mg/L	1.0	08/29/20 21:26	
492563008	HGWC-101					
	рН	5.32	Std. Units		09/01/20 07:51	
PA 6020B	Barium	0.045	mg/L	0.010	09/02/20 11:52	
PA 6020B	Beryllium	0.000057J	mg/L	0.0030	09/02/20 11:52	
PA 6020B	Cadmium	0.00019J	mg/L	0.0025	09/02/20 11:52	
PA 6020B	Cobalt	0.0027J	mg/L	0.0050	09/02/20 11:52	
492563009	HGWC-103					
	рН	5.82	Std. Units		09/01/20 07:51	
PA 6020B	Barium	0.038	mg/L	0.010	09/02/20 11:58	
PA 6020B	Beryllium	0.000050J	mg/L	0.0030	09/02/20 11:58	
PA 6020B	Cadmium	0.00082J	mg/L	0.0025	09/02/20 11:58	
PA 6020B	Chromium	0.00069J	mg/L	0.010	09/02/20 11:58	
PA 6020B	Cobalt	0.0019J	mg/L	0.0050	09/02/20 11:58	
PA 6020B	Lead	0.00018J	mg/L	0.0050	09/02/20 11:58	
PA 6020B	Lithium	0.0016J	mg/L	0.030	09/02/20 11:58	
492563010	HGWC-107					
	рН	6.09	Std. Units		09/01/20 07:51	
PA 6020B	Barium	0.034	mg/L	0.010	09/01/20 21:19	
492563011	HGWC-105					
	рН	6.45	Std. Units		09/01/20 07:51	
PA 6020B	Barium	0.068	mg/L	0.010		
PA 6020B	Lithium	0.0037J	mg/L	0.030	09/01/20 21:36	
492563012	HGWC-109					
	рН	6.64	Std. Units		09/01/20 07:51	
PA 6020B	Arsenic	0.0011J	mg/L	0.0050	09/01/20 21:42	
PA 6020B	Barium	0.083	mg/L	0.010	09/01/20 21:42	
PA 6020B	Cobalt	0.00086J	mg/L	0.0050	09/01/20 21:42	
PA 6020B	Lithium	0.0011J	mg/L	0.030	09/01/20 21:42	
PA 300.0 Rev 2.1 1993	Fluoride	0.094J	mg/L	0.10	08/30/20 00:09	
492563013	HGWC-117					
	рН	5.92	Std. Units		09/01/20 07:51	
PA 6020B	Barium	0.047	mg/L	0.010	09/01/20 21:47	
PA 6020B	Beryllium	0.000049J	mg/L	0.0030	09/02/20 18:36	
PA 6020B	Cadmium	0.00080J	mg/L	0.0025	09/01/20 21:47	
PA 6020B	Chromium	0.00057J	mg/L	0.010		
PA 6020B	Cobalt	0.011	mg/L	0.0050	09/01/20 21:47	

REPORT OF LABORATORY ANALYSIS

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Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92492563013	HGWC-117					
EPA 6020B EPA 6020B	Lead Lithium	0.00014J 0.0024J	mg/L mg/L	0.0050 0.030	09/01/20 21:47 09/01/20 21:47	



ANALYTICAL RESULTS

Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

Sample: HGWA-111	Lab ID:	92492563001	Collecte	ed: 08/25/20	10:03	Received: 08/	26/20 12:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte	;					
Н	6.70	Std. Units			1		09/01/20 07:51		
6020 MET ICPMS	Analytical	Method: EPA 6	6020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	SA.				
Antimony	ND	mg/L	0.0030	0.00028	1	08/27/20 17:10	08/28/20 17:23	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/27/20 17:10	08/28/20 17:23	7440-38-2	
Barium	0.031	mg/L	0.010	0.00071	1	08/27/20 17:10	08/28/20 17:23	7440-39-3	
Beryllium	0.000047J	mg/L	0.0030	0.000046	1	08/27/20 17:10	08/28/20 17:23	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/27/20 17:10	08/28/20 17:23	7440-43-9	
Chromium	0.0013J	mg/L	0.010	0.00055	1	08/27/20 17:10	08/28/20 17:23	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/27/20 17:10	08/28/20 17:23	7440-48-4	
₋ead	0.00036J	mg/L	0.0050	0.000036	1	08/27/20 17:10	08/28/20 17:23	7439-92-1	
_ithium	0.0033J	mg/L	0.030	0.00081	1	08/27/20 17:10	08/28/20 17:23	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/27/20 17:10	08/28/20 17:23	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/27/20 17:10	08/28/20 17:23	7782-49-2	
Γhallium	ND	mg/L	0.0010	0.00014	1	08/27/20 17:10	08/28/20 17:23	7440-28-0	
7470 Mercury	Analytical	Method: EPA	7470A Pre	paration Met	hod: EF	PA 7470A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	SA.				
Mercury	ND	mg/L	0.00050	0.000078	1	08/31/20 11:00	09/01/20 09:23	7439-97-6	
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
	Pace Ana	lytical Services	- Asheville						
Fluoride	0.052J	mg/L	0.10	0.050	1		08/27/20 17:56	16984-48-8	



ANALYTICAL RESULTS

Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

Sample: HGWA-112	Lab ID:	92492563002	Collecte	ed: 08/25/20	12:10	Received: 08/	26/20 12:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	- Charlotte	•					
Н	5.53	Std. Units			1		09/01/20 07:51		
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, G	βA				
Antimony	ND	mg/L	0.0030	0.00028	1	08/27/20 17:10	08/28/20 17:29	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/27/20 17:10	08/28/20 17:29	7440-38-2	
Barium	0.028	mg/L	0.010	0.00071	1	08/27/20 17:10	08/28/20 17:29	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	08/27/20 17:10	08/28/20 17:29	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/27/20 17:10	08/28/20 17:29	7440-43-9	
Chromium	0.0039J	mg/L	0.010	0.00055	1	08/27/20 17:10	08/28/20 17:29	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/27/20 17:10	08/28/20 17:29	7440-48-4	
₋ead	0.00011J	mg/L	0.0050	0.000036	1	08/27/20 17:10	08/28/20 17:29	7439-92-1	
_ithium	ND	mg/L	0.030	0.00081	1	08/27/20 17:10	08/28/20 17:29	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/27/20 17:10	08/28/20 17:29	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/27/20 17:10	08/28/20 17:29	7782-49-2	
Γhallium	ND	mg/L	0.0010	0.00014	1	08/27/20 17:10	08/28/20 17:29	7440-28-0	
7470 Mercury	Analytical	Method: EPA 7	470A Pre	paration Met	nod: EF	PA 7470A			
	Pace Anal	ytical Services	- Peachtre	e Corners, G	βA				
Mercury	ND	mg/L	0.00050	0.000078	1	08/31/20 11:00	09/01/20 09:32	7439-97-6	
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0 Rev 2	2.1 1993					
•	Pace Anal	ytical Services	- Asheville						
Fluoride	ND	mg/L	0.10	0.050	1		08/27/20 18:11	16984-48-8	
		-							



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

Sample: HGWA-113	Lab ID:	92492563003	Collecte	ed: 08/25/20	15:17	Received: 08/	26/20 12:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	- Charlotte)					
ЭН	5.95	Std. Units			1		09/01/20 07:51		
6020 MET ICPMS	Analytical	Method: EPA 6	6020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Antimony	ND	mg/L	0.0030	0.00028	1	08/27/20 17:10	08/28/20 17:35	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	08/27/20 17:10	08/28/20 17:35	7440-38-2	
3arium	0.030	mg/L	0.010	0.00071	1	08/27/20 17:10	08/28/20 17:35	7440-39-3	
Beryllium	0.000046J	mg/L	0.0030	0.000046	1	08/27/20 17:10	08/28/20 17:35	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	08/27/20 17:10	08/28/20 17:35	7440-43-9	
Chromium	0.0031J	mg/L	0.010	0.00055	1	08/27/20 17:10	08/28/20 17:35	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	08/27/20 17:10	08/28/20 17:35	7440-48-4	
₋ead	0.00022J	mg/L	0.0050	0.000036	1	08/27/20 17:10	08/28/20 17:35	7439-92-1	
_ithium	0.0014J	mg/L	0.030	0.00081	1	08/27/20 17:10	08/28/20 17:35	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	08/27/20 17:10	08/28/20 17:35	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	08/27/20 17:10	08/28/20 17:35	7782-49-2	
Γhallium	ND	mg/L	0.0010	0.00014	1	08/27/20 17:10	08/28/20 17:35	7440-28-0	
7470 Mercury	Analytical	Method: EPA 7	7470A Pre _l	paration Met	hod: EF	PA 7470A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Mercury	ND	mg/L	0.00050	0.000078	1	08/31/20 11:00	09/01/20 09:35	7439-97-6	
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0 Rev 2	2.1 1993					
	Pace Anal	ytical Services	- Asheville	:					
Fluoride	0.17	mg/L	0.10	0.050	1		08/27/20 18:26	16984-48-8	
		-							



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

Sample: HGWC-118	Lab ID:	92492563004	Collecte	ed: 08/26/20	15:36	Received: 08/	27/20 08:56 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL .	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	- Charlotte)					
Н	6.97	Std. Units			1		09/01/20 07:51		
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	nod: EF	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, G	iΑ				
Antimony	ND	mg/L	0.0030	0.00028	1	09/01/20 14:03	09/02/20 11:41	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/02/20 11:41	7440-38-2	
Barium	0.056	mg/L	0.010	0.00071	1	09/01/20 14:03	09/02/20 11:41	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 11:41	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/02/20 11:41	7440-43-9	
Chromium	0.00098J	mg/L	0.010	0.00055	1	09/01/20 14:03	09/02/20 11:41	7440-47-3	
Cobalt	0.00061J	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/02/20 11:41	7440-48-4	
₋ead	0.00036J	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/02/20 11:41	7439-92-1	
_ithium	0.0028J	mg/L	0.030	0.00081	1	09/01/20 14:03	09/02/20 11:41	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/01/20 14:03	09/02/20 11:41	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/02/20 11:41	7782-49-2	
Γhallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/02/20 11:41	7440-28-0	
7470 Mercury	Analytical	Method: EPA 7	470A Pre	paration Met	nod: EF	PA 7470A			
	Pace Anal	ytical Services	- Peachtre	e Corners, G	iΑ				
Mercury	ND	mg/L	0.00050	0.000078	1	08/31/20 11:00	09/01/20 09:37	7439-97-6	
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0 Rev 2	2.1 1993					
•	Pace Anal	ytical Services	- Asheville						
Fluoride	0.072J	mg/L	0.10	0.050	1		08/29/20 01:38	16984-48-8	
		-							



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

Sample: HGWC-102	Lab ID:	92492563005	Collecte	ed: 08/27/20	15:45	Received: 08/	28/20 11:08 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	- Charlotte)					
рН	5.7	Std. Units			1		09/01/20 07:51		
6020 MET ICPMS	Analytical	Method: EPA 6	6020B Pre	paration Met	hod: EF	A 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Antimony	ND	mg/L	0.0030	0.00028	1	09/01/20 14:03	09/01/20 20:50	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/01/20 20:50		
Barium	0.028	mg/L	0.010	0.00071	1	09/01/20 14:03	09/01/20 20:50		
Beryllium	ND	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 18:01		
Boron	2.7	mg/L	0.10	0.0052	1	09/01/20 14:03	09/01/20 20:50		
Cadmium	0.00038J	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/01/20 20:50		
- Calcium	106	mg/L	0.10	0.021	1	09/01/20 14:03	09/02/20 18:01		
Chromium	ND	mg/L	0.010	0.00055	1	09/01/20 14:03	09/01/20 20:50	7440-47-3	
Cobalt	0.0010J	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/01/20 20:50	7440-48-4	
_ead	ND	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/01/20 20:50	7439-92-1	
_ithium	0.0011J	mg/L	0.030	0.00081	1	09/01/20 14:03	09/01/20 20:50	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/01/20 14:03	09/01/20 20:50	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/01/20 20:50	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/01/20 20:50	7440-28-0	
7470 Mercury	Analytical	Method: EPA 7	7470A Pre	paration Met	hod: EF	A 7470A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Mercury	ND	mg/L	0.00050	0.000078	1	08/31/20 11:00	09/01/20 09:40	7439-97-6	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Anal	ytical Services	- Peachtre	e Corners, C	βA				
Total Dissolved Solids	663	mg/L	10.0	10.0	1		08/31/20 18:03		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0 Rev 2	2.1 1993					
	Pace Anal	ytical Services	- Asheville						
Chloride	7.1	mg/L	1.0	0.60	1		08/29/20 20:56	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1			16984-48-8	
Sulfate	382	mg/L	1.0	0.50	1		08/29/20 20:56		



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

Sample: FB-02	Lab ID:	92492563006	Collecte	ed: 08/27/20	15:30	Received: 08/	28/20 11:08 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	§A				
Antimony	ND	mg/L	0.0030	0.00028	1	09/01/20 14:03	09/01/20 20:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/01/20 20:56	7440-38-2	
Barium	0.0020J	mg/L	0.010	0.00071	1	09/01/20 14:03	09/01/20 20:56	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 18:07	7440-41-7	
Boron	0.013J	mg/L	0.10	0.0052	1	09/01/20 14:03	09/01/20 20:56	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/01/20 20:56	7440-43-9	
Calcium	ND	mg/L	0.10	0.021	1	09/01/20 14:03	09/01/20 20:56	7440-70-2	
Chromium	ND	mg/L	0.010	0.00055	1	09/01/20 14:03	09/01/20 20:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/01/20 20:56	7440-48-4	
_ead	ND	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/01/20 20:56	7439-92-1	
_ithium	ND	mg/L	0.030	0.00081	1	09/01/20 14:03	09/01/20 20:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/01/20 14:03	09/01/20 20:56	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/01/20 20:56	7782-49-2	
Γhallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/01/20 20:56	7440-28-0	
7470 Mercury	Analytical	Method: EPA 7	470A Pre	paration Met	hod: EF	PA 7470A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Mercury	ND	mg/L	0.00050	0.000078	1	08/31/20 11:00	09/01/20 09:47	7439-97-6	
2540C Total Dissolved Solids	Analytical	Method: SM 24	150C-2011						
	Pace Anal	ytical Services	- Peachtre	e Corners, C	§A				
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/31/20 18:04		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0 Rev 2	2.1 1993					
	Pace Anal	ytical Services	- Asheville						
Chloride	ND	mg/L	1.0	0.60	1		08/29/20 21:11	16887-00-6	
- - - - - - - - - - - - - - - - - - -	ND	mg/L	0.10	0.050	1		08/29/20 21:11	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/29/20 21:11	14808-79-8	



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

Sample: FD-02	Lab ID:	92492563007	' Collecte	ed: 08/27/20	00:00	Received: 08/	/28/20 11:08 Ma	atrix: Water	
			Report			_			
Parameters	Results	Units	Limit	MDL_	DF	Prepared	Analyzed	CAS No.	Qua
6020 MET ICPMS	Analytical	Method: EPA	6020B Pre	paration Met	thod: El	PA 3005A			
	Pace Anal	ytical Services	s - Peachtre	e Corners, 0	GΑ				
Antimony	ND	mg/L	0.0030	0.00028	1	09/01/20 14:03	09/01/20 21:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/01/20 21:02	7440-38-2	
3arium	0.027	mg/L	0.010	0.00071	1	09/01/20 14:03	09/01/20 21:02	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 18:13	7440-41-7	
Boron	2.8	mg/L	0.10	0.0052	1	09/01/20 14:03	09/01/20 21:02	7440-42-8	
Cadmium	0.00034J	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/01/20 21:02	7440-43-9	
Calcium	105	mg/L	0.10	0.021	1	09/01/20 14:03	09/01/20 21:02	7440-70-2	
Chromium	ND	mg/L	0.010	0.00055	1	09/01/20 14:03	09/01/20 21:02	7440-47-3	
Cobalt	0.0011J	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/01/20 21:02	7440-48-4	
₋ead	ND	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/01/20 21:02	7439-92-1	
₋ithium	0.0011J	mg/L	0.030	0.00081	1	09/01/20 14:03	09/01/20 21:02	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/01/20 14:03	09/01/20 21:02	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/01/20 21:02	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/01/20 21:02	7440-28-0	
7470 Mercury	Analytical	Method: EPA	7470A Pre	paration Met	thod: EF	PA 7470A			
•	Pace Anal	ytical Services	s - Peachtre	e Corners, 0	GΑ				
Mercury	ND	mg/L	0.00050	0.000078	1	08/31/20 11:00	09/01/20 09:49	7439-97-6	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Anal	ytical Services	s - Peachtre	e Corners, 0	GΑ				
Total Dissolved Solids	661	mg/L	10.0	10.0	1		08/31/20 18:04		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
·	Pace Anal	ytical Services	s - Asheville	:					
Chloride	7.0	mg/L	1.0	0.60	1		08/29/20 21:26	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/29/20 21:26	16984-48-8	
Sulfate	381	mg/L	1.0	0.50	1		08/29/20 21:26	14808-79-8	



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

Sample: HGWC-101	Lab ID:	92492563008	Collecte	ed: 08/27/20	11:30	Received: 08/	28/20 11:08 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical l	Method:							
	Pace Analy	ytical Services	- Charlotte						
рН	5.32	Std. Units			1		09/01/20 07:51		
6020 MET ICPMS	Analytical l	Method: EPA 6	020B Pre	paration Met	nod: EF	PA 3005A			
	Pace Analy	ytical Services	- Peachtre	e Corners, G	iΑ				
Antimony	ND	mg/L	0.0030	0.00028	1	09/01/20 14:03	09/02/20 11:52	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/02/20 11:52	7440-38-2	
Barium	0.045	mg/L	0.010	0.00071	1	09/01/20 14:03	09/02/20 11:52	7440-39-3	
Beryllium	0.000057J	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 11:52	7440-41-7	
Cadmium	0.00019J	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/02/20 11:52	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/01/20 14:03	09/02/20 11:52	7440-47-3	
Cobalt	0.0027J	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/02/20 11:52	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/02/20 11:52	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/01/20 14:03	09/02/20 11:52	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/01/20 14:03	09/02/20 11:52	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/02/20 11:52	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/02/20 11:52	7440-28-0	
7470 Mercury	Analytical l	Method: EPA 7	470A Prep	paration Met	nod: EF	PA 7470A			
	Pace Analy	ytical Services	- Peachtre	e Corners, G	iΑ				
Mercury	ND	mg/L	0.00050	0.000078	1	08/31/20 11:00	09/01/20 09:51	7439-97-6	
300.0 IC Anions 28 Days	Analytical l	Method: EPA 3	00.0 Rev 2	2.1 1993					
	Pace Analy	ytical Services	- Asheville						



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

Sample: HGWC-103	Lab ID:	92492563009	Collecte	ed: 08/27/20	13:40	Received: 08/	28/20 11:08 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL .	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical l	Method:							
	Pace Analy	tical Services	- Charlotte						
рН	5.82	Std. Units			1		09/01/20 07:51		
6020 MET ICPMS	Analytical l	Method: EPA 6	020B Prep	paration Met	hod: EF	PA 3005A			
	Pace Analy	ytical Services	- Peachtre	e Corners, G	SA .				
Antimony	ND	mg/L	0.0030	0.00028	1	09/01/20 14:03	09/02/20 11:58	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/02/20 11:58	7440-38-2	
Barium	0.038	mg/L	0.010	0.00071	1	09/01/20 14:03	09/02/20 11:58	7440-39-3	
Beryllium	0.000050J	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 11:58	7440-41-7	
Cadmium	0.00082J	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/02/20 11:58	7440-43-9	
Chromium	0.00069J	mg/L	0.010	0.00055	1	09/01/20 14:03	09/02/20 11:58	7440-47-3	
Cobalt	0.0019J	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/02/20 11:58	7440-48-4	
Lead	0.00018J	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/02/20 11:58	7439-92-1	
Lithium	0.0016J	mg/L	0.030	0.00081	1	09/01/20 14:03	09/02/20 11:58	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/01/20 14:03	09/02/20 11:58	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/02/20 11:58	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/02/20 11:58	7440-28-0	
7470 Mercury	Analytical l	Method: EPA 7	470A Prep	paration Met	nod: EF	PA 7470A			
	Pace Analy	tical Services	- Peachtre	e Corners, G	βA				
Mercury	ND	mg/L	0.00050	0.000078	1	08/31/20 11:00	09/01/20 09:54	7439-97-6	
300.0 IC Anions 28 Days	Analytical l	Method: EPA 3	00.0 Rev 2	2.1 1993					
	Pace Analy	tical Services	- Asheville						
Fluoride	ND	mg/L	0.10	0.050	1		08/29/20 22:25	16094 49 9	



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

Sample: HGWC-107	Lab ID:	92492563010	Collecte	ed: 08/27/20	17:30	Received: 08/	28/20 11:08 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	s - Charlotte	•					
pH	6.09	Std. Units			1		09/01/20 07:51		
6020 MET ICPMS	Analytical	Method: EPA	6020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Anal	ytical Services	s - Peachtre	e Corners, C	SA.				
Antimony	ND	mg/L	0.0030	0.00028	1	09/01/20 14:03	09/01/20 21:19	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/01/20 21:19	7440-38-2	
3arium	0.034	mg/L	0.010	0.00071	1	09/01/20 14:03	09/01/20 21:19	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 18:18	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/01/20 21:19	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/01/20 14:03	09/01/20 21:19	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/01/20 21:19	7440-48-4	
₋ead	ND	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/01/20 21:19	7439-92-1	
_ithium	ND	mg/L	0.030	0.00081	1	09/01/20 14:03	09/01/20 21:19	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/01/20 14:03	09/01/20 21:19	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/01/20 21:19	7782-49-2	
Γhallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/01/20 21:19	7440-28-0	
7470 Mercury	Analytical	Method: EPA	7470A Pre _l	paration Met	hod: EF	PA 7470A			
	Pace Anal	ytical Services	s - Peachtre	e Corners, C	€A				
Mercury	ND	mg/L	0.00050	0.000078	1	08/31/20 11:00	09/01/20 09:56	7439-97-6	
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
	Pace Anal	ytical Services	s - Asheville						
Fluoride	ND	mg/L	0.10	0.050	1		08/29/20 23:40	16984-48-8	



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

Sample: HGWC-105	Lab ID:	92492563011	Collecte	ed: 08/27/20	13:43	Received: 08/	28/20 11:08 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	s - Charlotte	•					
ЭН	6.45	Std. Units			1		09/01/20 07:51		
6020 MET ICPMS	Analytical	Method: EPA	6020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Anal	ytical Services	s - Peachtre	e Corners, C	βA				
Antimony	ND	mg/L	0.0030	0.00028	1	09/01/20 14:03	09/01/20 21:36	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/01/20 21:36	7440-38-2	
Barium	0.068	mg/L	0.010	0.00071	1	09/01/20 14:03	09/01/20 21:36	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 18:24	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/01/20 21:36	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/01/20 14:03	09/01/20 21:36	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/01/20 21:36	7440-48-4	
₋ead	ND	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/01/20 21:36	7439-92-1	
_ithium	0.0037J	mg/L	0.030	0.00081	1	09/01/20 14:03	09/01/20 21:36	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/01/20 14:03	09/01/20 21:36	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/01/20 21:36	7782-49-2	
Γhallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/01/20 21:36	7440-28-0	
7470 Mercury	Analytical	Method: EPA	7470A Pre _l	paration Met	nod: EF	PA 7470A			
	Pace Anal	ytical Services	s - Peachtre	e Corners, C	βA				
Mercury	ND	mg/L	0.00050	0.000078	1	08/31/20 11:00	09/01/20 09:59	7439-97-6	
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
	Pace Anal	ytical Services	s - Asheville						
Fluoride	ND	mg/L	0.10	0.050	1		08/29/20 23:55	16984-48-8	



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

Sample: HGWC-109	Lab ID:	92492563012	Collecte	ed: 08/27/20	15:42	Received: 08/	28/20 11:08 Ma	atrix: Water	•
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	- Charlotte	•					
pH	6.64	Std. Units			1		09/01/20 07:51		
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	βA				
Antimony	ND	mg/L	0.0030	0.00028	1	09/01/20 14:03	09/01/20 21:42	7440-36-0	
Arsenic	0.0011J	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/01/20 21:42	7440-38-2	
3arium	0.083	mg/L	0.010	0.00071	1	09/01/20 14:03	09/01/20 21:42	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 18:30	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/01/20 21:42	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/01/20 14:03	09/01/20 21:42	7440-47-3	
Cobalt	0.00086J	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/01/20 21:42	7440-48-4	
_ead	ND	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/01/20 21:42	7439-92-1	
_ithium	0.0011J	mg/L	0.030	0.00081	1	09/01/20 14:03	09/01/20 21:42	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/01/20 14:03	09/01/20 21:42	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/01/20 21:42	7782-49-2	
Γhallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/01/20 21:42	7440-28-0	
7470 Mercury	Analytical	Method: EPA 7	'470A Pre _l	paration Met	nod: EF	PA 7470A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	βA				
Mercury	ND	mg/L	0.00050	0.000078	1	08/31/20 11:00	09/01/20 10:01	7439-97-6	
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0 Rev 2	2.1 1993					
	Pace Anal	ytical Services	- Asheville						
Fluoride	0.094J	mg/L	0.10	0.050	1		08/30/20 00:09	16984-48-8	



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

Sample: HGWC-117	Lab ID:	92492563013	Collecte	ed: 08/27/20	17:48	Received: 08/	28/20 11:08 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical	Method:							
	Pace Analy	ytical Services	- Charlotte						
рН	5.92	Std. Units			1		09/01/20 07:51		
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	nod: EF	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, G	iΑ				
Antimony	ND	mg/L	0.0030	0.00028	1	09/01/20 14:03	09/01/20 21:47	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/01/20 14:03	09/01/20 21:47	7440-38-2	
Barium	0.047	mg/L	0.010	0.00071	1	09/01/20 14:03	09/01/20 21:47	7440-39-3	
Beryllium	0.000049J	mg/L	0.0030	0.000046	1	09/01/20 14:03	09/02/20 18:36	7440-41-7	
Cadmium	0.00080J	mg/L	0.0025	0.00012	1	09/01/20 14:03	09/01/20 21:47	7440-43-9	
Chromium	0.00057J	mg/L	0.010	0.00055	1	09/01/20 14:03	09/01/20 21:47	7440-47-3	
Cobalt	0.011	mg/L	0.0050	0.00038	1	09/01/20 14:03	09/01/20 21:47	7440-48-4	
Lead	0.00014J	mg/L	0.0050	0.000036	1	09/01/20 14:03	09/01/20 21:47	7439-92-1	
Lithium	0.0024J	mg/L	0.030	0.00081	1	09/01/20 14:03	09/01/20 21:47	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	09/01/20 14:03	09/01/20 21:47	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/01/20 14:03	09/01/20 21:47	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/01/20 14:03	09/01/20 21:47	7440-28-0	
7470 Mercury	Analytical	Method: EPA 7	470A Pre	paration Met	nod: EF	PA 7470A			
	Pace Analy	ytical Services	- Peachtre	e Corners, G	iΑ				
Mercury	ND	mg/L	0.00050	0.000078	1	08/31/20 11:00	09/01/20 10:03	7439-97-6	
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0 Rev 2	2.1 1993					
	Pace Analy	ytical Services	- Asheville						
		,							



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

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: 92492563001, 92492563002, 92492563003

METHOD BLANK: 2984655 Matrix: Water

Associated Lab Samples: 92492563001, 92492563002, 92492563003

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND 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					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% 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 SP	PIKE DUPLI	CATE: 2984	657		2984658							
	,	92491917001	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
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	

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.



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

MATRIX SPIKE & MATRIX S	SPIKE DUPL	ICATE: 2984	657 MS	MSD	2984658							
		92491917001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
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	

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.



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

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: 92492563004, 92492563005, 92492563006, 92492563007, 92492563008, 92492563009, 92492563010,

92492563011, 92492563012, 92492563013

METHOD BLANK: 2988642 Matrix: Water

Associated Lab Samples: 92492563004, 92492563005, 92492563006, 92492563007, 92492563008, 92492563009, 92492563010,

92492563011, 92492563012, 92492563013

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND 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	
Boron	mg/L	ND	0.10	0.0052	09/01/20 19:19	
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 SAMPI	_L. 2900	3643	Spike	10	CS	LCS	% F	Rec				
Parameter		Units	Conc.		sult	% Rec			Qualifiers			
Antimony		mg/L).1	0.10	10	 1	80-120				
Arsenic		mg/L	0).1	0.099	9:	9	80-120				
Barium		mg/L	0).1	0.10	10	1	80-120				
Beryllium		mg/L	0).1	0.092	9:	2	80-120				
Boron		mg/L		1	0.93	9:	3	80-120				
Cadmium		mg/L	0).1	0.098	98	3	80-120				
Chromium		mg/L	0).1	0.096	9	3	80-120				
Cobalt		mg/L	0).1	0.097	9	7	80-120				
Lead		mg/L	0).1	0.098	98	3	80-120				
Lithium		mg/L	0).1	0.092	9:	2	80-120				
Molybdenum		mg/L	0).1	0.10	10:	3	80-120				
Selenium		mg/L	0).1	0.096	9	3	80-120				
Thallium		mg/L	0).1	0.096	9	6	80-120				
MATRIX SPIKE & MATRIX SPIKE	DUPLICA	TE: 2988	644		2988645	5						
			MS	MSD								
	924	192563004	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.10	0.095	100	95	75-125	5	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.



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

MATRIX SPIKE & MATRIX	SPIKE DUPL	ICATE: 2988	644		2988645							
		92492563004	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Arsenic	mg/L	ND	0.1	0.1	0.10	0.093	99	92	75-125		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	
Boron	mg/L	0.69	1	1	1.6	1.6	88	91	75-125	2	20	
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	

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.



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

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: 92492563001, 92492563002, 92492563003, 92492563004, 92492563005, 92492563006, 92492563007,

92492563008, 92492563009, 92492563010, 92492563011, 92492563012, 92492563013

METHOD BLANK: 2987104 Matrix: Water

Associated Lab Samples: 92492563001, 92492563002, 92492563003, 92492563004, 92492563005, 92492563006, 92492563007,

92492563008, 92492563009, 92492563010, 92492563011, 92492563012, 92492563013

Blank Reporting

 Parameter
 Units
 Result
 Limit
 MDL
 Analyzed
 Qualifiers

 Mercury
 mg/L
 0.00011J
 0.00050
 0.000078
 09/01/20 09:18

LABORATORY CONTROL SAMPLE: 2987105

LCS LCS % Rec Spike Units % Rec Limits Qualifiers Parameter Conc. Result 97 Mercury mg/L 0.0025 0.0024 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2987106 2987107

MS MSD

92492563001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual ND 0.0025 0.0025 0.0024 20 Mercury 0.0024 93 94 75-125 mg/L

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.



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

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: 92492563005, 92492563006, 92492563007

METHOD BLANK: 2988051 Matrix: Water

Associated Lab Samples: 92492563005, 92492563006, 92492563007

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 08/31/20 17:59

LABORATORY CONTROL SAMPLE: 2988052

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

SAMPLE DUPLICATE: 2988053

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

SAMPLE DUPLICATE: 2988054

Date: 09/08/2020 12:01 PM

Parameter Units Parameter Units Parameter Units Parameter Units Parameter Units Parameter Parameter Parameter Units Parameter Result Result RPD RPD Qualifiers ND ND ND 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.



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

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: 92492563001, 92492563002, 92492563003

METHOD BLANK: 2984151 Matrix: Water

Associated Lab Samples: 92492563001, 92492563002, 92492563003

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Fluoride mg/L ND 0.10 0.050 08/27/20 13:21

LABORATORY CONTROL SAMPLE: 2984152

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Fluoride 2.5 2.6 103 90-110 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2984153 2984154

MSD MS 92492398001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Result Result % Rec % Rec **RPD** RPD Result Conc. Limits Qual ND 10 M1 Fluoride mg/L 2.5 2.5 2.1 2.1 82 84 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2984155 2984156

MS MSD 92492228018 MS MSD MS MSD Spike Spike % Rec Max RPD RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits Qual Fluoride ND 2.5 2.7 2.5 2.6 105 107 10 mg/L 90-110

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.



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

QC Batch: 563042

QC Batch Method: EPA 300.0 Rev 2.1 1993

Analysis Method: EPA 300.0 Rev 2.1 1993

Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92492563004

METHOD BLANK: 2985604 Matrix: Water

Associated Lab Samples: 92492563004

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Fluoride mg/L ND 0.10 0.050 08/28/20 19:55

LABORATORY CONTROL SAMPLE: 2985605

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Fluoride 2.5 2.7 107 90-110 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2985606 2985607

MSD MS 92492821006 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Conc. Result Result % Rec % Rec **RPD** RPD Result Limits Qual

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

MS MSD % Rec 92492821016 MS MSD MS MSD Spike Spike Max **RPD** RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits Qual Fluoride 0.14 2.5 2.5 2.8 2.8 106 106 0 10 mg/L 90-110

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.



Project: HAMMOND AP-4 SCAN/BKG 07

LABORATORY CONTROL SAMPLE: 2006002

Date: 09/08/2020 12:01 PM

Pace Project No.: 92492563

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: 92492563005, 92492563006, 92492563007, 92492563008

METHOD BLANK: 2986801 Matrix: Water

Associated Lab Samples: 92492563005, 92492563006, 92492563007, 92492563008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/29/20 14:28	
Fluoride	mg/L	ND	0.10	0.050	08/29/20 14:28	
Sulfate	mg/L	ND	1.0	0.50	08/29/20 14:28	

LABORATORT CONTROL SAMPLE.	2900002	Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	50	52.5	105	90-110	
Fluoride	mg/L	2.5	2.6	105	90-110	
Sulfate	mg/L	50	52.6	105	90-110	

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 2986	803		2986804							
			MS	MSD								
		92493054001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	1.1	50	50	53.3	54.4	104	107	90-110	2	10	
Fluoride	mg/L	0.14	2.5	2.5	2.8	2.8	105	106	90-110	1	10	
Sulfate	mg/L	10.6	50	50	63.2	64.2	105	107	90-110	2	10	

MATRIX SPIKE & MATRIX SF	PIKE DUPLI	CATE: 2986	805		2986806							
			MS	MSD								
		92492705017	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	25.2	50	50	77.7	78.4	105	106	90-110	1	10	
Fluoride	mg/L	0.15	2.5	2.5	2.8	2.8	105	107	90-110	1	10	
Sulfate	mg/L	1350	50	50	1380	1420	62	151	90-110	3	10	M6

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



Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

QC Batch: 563291 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: 92492563009, 92492563010, 92492563011, 92492563012, 92492563013

METHOD BLANK: 2986807 Matrix: Water

Associated Lab Samples: 92492563009, 92492563010, 92492563011, 92492563012, 92492563013

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Fluoride mg/L ND 0.10 0.050 08/29/20 21:55

LABORATORY CONTROL SAMPLE: 2986808

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Fluoride 2.5 2.7 106 90-110 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2986809 2986810

MSD MS 92492563009 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Result % Rec % Rec **RPD** RPD Result Conc. Conc. Limits Qual Fluoride mg/L ND 2.5 2.5 2.6 2.6 103 105 90-110 10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2986811 2986812

MS MSD 92493068007 MS MSD MS MSD Spike Spike % Rec Max **RPD** RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits Qual Fluoride 2.5 2.4 95 2 ND 2.5 2.4 97 10 mg/L 90-110

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.



QUALIFIERS

Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

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

Date: 09/08/2020 12:01 PM

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.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytica Batch
92492563001	—— ———————————————————————————————————				
92492563002	HGWA-112				
92492563003	HGWA-113				
2492563004	HGWC-118				
2492563005	HGWC-102				
2492563008	HGWC-101				
2492563009	HGWC-103				
2492563010	HGWC-107				
2492563011	HGWC-105				
2492563012	HGWC-109				
92492563013	HGWC-117				
2492563001	HGWA-111	EPA 3005A	562831	EPA 6020B	562944
2492563002	HGWA-112	EPA 3005A	562831	EPA 6020B	562944
92492563003	HGWA-113	EPA 3005A	562831	EPA 6020B	562944
92492563004	HGWC-118	EPA 3005A	563747	EPA 6020B	563831
2492563005	HGWC-102	EPA 3005A	563747	EPA 6020B	563831
2492563006	FB-02	EPA 3005A	563747	EPA 6020B	563831
2492563007	FD-02	EPA 3005A	563747	EPA 6020B	563831
2492563008	HGWC-101	EPA 3005A	563747	EPA 6020B	563831
2492563009	HGWC-103	EPA 3005A	563747	EPA 6020B	563831
2492563010	HGWC-107	EPA 3005A	563747	EPA 6020B	563831
2492563011	HGWC-105	EPA 3005A	563747	EPA 6020B	563831
2492563012	HGWC-109	EPA 3005A	563747	EPA 6020B	563831
2492563013	HGWC-117	EPA 3005A	563747	EPA 6020B	563831
2492563001	HGWA-111	EPA 7470A	563370	EPA 7470A	563482
2492563002	HGWA-112	EPA 7470A	563370	EPA 7470A	563482
2492563003	HGWA-113	EPA 7470A	563370	EPA 7470A	563482
2492563004	HGWC-118	EPA 7470A	563370	EPA 7470A	563482
2492563005	HGWC-102	EPA 7470A	563370	EPA 7470A	563482
2492563006	FB-02	EPA 7470A	563370	EPA 7470A	563482
2492563007	FD-02	EPA 7470A	563370	EPA 7470A	563482
2492563008	HGWC-101	EPA 7470A	563370	EPA 7470A	563482
2492563009	HGWC-101	EPA 7470A	563370	EPA 7470A	563482
2492563010	HGWC-107	EPA 7470A	563370	EPA 7470A	563482
2492563011	HGWC-105	EPA 7470A	563370	EPA 7470A	563482
2492563012	HGWC-103	EPA 7470A	563370	EPA 7470A EPA 7470A	563482
2492563013	HGWC-117	EPA 7470A	563370	EPA 7470A	563482
2492563005	HGWC-102	SM 2450C-2011	563552		
2492563006	FB-02	SM 2450C-2011	563552		
2492563007	FD-02	SM 2450C-2011	563552		
2492563001	HGWA-111	EPA 300.0 Rev 2.1 1993	562698		
2492563002	HGWA-112	EPA 300.0 Rev 2.1 1993	562698		
92492563003	HGWA-113	EPA 300.0 Rev 2.1 1993	562698		
2492563004	HGWC-118	EPA 300.0 Rev 2.1 1993	563042		
2492563005	HGWC-102	EPA 300.0 Rev 2.1 1993	563290		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 SCAN/BKG 07

Pace Project No.: 92492563

Date: 09/08/2020 12:01 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92492563006	FB-02	EPA 300.0 Rev 2.1 1993	563290		
92492563007	FD-02	EPA 300.0 Rev 2.1 1993	563290		
92492563008	HGWC-101	EPA 300.0 Rev 2.1 1993	563290		
92492563009	HGWC-103	EPA 300.0 Rev 2.1 1993	563291		
92492563010	HGWC-107	EPA 300.0 Rev 2.1 1993	563291		
92492563011	HGWC-105	EPA 300.0 Rev 2.1 1993	563291		
92492563012	HGWC-109	EPA 300.0 Rev 2.1 1993	563291		
92492563013	HGWC-117	EPA 300.0 Rev 2.1 1993	563291		

Sample Condition Upon Receipt

Client Name: GARWER WO#: 92492563

Courter: Fed Ex UPS USPS Clie Tracking #:	ent LI Comm	ercial	Pace Off	
Custody Seal on Cooler/Box Present: 2765	□ . no	Seals	intact: Æ ýes	□ no
Packing Material: Bubble Wrap Bubble	e Bags 🖸 T	Vone	☐ Other	
Thermometer Used 2/4	Type of Ice	سعند		Samples on ice, cooling process has begun
Cooler Temperature 46			is Frozen: Yes N	Date and initials of person examining contents: 2620
Temp should be above freezing to 6°C			Comments:	Contents y 2 4 2 CF
Chain of Custody Present:	DINGS DNo	□n/a	1.	
Chain of Custody Filled Out:	ZÍYes □No	□n/a	2.	
Chain of Custody Relinquished:	₽Yes □No	□n/a	3.	
Sampler Name & Signature on COC:	₽Yes □No	□n/a	4.	
Samples Arrived within Hold Time:	ØTes □No	□N/A	5.	
Short Hold Time Analysis (<72hr):	☐Yes ŒÑo	⁷ □n/a	6.	
Rush Turn Around Time Requested:	□Yes ☑No	DN/A	7,	
Sufficient Volume:	DYES DNo	□n/a	8.	
Correct Containers Used:	ØY65 □No	□N⁄A	9.	[발표] 발표를 살고 말을 하는 것은 것은 것이다.
-Pace Containers Used:	DYGS INO	□n/a		
Containers Intact:	HES NO	□N/A	10.	
Filtered volume received for Dissolved tests	□Yes □No	-©N/A	n.	
Sample Labels match COC:	Hes Ong	□n/A	12.	
-Includes date/time/ID/Analysis Matrix:	W			
All containers needing preservation have been checked.	GYes □No	□n/a	13.	
All containers needing preservation are found to be in	☐Yes ☐No	□n/a		
compliance with EPA recommendation.			Initial when	Lot # of added
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	□Yes □H o		completed	preservative
Samples checked for dechlorination:	☐Yes ☐No	□них	14.	
Headspace in VOA Vials (>6mm):	□Yes □No	DHA	15.	
Trip Blank Present:	□Yes □No	DNA	16.	
Trip Blank Custody Seals Present	□Yes □No	₽N/A		
Pace Trip Blank Lot # (if purchased):		<u> </u>		
Client Notification/ Resolution:				Field Data Required? Y / N
Person Contacted:		Date/	Time:	
Comments/ Resolution:				
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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)

Project Manager Review:

F-ALLC003rev.3, 11September2006



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

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FALL-Q-020rev.07, 15-Feb-2007



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

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ling Pace's NET 30 day payment lerns and agreeing to bis charges of 1,5% per month for any linknistic sait paid within the days

AAA). III & N Meizels-Sb. As, Ba. Be, B. Cd, Ca. Cr, Co. Pb, Li, Hg. Mb. Se, Ti lease note dry wells, strike though any wells not sampled, and tole when the last sample for the event has been taken. Section A Required Client Intomation: ITEM # mail To: \ddress: 7 5 quested Due Date/TAT: (A-Z, 0-9 f.,) Sample IDs MUST BE UNIQUE imported Note; By signing this form you are accepting Pace's NET uined Cient Information SCS Contacts Atlanta, GA GA POWER SAMPLE ID ADDITIONAL COMMENTS HGWC-102 FD-02 FB-02 Walled Matrix Cooles MATRIX CODE OBSURGANITE OWNATER WATER WATER WATER MAGAGET PACAGET PACAGET AR AR AR AR AR TISSUE TISSUE TISSUE TISSUE TISSUE TISSUE TISSUE TISSUE Project Number: GW6581 Copy To: Report 1 Project N Purchase RELINQUISHED BY / AFFILIATION Order No. SCS Contacts ٤ ₹ Geosyntec Contacts MATRIX CODE (see valid codes to left) Plant Hammond AP-4 Scar/BKG 07 G Ø G SAMPLE TYPE (G*GRAB C=COMP) Monde 05/27 65/27 06/27 DATE agreeing to take changes of 1.5% per month for any invoices not paid within 10 days. 12:30 SAMPLER NAME AND SIGNATURE 15:45 Carosyn Kr TIME. COLLECTED 30 (1950) SIGNATURE of SAMPLER: PRINT Name of SAMPLER: The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately. CHAIN-OF-CUSTODY / Analytical Request Document 22/27 22/23 1218 m/84/18 DATE SAMPLE TEMP AT COLLECTION 7005 Mali. " 7.70 Pace Quote Reference: Pace Project Manager: Theymas 5 # OF CONTAINERS hvoice Information: Attention: Southern Co. 11:05 S Company Name: Address: Unpreserved H₂SO₄ HNO₃ Preservatives Kevin Herring Dellie Wholism HCI NaQH 14 CE 141 Na₂S₂Q ACCEPTED BY / AFFILLATION Methanol Other **Analysis Test** Y/N DATE Signed (MM/DD/YY): Chloride, Fluoride, Sulfate z L'acosilling (Requested Analysis Filtered (Y/N) × × z × × × App. III & IV Metals 60 10/8020/74 × × RAD 226/228 z 08/27/2010 REGULATORY AGENCY Site Location 6/27/2/201 8/27 UST 7 NPOES STATE: Spil 8 Ē RCRA GROUND WATE þ Page: かた F-ALL-Q-020rev.07, 15-Feb-2007 Temp in *C Z Z z Residual Chlorine (Y/N) Received or PH=5.7 13 ice (Y/N) SAMPLE CONDITIONS Custody rated Coots 8 OTHER CO. DRINKING WATER (Y/N) w Samples inject g 0 (Y/N) B

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

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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.

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*Important Note: By signing this form you are accepting Paces No. 1 30 day payment terms and agreeing to bee changes of 1.5% per month for any invoices not paid within 30 days.

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





September 17, 2020

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

RE: Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 26, 2020 and August 28, 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

Ken Her

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.





CERTIFICATIONS

HAMMOND AP-4 SCAN/BKG 07 RADS Project:

Pace Project No.: 92492559

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

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

Missouri Certification #: 235

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

North Carolina Certification #: 42706

North Dakota Certification #: R-190

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



SAMPLE SUMMARY

Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92492559001	HGWA-111	Water	08/25/20 10:03	08/26/20 12:00
92492559002	HGWA-112	Water	08/25/20 12:10	08/26/20 12:00
92492559003	HGWA-113	Water	08/25/20 15:17	08/26/20 12:00
92492559004	HGWC-118	Water	08/26/20 15:36	08/27/20 08:56
92492559005	HGWC-102	Water	08/27/20 15:45	08/28/20 11:08
92492559006	FB-02	Water	08/27/20 15:30	08/28/20 11:08
92492559007	FD-02	Water	08/27/20 00:00	08/28/20 11:08
92492559008	HGWC-101	Water	08/27/20 11:30	08/28/20 11:08
92492559009	HGWC-103	Water	08/27/20 13:40	08/28/20 11:08
92492559010	HGWC-107	Water	08/27/20 17:30	08/28/20 11:08
92492559011	HGWC-105	Water	08/27/20 13:43	08/28/20 11:08
92492559012	HGWC-109	Water	08/27/20 15:42	08/28/20 11:08
92492559013	HGWC-117	Water	08/27/20 17:48	08/28/20 11:08



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92492559001	HGWA-111	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492559002	HGWA-112	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492559003	HGWA-113	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492559004	HGWC-118	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92492559005	HGWC-102	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2492559006	FB-02	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2492559007	FD-02	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92492559008	HGWC-101	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92492559009	HGWC-103	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92492559010	HGWC-107	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2492559011	HGWC-105	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92492559012	HGWC-109	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
			LAL		PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
•		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg



SUMMARY OF DETECTION

Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
 92492559001	— HGWA-111			_		
EPA 9315	Radium-226	0.176 ±	pCi/L		09/14/20 07:16	
EPA 93 13	Radium-220	0.181	pCI/L		09/14/20 07.10	
		(0.352)				
EPA 9320	Radium-228	C:76% T:NA 0.394 ±	pCi/L		09/16/20 11:38	
21710020	radiam 220	0.467	PONE		00/10/20 11:00	
		(0.986) C:61%				
		T:80%				
Total Radium Calculation	Total Radium	0.570 ±	pCi/L		09/17/20 11:22	
		0.648 (1.34)				
2402550002	LICINIA 442	(1.34)				
92492559002 FDA 0045	HGWA-112	0.0182 ±	0://		00/44/00 07 00	
EPA 9315	Radium-226	0.0182 ± 0.161	pCi/L		09/14/20 07:29	
		(0.413)				
EDA 0000	Dadisma 000	C:90% T:NA -0.0563 ±	0://		00/40/00 44 00	
EPA 9320	Radium-228	-0.0503 ± 0.427	pCi/L		09/16/20 11:38	
		(1.00)				
		C:57% T:85%				
Total Radium Calculation	Total Radium	0.0182 ±	pCi/L		09/17/20 11:22	
	70121.112313111	0.588	P 0		00/11/20 1112	
		(1.41)				
92492559003	HGWA-113					
EPA 9315	Radium-226	0.0907 ±	pCi/L		09/14/20 07:11	
		0.175 (0.402)				
		C:85% T:NA				
EPA 9320	Radium-228	0.496 ±	pCi/L		09/16/20 11:38	
		0.459 (0.934)				
		C:60%				
T	T	T:77%	0:"		00/47/00 44 00	
Total Radium Calculation	Total Radium	0.587 ± 0.634	pCi/L		09/17/20 11:22	
		(1.34)				
92492559004	HGWC-118					
EPA 9315	Radium-226	0.255 ±	pCi/L		09/14/20 09:01	
		0.180				
		(0.285) C:91% T:NA				
EPA 9320	Radium-228	0.932 ±	pCi/L		09/16/20 14:42	
		0.483	•			
		(0.833) C:62%				
		T:82%				
Total Radium Calculation	Total Radium	1.19 ±	pCi/L		09/17/20 11:22	
		0.663 (1.12)				

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Lab Sample ID	Client Sample ID							
Method	Parameters —	Result	Units	Report Limit Ana	alyzed	Qualifiers		
2492559005	HGWC-102							
EPA 9315	Radium-226	0.322 ±	pCi/L	09/10/	20 07:36			
		0.237						
		(0.373) C:91% T:NA						
EPA 9320	Radium-228	0.844 ±	pCi/L	09/15/	20 14:40			
		0.455						
		(0.815) C:71%						
		T:89%						
Total Radium Calculation	Total Radium	1.17 ±	pCi/L	09/16/	20 10:12			
		0.692 (1.19)						
2492559006	FB-02	(1110)						
EPA 9315	Radium-226	0.288 ±	pCi/L	00/10/	20 19:37			
_1 / (00 10	Nadium-220	0.144	POI/L	09/10/	20 10.01			
		(0.222)						
EPA 9320	Radium-228	C:76% T:NA 0.0979 ±	pCi/L	00/15/	20 15:02			
LFA 9320	Nadium-220	0.352	pCi/L	09/13/	20 13.02			
		(0.800)						
		C:66% T:84%						
Total Radium Calculation	Total Radium	0.386 ±	pCi/L	09/16/	20 10:12			
		0.496						
		(1.02)						
2492559007	FD-02							
EPA 9315	Radium-226	0.269 ±	pCi/L	09/10/	20 19:37			
		0.124 (0.182)						
		C:88% T:NA						
EPA 9320	Radium-228	-0.0608 ±	pCi/L	09/15/	20 15:02			
		0.360 (0.855)						
		C:68%						
		T.84%						
Total Radium Calculation	Total Radium	0.269 ± 0.484	pCi/L	09/16/	20 10:12			
		(1.04)						
2492559008	HGWC-101							
EPA 9315	Radium-226	0.109 ±	pCi/L	09/10/	20 19:37			
		0.105	·					
		(0.191) C:82% T:NA						
EPA 9320	Radium-228	-0.00868 ±	pCi/L	09/15/	20 15:02			
		0.404	•					
		(0.939) C:66%						
		T:83%						
otal Radium Calculation	Total Radium	0.109 ±	pCi/L	09/16/	20 10:12			
		0.509 (1.13)						



SUMMARY OF DETECTION

Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Lab Sample ID	Client Sample ID				
Method	Parameters	Result	Units	Report Limit Analyzed	Qualifiers
92492559009	HGWC-103				
EPA 9315	Radium-226	0.109 ± 0.0888	pCi/L	09/10/20 19:37	
		(0.154) C:95% T:NA			
EPA 9320	Radium-228	0.261 ± 0.415 (0.900) C:68%	pCi/L	09/15/20 15:02	
Fatal Dadison Oalandation	Total Darkens	T:84%	0://	00/40/00 40 40	
Total Radium Calculation	Total Radium	0.370 ± 0.504	pCi/L	09/16/20 10:12	
		(1.05)			
2492559010	HGWC-107				
EPA 9315	Radium-226	0.264 ±	pCi/L	09/10/20 19:37	
		0.119 (0.171)			
		C:88% T:NA			
EPA 9320	Radium-228	-0.415 ±	pCi/L	09/15/20 15:02	
		0.432 (1.09)			
		C:61%			
Estal Dadison Oaladation	Takal Dadisan	T:79% 0.264 ±	0://	00/40/00 40 40	
Total Radium Calculation	Total Radium	0.204 ±	pCi/L	09/16/20 10:12	
		(1.26)			
2492559011	HGWC-105				
EPA 9315	Radium-226	0.300 ±	pCi/L	09/10/20 19:37	
		0.162 (0.268)			
		C:85% T:NA			
EPA 9320	Radium-228	0.116 ±	pCi/L	09/15/20 15:03	
		0.373 (0.843)			
		C:66%			
	"	T:83%	0.0	00/40/00 40 40	
Total Radium Calculation	Total Radium	0.416 ± 0.535	pCi/L	09/16/20 10:12	
		(1.11)			
2492559012	HGWC-109				
EPA 9315	Radium-226	0.278 ±	pCi/L	09/10/20 19:37	
		0.129	•		
		(0.191) C:88% T:NA			
EPA 9320	Radium-228	0.711 ±	pCi/L	09/15/20 15:05	
		0.468 (0.897)			
		C:70%			
	T	T:85%	Q::::		
Total Radium Calculation	Total Radium	0.989 ± 0.597	pCi/L	09/16/20 10:12	
		(1.09)			

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Lab Sample ID	Client Sample ID					
Method	Parameters —	Result	Units	Report Limit	Analyzed	Qualifiers
92492559013	HGWC-117					
EPA 9315	Radium-226	0.193 ± 0.107 (0.167) C:87% T:NA	pCi/L		09/10/20 19:37	
EPA 9320	Radium-228	-0.131 ± 0.403 (0.963) C:64% T:85%	pCi/L		09/15/20 15:05	
Total Radium Calculation	Total Radium	0.193 ± 0.510 (1.13)	pCi/L		09/16/20 10:12	



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Sample: HGWA-111 PWS:	Lab ID: 92492559 Site ID:	O001 Collected: 08/25/20 10:03 Sample Type:	Received:	08/26/20 12:00	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Serv	vices - Greensburg				
Radium-226	EPA 9315	0.176 ± 0.181 (0.352) C:76% T:NA	pCi/L	09/14/20 07:16	6 13982-63-3	
	Pace Analytical Serv	vices - Greensburg				
Radium-228	EPA 9320	0.394 ± 0.467 (0.986) C:61% T:80%	pCi/L	09/16/20 11:38	3 15262-20-1	
	Pace Analytical Serv	vices - Greensburg				
Total Radium	Total Radium Calculation	$0.570 \pm 0.648 (1.34)$	pCi/L	09/17/20 11:22	2 7440-14-4	



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Sample: HGWA-112 PWS:	Lab ID: 9249 Site ID:	2559002 Collected: 08/25/20 12:10 Sample Type:	Received:	08/26/20 12:00	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.0182 ± 0.161 (0.413) C:90% T:NA	pCi/L	09/14/20 07:29	9 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	-0.0563 ± 0.427 (1.00) C:57% T:85%	pCi/L	09/16/20 11:38	3 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.0182 ± 0.588 (1.41)	pCi/L	09/17/20 11:22	2 7440-14-4	



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Sample: HGWA-113 PWS:	Lab ID: 9249 Site ID:	2559003 Collected: 08/25/20 15:17 Sample Type:	Received:	08/26/20 12:00	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.0907 ± 0.175 (0.402) C:85% T:NA	pCi/L	09/14/20 07:11	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.496 ± 0.459 (0.934) C:60% T:77%	pCi/L	09/16/20 11:38	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.587 ± 0.634 (1.34)	pCi/L	09/17/20 11:22	? 7440-14-4	



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Sample: HGWC-118 PWS:	Lab ID: 9249 Site ID:	2559004 Collected: 08/26/20 15:36 Sample Type:	Received:	08/27/20 08:56	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.255 ± 0.180 (0.285) C:91% T:NA	pCi/L	09/14/20 09:0	1 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.932 ± 0.483 (0.833) C:62% T:82%	pCi/L	09/16/20 14:42	2 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	1.19 ± 0.663 (1.12)	pCi/L	09/17/20 11:22	2 7440-14-4	



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Sample: HGWC-102 PWS:	Lab ID: 92492 Site ID:	2559005 Collected: 08/27/20 15:45 Sample Type:	Received:	08/28/20 11:08	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				,
Radium-226	EPA 9315	0.322 ± 0.237 (0.373) C:91% T:NA	pCi/L	09/10/20 07:30	6 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.844 ± 0.455 (0.815) C:71% T:89%	pCi/L	09/15/20 14:40	0 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	1.17 ± 0.692 (1.19)	pCi/L	09/16/20 10:12	2 7440-14-4	



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Sample: FB-02 PWS:	Lab ID: 9249 Site ID:	2559006 Collected: 08/27/20 15:30 Sample Type:	Received:	08/28/20 11:08 I	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.288 ± 0.144 (0.222) C:76% T:NA	pCi/L	09/10/20 19:37	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.0979 ± 0.352 (0.800) C:66% T:84%	pCi/L	09/15/20 15:02	2 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.386 ± 0.496 (1.02)	pCi/L	09/16/20 10:12	2 7440-14-4	



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Sample: FD-02 PWS:	Lab ID: 924925 5 Site ID:	59007 Collected: 08/27/20 00:00 Sample Type:	Received:	08/28/20 11:08	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	rvices - Greensburg				
Radium-226	EPA 9315	0.269 ± 0.124 (0.182) C:88% T:NA	pCi/L	09/10/20 19:37	7 13982-63-3	
	Pace Analytical Se	rvices - Greensburg				
Radium-228	EPA 9320	-0.0608 ± 0.360 (0.855) C:68% T:84%	pCi/L	09/15/20 15:02	2 15262-20-1	
	Pace Analytical Se	rvices - Greensburg				
Total Radium	Total Radium Calculation	0.269 ± 0.484 (1.04)	pCi/L	09/16/20 10:12	2 7440-14-4	



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Sample: HGWC-101 PWS:	Lab ID: 9249 Site ID:	2559008 Collected: 08/27/20 11:30 Sample Type:	Received:	08/28/20 11:08 I	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.109 ± 0.105 (0.191) C:82% T:NA	pCi/L	09/10/20 19:37	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	-0.00868 ± 0.404 (0.939) C:66% T:83%	pCi/L	09/15/20 15:02	2 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.109 ± 0.509 (1.13)	pCi/L	09/16/20 10:12	2 7440-14-4	



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Sample: HGWC-103 PWS:	Lab ID: 92492 Site ID:	2559009 Collected: 08/27/20 13:40 Sample Type:	Received:	08/28/20 11:08	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 9315	0.109 ± 0.0888 (0.154) C:95% T:NA	pCi/L	09/10/20 19:37	7 13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 9320	0.261 ± 0.415 (0.900) C:68% T:84%	pCi/L	09/15/20 15:02	2 15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.370 ± 0.504 (1.05)	pCi/L	09/16/20 10:12	2 7440-14-4	



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Sample: HGWC-107 PWS:	Lab ID: 9249 Site ID:	2559010 Collected: 08/27/20 17:30 Sample Type:	Received:	08/28/20 11:08	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.264 ± 0.119 (0.171) C:88% T:NA	pCi/L	09/10/20 19:3	7 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	-0.415 ± 0.432 (1.09) C:61% T:79%	pCi/L	09/15/20 15:02	2 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.264 ± 0.551 (1.26)	pCi/L	09/16/20 10:12	2 7440-14-4	



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Sample: HGWC-105 PWS:	Lab ID: 9249 Site ID:	2559011 Collected: 08/27/20 13:43 Sample Type:	Received:	08/28/20 11:08	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.300 ± 0.162 (0.268) C:85% T:NA	pCi/L	09/10/20 19:37	7 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.116 ± 0.373 (0.843) C:66% T:83%	pCi/L	09/15/20 15:03	3 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.416 ± 0.535 (1.11)	pCi/L	09/16/20 10:12	2 7440-14-4	



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Sample: HGWC-109 PWS:	Lab ID: 9249 Site ID:	2559012 Collected: 08/27/20 15:42 Sample Type:	Received:	08/28/20 11:08	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg			_	
Radium-226	EPA 9315	0.278 ± 0.129 (0.191) C:88% T:NA	pCi/L	09/10/20 19:37	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.711 ± 0.468 (0.897) C:70% T:85%	pCi/L	09/15/20 15:05	5 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.989 ± 0.597 (1.09)	pCi/L	09/16/20 10:12	2 7440-14-4	



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Sample: HGWC-117 PWS:	Lab ID: 9249 Site ID:	D2559013 Collected: 08/27/20 17:48 Sample Type:	Received:	08/28/20 11:08	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.193 ± 0.107 (0.167) C:87% T:NA	pCi/L	09/10/20 19:37	7 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	-0.131 ± 0.403 (0.963) C:64% T:85%	pCi/L	09/15/20 15:05	5 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.193 ± 0.510 (1.13)	pCi/L	09/16/20 10:12	2 7440-14-4	



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

EPA 9315

Pace Project No.: 92492559

QC Batch Method:

QC Batch: 412356

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

EPA 9315

Associated Lab Samples: 92492559001, 92492559002, 92492559003

METHOD BLANK: 1994515 Matrix: Water

Associated Lab Samples: 92492559001, 92492559002, 92492559003

 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

Analysis Method:

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.



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

QC Batch: 412342 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92492559005

METHOD BLANK: 1994498 Matrix: Water

Associated Lab Samples: 92492559005

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-228
 0.550 ± 0.369 (0.698) C:73% T:85%
 pCi/L
 09/15/20 14:39

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



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

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: 92492559004

METHOD BLANK: 1994502 Matrix: Water

Associated Lab Samples: 92492559004

 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

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.



EPA 9315

Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

QC Batch: 412358

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92492559004

METHOD BLANK: 1994517 Matrix: Water

Associated Lab Samples: 92492559004

 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

Analysis Method:

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.



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

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: 92492559006, 92492559007, 92492559008, 92492559010, 92492559011, 92492559012,

92492559013

METHOD BLANK: 1994499 Matrix: Water

Associated Lab Samples: 92492559006, 92492559007, 92492559008, 92492559009, 92492559010, 92492559011, 92492559012,

92492559013

 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

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.



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

QC Batch Method:

QC Batch: 412351

412351 Analysis Method:
EPA 9315 Analysis Description:

Laboratory:

EPA 9315

9315 Total Radium

Pace Analytical Services - Greensburg

Associated Lab Samples: 92492559005

METHOD BLANK: 1994513 Matrix: Water

Associated Lab Samples: 92492559005

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-226
 0.0558 ± 0.230 (0.577) C:80% T:NA
 pCi/L
 09/10/20 07:35

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



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

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: 92492559006, 92492559007, 92492559008, 92492559010, 92492559011, 92492559012,

92492559013

METHOD BLANK: 1994514 Matrix: Water

Associated Lab Samples: 92492559006, 92492559007, 92492559008, 92492559009, 92492559010, 92492559011, 92492559012,

92492559013

 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

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.



Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

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: 92492559001, 92492559002, 92492559003

METHOD BLANK: 1994501 Matrix: Water

Associated Lab Samples: 92492559001, 92492559002, 92492559003

 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

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.



QUALIFIERS

Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

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

Date: 09/17/2020 05:16 PM

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.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 SCAN/BKG 07 RADS

Pace Project No.: 92492559

Date: 09/17/2020 05:16 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92492559001	HGWA-111	EPA 9315	412356		
92492559002	HGWA-112	EPA 9315	412356		
92492559003	HGWA-113	EPA 9315	412356		
92492559004	HGWC-118	EPA 9315	412358		
92492559005	HGWC-102	EPA 9315	412351		
92492559006	FB-02	EPA 9315	412352		
92492559007	FD-02	EPA 9315	412352		
92492559008	HGWC-101	EPA 9315	412352		
92492559009	HGWC-103	EPA 9315	412352		
92492559010	HGWC-107	EPA 9315	412352		
92492559011	HGWC-105	EPA 9315	412352		
92492559012	HGWC-109	EPA 9315	412352		
92492559013	HGWC-117	EPA 9315	412352		
92492559001	HGWA-111	EPA 9320	412346		
92492559002	HGWA-112	EPA 9320	412346		
2492559003	HGWA-113	EPA 9320	412346		
92492559004	HGWC-118	EPA 9320	412347		
92492559005	HGWC-102	EPA 9320	412342		
92492559006	FB-02	EPA 9320	412345		
92492559007	FD-02	EPA 9320	412345		
92492559008	HGWC-101	EPA 9320	412345		
92492559009	HGWC-103	EPA 9320	412345		
92492559010	HGWC-107	EPA 9320	412345		
92492559011	HGWC-105	EPA 9320	412345		
92492559012	HGWC-109	EPA 9320	412345		
92492559013	HGWC-117	EPA 9320	412345		
92492559001	HGWA-111	Total Radium Calculation	414381		
92492559002	HGWA-112	Total Radium Calculation	414381		
92492559003	HGWA-113	Total Radium Calculation	414381		
92492559004	HGWC-118	Total Radium Calculation	414381		
92492559005	HGWC-102	Total Radium Calculation	414090		
92492559006	FB-02	Total Radium Calculation	414090		
92492559007	FD-02	Total Radium Calculation	414090		
92492559008	HGWC-101	Total Radium Calculation	414090		
92492559009	HGWC-103	Total Radium Calculation	414090		
92492559010	HGWC-107	Total Radium Calculation	414090		
92492559011	HGWC-105	Total Radium Calculation	414090		
92492559012	HGWC-109	Total Radium Calculation	414090		
92492559013	HGWC-117	Total Radium Calculation	414090		

Pace Analytical

Sample Condition Upon Recei

Client Name: GARwer

WO#:92492559

Courier: Fed Ex UPS USPS Colin Tracking #:	ent 🔲 Commercial	Pace Other	92492559
Custody Seal on Cooler/Box Present: Ges	Seal		Proj. Name:
		s Intact: 🗗 yes	no
Packing Material: Bubble Wrap Bubbl		A second second	
Thermometer Used	Type of Ice: We		Samples on ice, cooling process has begun
Cooler Temperature 7/6 Temp should be above freezing to 6°C	Biological Tissue	is Frozen: Yes Comments:	No Date and initials of person examining contents:
Chain of Custody Present:	DAYES DNO DN/A	1.	
Chain of Custody Filled Out:	✓Yes □No □N/A	2.	
Chain of Custody Relinquished:	EYes □No □N/A	3.	
Sampler Name & Signature on COC:	BYes □No □N/A	4.	
Samples Arrived within Hold Time:	ATES DNO DNIA	5.	
Short Hold Time Analysis (<72hr):	□Yes ☑No □N/A	6.	
Rush Turn Around Time Requested:	□Yes ØNo □N/A	7.	
Sufficient Volume:	DVES ONO ON/A	8.	
Correct Containers Used:	AND OND ESTA	9.	
-Pace Containers Used:	Ç¥es DNo DN/A	The state of the s	
Containers Intact;	HUS DNO DNA	10.	
Filtered volume received for Dissolved tests	□Yes □No ·□N/A	11.	
Sample Labels match COC:	HYES, DNO DN/A	12.	
-Includes date/time/ID/Analysis Matrix:	$\underline{\hspace{0.1cm}}$ W		
All containers needing preservation have been checked.	Cayes Ono On/A	13.	
All containers needing preservation are found to be in compliance with EPA recommendation.	ØYes □No □N/A		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	□Yes ☐ No	Initial when completed	Lot # of added preservative
Samples checked for dechlorination:	□Yes □No □H/A	14.	
Headspace in VOA Vials (>6mm):	□Yes □No □HA	15.	
Trip Blank Present:	□Yes □No □MA	16.	[12] 등 발표하는 기계 및 기계 등 기계 등 보고 있다. 경기 (12) 기계 및 기계
Trip Blank Custody Seals Present	□Yes □No ÆNIA		
Pace Trip Blank Lot # (if purchased):			
Client Notification/ Resolution:			Field Data Required? Y / N
Person Contacted:	Date/1	lime:	
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. Algorithm fields must be completed accurately.

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FALL-Q-020rev.07, 15-Feb-2007



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

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^op. III & IV Medais=Sb, As, Ba, Ba, B, Cd, Ca, Cr, Co, Pb, ⊔, +g, Mo, Se, 11 Please note dry wells, strike though any wets not sampled, and note when the last sample for the event has been taken. 5 ITEM# equired Client Information. sted Due Date/TAT: Required Client Information (A-Z, 0-8 f. .) Sample 10th MUST BE UNIQUE SCS Contacts GA Power Atlanta, GA SAMPLE ID ADDITIONAL COMMENTS HGWC-102 10 Day Fax FD-02 FB-02 Valle Natric Codes HATRIX CODE DECEMBER OF THE PROPERTY OF T 3 Copy to: Project N Section a Required Project Information urchase. Report To Ė RELINQUISHED BY / AFFILATION Order No. amber: GW6581 SCS Contacts Ş Geosyntec Contacts MATRIX CODE (see valid codes to left) o Ø G Plant Hammond AP-4 Scan/BKG 07 SAMPLE TYPE (G-GRAB C=COMP) Macder Lage o 68/27 12/30 62350 SAMPLER NAME AND SIGNATURE 54:51 12:30 Grosynth Z Z COLLECTED 198 SIGNATURE of SAMPLER: PRINT Name of SAMPLER: m/84/19 25/27 6218 PIL SAMPLE TEMP AT COLLECTION 4.70 25.52 1480 Section C invoice infarr Attention: # OF CONTAINERS Pace Quote Reference: Pace Project llios Ų. Address: 黑 Company Name Unpreserved H₂SO₄ HNO₃ Preservatives . Southern Co. Kevin Herring widhin OC stays. HCI COS CI NaOH ACCEPTED BY ! AFRILIATION Na₂S₂O₃ Mathanol Other **Analysis Test** Y/N DATE Signed (MM/DD/YY): Chloride, Fluoride, Sulfate Millitoant ! × z B × App. III & IV Metals 8010/6020/74 z ted Analysis Filtered (Y/N) RAD 226/228 z 08/27/2010 REGULATORY AGENCY Site Location 100244162[19] 18/27 UST DATE STATE: NPDES an 8 Ħ GROUND WATE þ F-ALL-Q-020rev.07, 15-Feb-2007 1 Temp in *C Residual Chlorine (Y/N) z z 2 Received or PH= 5.7 Ice (Y/N) SAMPLE CONDITIONS Custody 4 aled Cool (Y/N) OTHER CEN DRINKING WATER Samples Infac 6 66 (Y/N)

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

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Quality Control Sample Performance Assessment

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	Sample Matrix Spike Control Assessment	Sample Collection Date:	Sample I.D. Sample MS I.D. Sample MS I.D.	Spike I.D.:	MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike Volume Used in MS (mL):	Spike Volume Used in MSD (mL):	MS Aliquot (L, g, F):	MS Target Conc.(pCi/L, g, F);	MSD Aliquot (L, g, F):	MSD Target Conc. (pCVL, g, F):	MS Spike Uncertainty (calculated):	MSD Spike Uncertainty (catculated):	Sample Result:	Sample Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Result:	Matrix Spike Result Counting Uncertainty (pCi/l., g, F):	Sample Matrix Spike Duplicate Result:	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	MS Numerical Performance Indicator:	MSD Numerical Performance Indicator:	MS Percent Recovery:	MSD Percent Recovery:	MS Status vs Numerical Indicator:	MSD Status vs Numerical Indicator:	MS Status vs Recovery:	MSD Status vs Recovery:	MS/MSD Upper % Recovery Limits:	MS/MSD Lower % Recovery Limits:
													z	LCSD55958															
134-220	₹	9/9/2020	55958 DW		1994513	0.056	0.230	0.577	0.48	Ψ/N	Pass		FCSD (X or N)3	85655SDT	9/10/2020	19-033	24.045	0.10	0.507	4.743	0.057	4.838	0.784	0.24	102.00%	Y/X	Pass	125%	75%
1631	Analyst:	Date:	Worklist Matrix:	Method Blank Assessment	MB Sample ID	MB concentration:	M/B Counting Uncertainty:	MB MDC:	MB Numerical Performance Indicator:	MB Status vs Numerical Indicator.	MB Status vs. MDC:	***************************************	Laboratory Control Sample Assessment		Count Date:	Spike I.D.:	Decay Corrected Spike Concentration (pCi/mL):	Volume Used (mL):	Aliquot Volume (L, g, F):	Target Conc. (pCi/L, g, F):	Uncertainty (Calculated):	Result (pCi/L, g, F):	LCS/LCSD Counting Uncertainty (pCi/L, g, F):	Numerical Performance Indicator:	Percent Recovery:	Status vs Numerical Indicator:	Status vs Recovery:	Upper % Recovery Limits:	Lower % Recovery Limits:

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	the space below.	1,338	Sample Duplicate Result (pCt/L, g, F);
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Matri			Duplicate Sample Assessment
		75%	Lower % Recovery Limits:
		125%	Upper % Recovery Limits:
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		102.00%	Percent Recovery:
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		0.784	LCS/LCSD Counting Uncertainty (pCi/L, g, F);
		4.838	Result (pCVL, g, F):
		0.057	Uncertainty (Calculated):
		4,743	Target Conc. (pCi/L, g, F):
Σ		0.507	Aliquot Volume (L, g, F):
		0.10	Volume Used (mL):
		24.045	Decay Corrected Spike Concentration (pCi/mL):
		19-033	Spike I.D.:
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Matrix Spike/Matrix Spike Duplicate Sample Assessment	Sample I.D. Sample MS I.D.	ASD I.	S	-	***		•		0		Œ
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Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

An 9/10/2020

TAR_55958_W.xls Total Alpha Radium (R104-3 11Feb2019).xls

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Quality Control Sample Performance Assessment

Pace Analytical"

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Ra-226 LAL 9/9/2020 1994513 0.056 0.230 0.577 0.48 NVA Pass 55958 DW MB Sample ID
MB concentration:
M/B Counting Uncertainty:
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MSD Slatus vs Recover MS/MSD Upper % Recovery Limit MS/MSD Lower % Recovery Limit	MS Status vs Recovery:		
MS/MSD Upper % Recovery Limit MS/MSD Lower % Recovery Limit	MSD Status vs Recovery:		
MS/MSD Lower % Recovery Limit	MS/MSD Upper % Recovery Limits:		
	MS/MSD Lower % Recovery Limits:		

	Enter Duolicate	92492363002	Sample I.D.:
Mat			Duplicate Sample Assessment
		75%	Lower % Recovery Limits:
		125%	Upper % Recovery Limits:
		Pass	Status vs Recovery:
		ďΧ	Status vs Numerical Indicator;
		102.00%	Percent Recovery:
		0.24	Numerical Performance Indicator:
_		0.784	LCS/LCSD Counting Uncertainty (pCi/L, g, F):
		4.838	Result (pCi/L, g, F):
		0.057	Uncertainty (Calculated);
		4.743	Target Conc. (pCi/L, g, F):
_		0.507	Aliquot Volume (L, g, F);
		0.10	Volume Used (mL):
		24.045	Decay Corrected Spike Concentration (pCi/mL):
		19-033	Spike I.D.:
		9/10/2020	Count Date:
	LCSD55958	LCS55958	
	z	LCSD (Y or N)?	Laboratory Control Sample Assessment

Matrix Spike/Matrix Spike Duplicate Sample Assessment	Sample I.D.: 92492363002 Enter Duplicate	Duplicate Sample I.D. 92492363002DUP sample IDs if	7 other than	0 LCS/LCSD in Sample Matrix Spike Result:	4 [the space below.] Matrix Spike Result Counting Uncertainty (pCi/l., g, F):	7 Sample Matrix Spike Duplicate Result:	w ## Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	8 92492363002 Duplicate Numerical Performance Indicator:	% 92492363002DUP (Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	MS/ MSD Duplicate Status vs Numerical Indicator:	s MS/ MSD Duplicate Status vs RPD:	
	92492363	9249236300	1.477	0.490	1.354	0.517	See Below#	0.338	8.67%	√Z Z	Pass	25%
icate Sample Assessment	Sample I.D.:	Duplicate Sample I.D.	Sample Result (pCi/L, g, F):	Sample Result Counting Uncertainty (pCi/L, g, F):	Sample Duplicate Result (pCI/L, g, F):	Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	Are sample and/or duplicate results below RL?	Duplicate Numerical Performance Indicator:	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:



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TAR_55958_W.xls Total Alpha Radium (R104-3 11Feb2019).xls

1 of 1

Pace Analytical

Quality Control Sample Performance Assessment

LAL 9/10/2020 55959 DW Test Analyst Date:

Analyst Must Manually Enter All Fields Highlighted in Yellow. Sample Matrix Spike Control Assessment

MS/MSD 2

MS/MSD 1

Sample I.D. Sample MS I.D.

Sample Collection Date

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):

Worklist: Matrix:

1994514 0.206 0.098 0.149 4.13 M/B Counting Uncertainty: MB MDC: MB Numerical Performanca Indicator. MB Sample ID MB concentration;

Method Blank Assessment

N/A See Comment* MB Status vs. MDC; MB Status vs Numerical Indicator: Laboratory Control Sample Assessmen

(N to V)

LCSD55959 9/11/2020 19-033 24.045 0.10 0.507 4.740 0.057 4.372 0.792 -0.91 92,23% N/A Aliquot Volume (L, g, F): Target Conc. (pCi/L, g, F): Decay Corrected Spike Concentration (pCi/mL): Uncertainty (Calculated): Result (pCi/L, g, F): LCS/LCSD Counting Uncertainty (pCi/L, g, F): Spike I.D.: Volume Used (mL): Numerical Performance Indicator: Percent Recovery

Matrix Spike Result Counting Uncertainty (pCi/L, g, F):

Sample Result Counting Uncertainty (pCl/L, g, F)

Sample Matrix Spike Result

MS Spike Uncertainty (calculated) MSD Spike Uncertainty (calculated) Sample Result

Sample Matrix Spike Duplicate Result

Matrix Spike Duplicate Result Counting Uncertainty (pCifl., g. F):
MS Numerical Performance Indicator:

MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery. MSD Status vs Recovery. MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits

MSD Numerical Performance Indicator

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Upper % Recovery Limits: Lower % Recovery Limits: Status vs Recovery Status vs Numerical Indicator

Duplicate Sample Assessmen

Enter Duplicate he space below LCS/LCSD in sample IDs if other than 92492559006DUP 92492559006 See Below ## 128.44% 0.288 0.138 0.063 0.153 2.147 Sample I.D.: Sample Result (pCl/L, g, F): Sample Result Counting Uncertainty (pCl/L, g, F): Sample Duplicate Result (pCl/L, g, F): Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): Are sample and/or duplicate results below RL? Duplicate RPD: Duplicate Sample I.D. Duplicate Numerical Performance Indicator:

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): (Based on the Percent Recoveries) MS/ MSD Duplicate RPD: MS/ MSD Duplicate Status vs Numerical Indicator: Duplicate Numerical Performance Indicator

Σ Σ Σ

Duplicate Status vs Numerical Indicator:

Duplicate Status vs RPD: % RPD Limit

MS/ MSD Duplicate Status vs RPD: % RPD Limit:

Evatuation 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.

MAN GIII LOUD wacceptable_precision: N

AN9 111/2020

TAR_55959_W.xls Total Alpha Radium (R104-3 11Feb2019).xls

Printed: 9/11/2020 12:18 PM TAR DW QC

Quality Control Sample Performance Assessment

LAL 9/10/2020 55959 DW Worklist: Matrix: Date: **Analyst**:

Face Analytical

994514 0.206 0.098 0.149 4.13

MB Sample ID MB concentration:

Method Blank Assessment

M/B Counting Uncertainty: MB MDC: MB Numerical Performance Indicator;

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

See Comment*

₹

MB Status vs Numerical Indicator:

MB Status vs. MDC

Laboratory Control

	70 000		
ol Sample Assessment	LCSD (7 or N)?	z	
	LCS55959	LCSD55959	
Count Date:	9/11/2020		
Spike I.D.:	19-033		
Decay Corrected Spike Concentration (pCi/mL):	24.045		
Volume Used (mL):	0.10		
Aliquot Volume (L, g, F):	0,507		Mat
Target Conc. (pCi/L, g, F):	4.740		
Uncertainty (Calculated):	0.057		
Result (pCi/L, g, F):	4.372		
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.792		
Numerical Performance Indicator:	-0,91		
Percent Recovery:	92.23%		
Status vs Numerical Indicator:	N/A		
Status vs Recovery:	Pass	•	
Upper % Recovery Limits:	125%		
Lower % Recovery Limits:	75%		
(Į

Enter Duplicate

sample IDs if LCS/LCSD in other than

92492559007DUP

92492559007

Sample I.D.:

Duplicate Sample Assessment

Duplicate Sample I.D.

the space below

0.286 0.118 0.234 th 0.201 See Below ##

Sample Result (pCi/L, g, F):
Sample Result Counting Uncertainty (pCi/L, g, F):
Sample Duplicate Result (pCi/L, g, F):
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):
Are sample and/or duplicate results below RL?

Duplicate Numerical Performance Indicator: 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.

N/A Pass 25%

Comments:

"The method biank result is below the reporting limit for this analysis and is acceptable.

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TAR_55959_W.xis Total Alpha Radium (R104-3 11Feb2019).xis

Face Analytical

Quality Control Sample Performance Assessment

9/11/2020 Ra-226 ₹ Date:

MS/MSD 2

MS/MSD 1

Sample I.D. Sample MS I.D.

Sample Collection Date:

Sample Matrix Spike Control Assessment

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.(pCVL, g, F): MSD Aliquot (L, g, F):

MSD Target Conc. (pCi/L, g, F) MS Spike Uncertainty (calculated) MSD Spike Uncertainty (calculated)

Sample Result

Analyst Must Manually Enter All Fields Highlighted in Yellow.

55960 DW Analyst:

Worklist: Matrix:

0.060 0.133

MB Sample ID MB concentration;

Method Blank Assessmen

0.88

MB Numerical Performance Indicator:

MB MDC

M/B Counting Uncertainty

N/A Pass MB Status vs Numerical Indicator: MB Status vs. MDC: Laboratory Control Sample Assessmen

Sample Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Result: Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): LCSD55960 1.60 111.84% 19-033 24.044 0.10 0.505 4.759 0.057 5.322 0.689 Decay Corrected Spike Concentration (pCi/mL): Volume Used (mL): Aliquot Volume (L, g, F): Target Conc. (pCl/L, g, F): Result (pCi/L, g, F): LCS/LCSD Counting Uncertainty (pCi/L, g, F): Uncertainty (Calculated) Numerical Performance Indicator Percent Recovery Spike I.D.

Sample Matrix Spike Duplicate Result:

MS Numerical Performance Indicator:

MSD Numerical Performance Indicator

MS Percent Recovery MSD Percent Recovery MS Status vs Numerical Indicator MS/MSD Upper % Recovery Limits:

MSD Status vs Numerical Indicator MS Status vs Recovery MSD Status vs Recovery MS/MSD Lower % Recovery Limits

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Enter Duplicate

sample IDs if

other then

LCS/LCSD in he space below

Pass 125% 75% Upper % Recovery Limits: Lower % Recovery Limits:

ΚŽ

Status vs Recovery:

Status vs Numerical Indicator

92493016012DUP 92493016012 See Below 推 -1.435 13.47% 5.414 4.731 Sample Result (DCML, g, F):
Sample Result Counting Uncertainty (DCML, g, F):
Sample Duplicate Result (DCML, g, F):
Sample Duplicate Result Counting Uncertainty (DCML, g, F):
Are sample and/or duplicate results below RL? Sample I.D.: Duplicate Sample I.D. Duplicate Numerical Performance Indicator: Duplicate Sample Assessment

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

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

N/A Pass 25%

Duplicate RPD:

Duplicate Status vs Numerical Indicator:

Duplicate Status vs RPD; % RPD Limit;

Comments:



Face Analytical

Quality Control Sample Performance Assessment

Test Ra-226
Analyst LAL
Date: 9/11/2020
Worklist: 55960
Matrix: DW

Ra-226 Analyst.

Ra-226 Sample M

Method Blank Assessment	
MB Sample ID	1994515
MB concentration:	090'0
M/B Counting Uncertainty;	0.133
MB MDC:	0,265
MB Numerical Performance Indicator:	0.88
MB Status vs Numerical Indicator:	A/A
MB Status vs MDC	Dace

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	Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
	Sample Collection Date:		
	Sample I.D.		
	Sample MS I.D.		
	Sample MSD I.D.		
	Spike I.D.:		
	MS/MSD Decay Corrected Spike Concentration (pCi/mt_):		
	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):		
1	Sample Result:		
	Sample Result Counting Uncertainty (pCi/L, g, F):		
	Sample Matrix Spike Result:		
	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
	Sample Matrix Spike Duplicate Result:		
_	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
	MS Numerical Performance Indicator:		
	MSD Numerical Performance Indicator;		
	MS Percent Recovery:		
-	MSD Percent Recovery:		
	MS Status vs Numerical Indicator:		
	MSD Status vs Numerical Indicator:		
	MS Status vs Recovery:		
	MSD Status vs Recovery:		
	MS/MSD Upper % Recovery Limits:		
_	MS/MSD Lower % Recovery Limits:		

						ME										
Z	LCSD55960															
LCSD (Y or N)?	LCS55960	9/14/2020	19-033	24.044	0,10	0.505	4.759	0.057	5.322	0.589	1.60	111.84%	N/A	Pass	125%	75%
Laboratory Control Sample Assessment		Count Date:	Spike I.D.:	Decay Corrected Spike Concentration (pCi/mL):	Volume Used (mt.):	Aliquot Volume (L, g, F):	Target Conc. (pCiA., g, F):	Uncertainty (Calcutated):	Result (pCI/L, g, F):	LCS/LCSD Counting Uncertainty (pCi/L, g, F):	Numerical Performance Indicator:	Percent Recovery:	Status vs Numerical Indicator:	Status vs Recovery:	Upper % Recovery Limits:	Lower % Recovery Limits:

Duplicate Sample Assessment			Matrix S
- access	Sample I D - 92493016013	Enter Duolicate	
Duplicate Sample L	Duplicate Sample I.D. 92493016013DUP		
Sample Result (pCi/L, g, F):	F): 6.412		
Sample Result Counting Uncertainty (pCl/L, g, F):	F): 0.759	LCS/LCSD in	
Sample Duplicate Result (pCi/L, g, F):	F): 5.852	the space below.	
Sample Duplicate Result Counting Uncertainty (pCI/L, g, F):	F): 0.718		
Are sample and/or duplicate results below RL?	RL? See Below #		Matri
Duplicate Numerical Performance Indicator:	tor; 1.050	92493016013	
Duplicate RPD:	D: 9.13%	92493016013DUP	œ.
Duplicate Status vs Numerical Indicator:	tor: N/A		
Duplicate Status vs RPD:	Pass Pass		
% RPD Limit:	nit: 25%		
## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.	ne sampte or duplicate	results are below th	e MDC.

Matrix Spike/Matrix Spike Duplicate Sample Assessment	Sample I.D.	Sample MS I.D.	Sample MSD I.D.	Sample Matrix Spike Result:	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Duplicate Numerical Performance Indicator:	(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	MS/ MSD Duplicate Status vs Numerical Indicator:	MS/ MSD Duplicate Status vs RPD:	1,200 76

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Umma/H2020

Comments:

Analyst Must Manually Enter All Fields Highlighted in Yellow. Ra-226

Face Analytical

9/11/2020 Test Analyst Date:

55961 DW Worklist Matrix:

Method Blank Assessment

0.118 0.278 0.92 0.058 MB Sample ID MB concentration: MB MDC: M/B Counting Uncertainty

N/A Pass MB Numerical Performance Indicator. MB Status vs Numerical Indicator: MB Status vs. MDC:

MS/MSD 2 MS/MSD 1 Sample I.D. Sample MS I.D. Sample MSD 1.D. MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated): Sample Collection Date: MS Aliquot (L, g, F): MS Target Conc.(pCi/L, 9, F): MSD Aliquot (L, g, F); Sample Result. Sample Matrix Spike Result. Matrix Spike Result Counting Uncertainty (pCM, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): Spike I.D. MS/MSD Decay Corrected Spike Concentration (pCi/mL) Spike Volume Used in MS (mL) Spike Volume Used in MSD (ml.) Sample Result Counting Uncertainty (pCi/L, g, F) MS Numerical Performance Indicator MSD Numerical Performance Indicator MS Percent Recovery MS Status vs Numerical Indicator MSD Percent Recovery Sample Matrix Spike Control Assessment

MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits: MSD Status vs Numerical Indicator 0.10 0.522 4.609 0.055 4.395 0.589 -0.71 95.35% 19-033 24.044 N/A Pass 125% 75%

Volume Used (mL): Aliquot Volume (L, g, F): Target Conc. (pCi/L, g, F):

Decay Corrected Spike Concentration (pCi/mL):

Count Date:

Laboratory Control Sample Assessment

Spike I.D.

Uncertainty (Calculated):

Result (pC/I/L. g. F): LCS/LCSD Counting Uncertainty (pC/I/L. g, F): Numerical Performance Indicator:

Percent Recovery: Status vs Numerical Indicator Status vs Recovery:

Upper % Recovery Limits: Lower % Recovery Limits:

Duplicate Sample Assessment

MSD Status vs Recovery

Spike Duplicate Sample Assessment

MS Status vs Recovery

		25%
		Fail**
//SW		ΑX
(Based on the Po	92492413011DUP	29.70%
	92492413011	0.647
Matrix Spike Duplic		See Below ##
		0.184
Matrix Sp	the space below.	0.265
	LCS/LCSD in	0.211
	other than	0.357
	samble IDs if	92492413011DUP
	Enter Duplicate	92492413011
MIDENIA SPINE/MIDENIA		
Matrix Snike/Matrix S		

Sample Result (DCirl., g, F):
Sample Result Counting Uncertainty (DCirl., g, F):
Sample Duplicate Result (DCirl., g, F):
Sample Duplicate Result (DCirl., g, F):

Are sample and/or duplicate results below RL? Duplicate Numerical Performance Indicator. Duplicate RPD

Duplicate Status vs Numerical Indicator:

Duplicate Status vs RPD

Sample I.D.: Dupiicate Sample I.D.

Sample MS I.D. Sample Matrix Spike Result: pike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result; ercent Recoveries) MS/ MSD Duplicate RPD: MS/ MSD Duplicate Status vs RPD: Sample MSD I.D. cate Result Counting Uncertainty (pCI/L, g, F) Duplicate Numerical Performance Indicator MSD Duplicate Status vs Numerical Indicator

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

Comments:

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TAR_55961_W.xls Total Alpha Radium (R104-3 11Feb2019).xls

TAR DW QC

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Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment

MS/MSD 2

MS/MSD 1

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)

Sample Collection Date

MS Aliquot (L, g, F): MS Target Conc.(pCi/L, g, F):

MSD Aliquot (L. g, F); MSD Target Conc. (pCi/L, g, F):

MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):

Sample Result:

Sample Result Counting Uncertainty (pCi/L, g, F):

Sample Matrix Spike Result.

Matrix Spike Result Counting Uncertainty (pCi/L, g, F):

Sample Matrix Spike Duplicate Result:

Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):

MS Numerical Performance Indicator MSD Numerical Performance Indicator

MS Percent Recovery

MSD Percent Recovery MS Status vs Numerical Indicator

MSD Status vs Numerical Indicator. MS Status vs Recovery MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:

Ra-226 LAL 9/11/2020 55961 DW Test: Analyst: Date: Worklist: Matrix:

0.056 0.118 0.278 0.92 N/A Pass MB Sample iD MB concentration; MB MDC MB Numerical Performance Indicator: MB Status vs Numerical Indicator: M/B Counting Uncertainty MB Status vs. MDC Method Blank Assessmen

Laboratory C

Control Sample Assessment	LCSD (Y or N)?	Z
	LCS55961	LCSD55961
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):	0.055	
Result (pCi/L, g, F):	4.395	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.589	
Numerical Performance Indicator:	-0.71	
Percent Recovery:	95.35%	
Status vs Numerical Indicator:	A/N	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

plicate Sample Assessment	Sample I.D.	Sample MSD I.D.	Sample Matrix Spike Result:	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Duplicate Numerical Performance Indicator;	(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	MS/ MSD Duplicate Status vs Numerical Indicator;	MS/ MSD Duplicate Status vs RPD:	% RPD Limit:
Matrix Spike/Matrix Spike Duplicate Sample Assessment				Matrix Spike Result	Sai	Matrix Spike Duplicate Result	Duplicate	(Based on the Percent Red	MS/ MSD Dupi		
	e .		_	ž		_	٥	اچا			
	Enter Duplicate	other than	LCS/LCSD in	the space below.			92492413010	92492413010DUP			

92492413010DUP

Sample I.D.: Duplicate Sample I.D.

Duplicate Sample Assessment

92492413010

0.192 0.186 0.181 See Below##

Sample Result (pClfl., g, F):
Sample Result Counting Uncertainty (pClfl., g, F):
Sample Duplicate Result (pClfl., g, F):
Sample Duplicate Result (bClfl., g, F):
Are sample and/or duplicate results below R1.7

50,74% 0.939

Duplicate RPD:

Duplicate Status vs Numerical Indicator:

Duplicate Status vs RPD:

Duplicate Numerical Performance Indicator;

N/A Fail***

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

Comments:

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TAR_55961_W.xls Total Alpha Radium (R104-3 11Feb2019).xls

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Ra-228 VAL 9/9/2020 55953 WT MB Sample ID MB concentration: M/B 2 Sigma CSU: MB MB C: Test Analyst Date: Worklist Matrix: Pace Analytical Method Blank Assessment

Æ		Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
1/2020		Sample Collection Date:		
5953		Sample LO.		
¥		Sample MS I.D.		
		Sample MSD I.D.		
		Spike I.D.:		
94498		MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
.550		Spike Volume Used in MS (mL):		
.369		Spike Volume Used in MSD (mL):		
9698		MS Aliquot (L, g, F):		
2.92		MS Target Conc.(pCi/L, g, F):		
aming		MSD Aliquot (L, g, F):		
Pass		MSD Target Conc. (pCi/L, g, F):		
		MS Spike Uncertainty (calculated):		
Y or N)?	<u> </u>	MSD Spike Uncertainty (calculated):		
S55953	LCSD55953	Sample Result:		
5/2020	9/15/2020	Sample Result 2 Sigma CSU (pCI/L, g, F):		
0-030	20-030	Sample Matrix Spike Result:		
8.394	38.395	Maurx Spike Result 2 Sigma CSU (pCi/L, g, F):		
0.10	0.10	Sample Matrix Spike Duplicate Result:		
1.804	0.812	Matrix Spike Duplicate Resutt 2 Sigma CSU (pCi/L, g, F):		
1.775	4.731	MS Numerical Performance Indicator.		
.234	0,232	MSD Numerical Performance Indicator:		
1,305	4.600	MS Percent Recovery:		
1.011	1.072	MSD Percent Recovery:		
-0.89	-0.23	MS Status vs Numerical Indicator:		
0.15%	97.24%	MSD Status vs Numerical Indicator:		
A/A	Α'N	MS Status vs Recovery:		
Pass	Pass	MSD Status vs Recovery:		
135%	135%	ğ		
	7000	Total Control Control		

Count Date: Spike I.D.:

MB Numerical Performance Indicator: MB Status vs Numerical Indicator: MB Status vs. MDC:

Laboratory Control Sample Assessment

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:
20-030	38.395	0.10	0.812	4.731	0.232	4.600	1.072	-0.23	97.24%	N/A	Pass	135%	%09			Enter Duplicate	sample iDs if	other than	LCS/LCSD in	the space below.							
20-030	38.394	0.10	0.804	4.775	0.234	4.305	1.011	-0.89	90.15%	A/A	Pass	135%	%09			LCS55953	LCSD55953	4.305	1.011	•	~	2	-0.393	7.57%	Pass	Pass	36%
Spike I, D.:	Decay Corrected Spike Concentration (pCi/mL):	Volume Used (mL):	Aliquot Volume (L, g, F):	Target Conc. (pCi/L, g, F):	Uncertainty (Catculated):	Result (pCi/L, g, F):	LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	Numerical Performance Indicator:	Percent Recovery:	Status vs Numerical Indicator:	Status vs Recovery:	Upper % Recovery Limits:	Lower % Recovery Limits:		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:	(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	Duplicate Status vs Numerical Indicator:	Duplicate Status vs RPD:	% RPD Limit:

MDC.	e results are below the	ample or duplicate	## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.
%		36%	% RPD Limit.
MS/ MSD Duplicate Stat		Pass	Duplicate Status vs RPD:
MS/ MSD Duplicate Status vs Numeric		Pass	Duplicate Status vs Numerical Indicator:

Comments:

Ra-228 NELAC DW2 Printed: 9/16/2020 8:14 AM

Ra-228

Pace Analytical

Analyst Must Manually Enter All Fields Highlighted in Yellow.

MS/MSD 2

MB Sample ID
MB concentration:
M/B 2 Sigma CSU:
MB MDC: Test: Analyst: Date: Worklist: Matrix:

Method Blank Assessment

L																													
MS/MSD 1																													
Sample Matrix Spike Control Assessment	Sample Collection Date:	Sample I.D.	CI CIM Significant	Soike LD	MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike Volume Used in MS (mL):	Spike Volume Used in MSD (mt.):	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:	Semple 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:
													Å	LCSD55954	9/15/2020	20-030	38.394	0.10	0.829	4.632	0.227	4.838	1.149	0.34	104,44%	A/N	Pass	135%	%09
۷AL	/9/2020	55954 WT	:		994499	0.357	0.355	0.727	1.97	Pass	Pass		(Y or N)?	C\$55954	/15/2020	20-030	38.394	0.10	0.808	4.752	0.233	5.042	1.200	0.46	06.10%	K/N	Pass	135%	80%

MB Numerical Performance Indicator: MB Status vs Numerical Indicator: MB Status vs, MDC:

Laboratory Control Sample Assessment

% RPD L		36%	% RPD Limit:
MS/ MSD Duplicate Status vs R		Pass	Duplicate Status vs RPD;
MS/ MSD Duplicate Status vs Numerical Indica		Pass	Duplicate Status vs Numerical Indicator:
Based on the Percent Recoveries) MS/ MSD Duplicate R		1.57%	(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:
Duplicate Numerical Performance Indica		0.241	Duplicate Numerical Performance Indicator:
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g		2	Are sample and/or duplicate results below RL?
Sample Matrix Spike Duplicate Re-		1.149	Sample Duplicate Result 2 Sigma CSU (pCt/L, g, F):
Matrix Spike Result 2 Sigma CSU (pCi/L, g	the space below.	4.838	Sample Duplicate Result (pCl/L, g, F):
Sample Matrix Spike Re-	LCS/LCSD in	1.200	Sample Result 2 Sigma CSU (pCi/L, g, F):
Sample MSD	other than	5.042	Sample Result (pCi/L, g, F):
Sample MS	sample IDs if	LCSD55954	Duplicate Sample I.D.
Sample	Enter Duplicate	LCS55954	Sample I.D.:
Matrix Spike/Matrix Spike Duplicate Sample Assessment			Duplicate Sample Assessment
	200	8	
MS/MSD Lower % Recovery Lin	%09	%0 9	Lower % Recovery Limits:
MS/MSD Upper % Recovery Lin	135%	135%	Upper % Recovery Limits:
MSD Status vs Recov	Pass	Pass	Status vs Recovery:
MS Status vs Recov	A/N	N/A	Status vs Numerical Indicator:
MSD Status vs Numerical Indica	104.44%	106.10%	Percent Recovery:
MS Status vs Numerical Indica	0.34	0,46	Numerical Performance Indicator;
MSD Percent Recov	1.149	1.200	LCS/LCSD 2 Sigma CSU (pCiv., g, F);
MS Percent Recov	4.838	5.042	Result (pCi/L, g, F);
MSD Numerical Performance Indica	0.227	0.233	Uncertainty (Calculated):
MS Numerical Performance Indica	4.632	4.752	Target Conc. (pCi/L, g, F):
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g	0.829	0.808	Aliquot Volume (L. g, F):
Sample Matrix Spike Duplicate Re-	0.10	0.10	Volume Used (mL):
Matrix Spike Result 2 Sigma CSU (pCi/L, g	38.394	38.394	Decay Corrected Spike Concentration (pCi/mL):
Sample Matrix Spike Re	20-030	20-030	Spike I.D.:
Semple Result 2 Sigma CSU (pCi/L, g	9/15/2020	9/15/2020	Count Date:
Southie Co	LC000000	1000004	

מיוויים מיווים מיוויים מיוויים מיוויים מיוויים מיוויים מיוויים מיוויים מיווים	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:

Ra-228 NELAC DW2 Primed: 9/16/2020 8:15 AM

Ra-228_55954_W.xls Ra-228 (R086-8 04Sep2019).xls Jugara

Analyst Must Manually Enter All Fields Highlighted in Yellow.

VAL 9/10/2020 55955 WT Date:

Worklist: Matrix: **Analyst**:

0.397 0.699 3.70 Fali* See Comment* 0.749 MB concentration: M/B 2 Sigma CSU; MB Sample ID MB MDC: MB Numerical Performance Indicator:

Method Blank Assessmen

MB Status vs Numerical Indicator: MB Status vs. MDC:

Laboratory Control Sample Assessmen

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

9/16/2020 20-030 38.383 0.10 0.800 4.796 0.235 6.376 1.417 2.16 132.93% N/A Pass 135% 60% 9/16/2020 20-030 38.383 0.10 0.811 4.730 0.232 5.530 1.18 116.90% N/A Pass 135% 60%

Aliquot Volume (L, g, F): Target Conc. (pCi/L, g, F):

Volume Used (mL):

Decay Corrected Spike Concentration (pCi/mL):

Spike LD.

Result (pCi/L, g, F):

Uncertainty (Calculated):

LCS/LCSD 2 Sigma CSU (pCi/L, g, F):

Numerical Performance Indicator

Percent Recovery: Status vs Numerical Indicator Status vs Recovery: Upper % Recovery Limits: Lower % Recovery Limits:

Duplicate Sample Assessment

Matrix Spike/Matrix Spike Duplicate Sample Assessment Enter Duplicate he space below sample IDs if LCS/LCSD in other than LCS55955 LCSD55955 NO -0.860 12.84% 6.376 5.530 Pass 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: (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: Duplicate Status vs RPD: % RPD Limit: Duplicate Sample I.D. Duplicate Status vs Numerical Indicator:

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

Sample MS I.D.

MS/MSD Lower % Recovery Limits

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Comments:

*The method blank result is below the reporting ilmit for this analysis and is acceptable.

Ra-228 NELAC DW2 Printed: 9/17/2020 10:58 AM

Ra-228 Analysis

Quality Control Sample Performance Assessment

Test Ra-228
Analyst VAL
Date: 9/10/2020
Worklist: 55956
Matrix: WT

Pace Analytical

1994502 0.314 0.487 1.054 1.26 Pass Pass

MB Sample ID

Method Blank Assessment

MB concentration:
MAB 2 Sigma CSU:
MB MDC:
MB Numerical Performance Indicator:
MB Status vs Numerical Indicator:
MB Status vs. MDC:

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 1.D.		
	Spike I.D.:		
	MS/MSD Decay Corrected Spike Concentration (pCl/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):		
Γ	MSD Spike Uncertainty (calculated):		
956	Sample Result:		
20	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 (pClift, g, F):		
	MS Numerical Performance Indicator:		
	MSD Numerical Performance Indicator:		
	MS Percent Recovery:		
	MSD Percent Recovery:		
	MS Status vs Numerical Indicator:	•	
8	MSD Status vs Numerical Indicator:		
•	MS Status vs Recovery:		
	MSD Status vs Recovery:		
	MS/MSD Upper % Recovery Limits:		
	MS/MSD Lawer % Recovery Limits:		

Laboratory Control Sample Assessment	LCSD (Y or N)?	>	
	LCS55956	LCSD55956	
Count Date:	9/16/2020	9/16/2020	
Spike I.D.:	20-030	20-030	
Decay Corrected Spike Concentration (pCi/mL):	38.382	38.382	
Volume Used (mL):	0.10	0.10	
Aliquot Volume (L, g, F):	0.813	0.814	Matrix S
Target Conc. (pCi/L, g, F);	4.719	4.715	
Uncertainty (Calculated)::	0.231	0.231	
Result (pCi/L, g, F):	5.086	5.348	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.251	1.293	
Numerical Performance Indicator:	0.57	9. 26.	
Percent Recovery:	107.78%	113.43%	
Status vs Numerical Indicator:	Ν	N/A	
Status vs Recovery:	Pass	Pass	
Upper % Recovery Limits:	135%	135%	
Lower % Recovery Limits:	60%	%09	
Duplicate Sample Assessment			Matrix Spike/Mat

Matrix Spike/Matrix Spike Duplicate Sample Assess Sample Matrix Spike Result 2 Sigma CSL Sample Matrix Spike Buplicate Result 2 Sigma CSL Sumple Matrix Spike Duplicate Nesult 2 Sigma CSL Duplicate Numerical Perform Based on the Percent Recoveries) MS/ MSD Duplicate Status vs Nume MS/ MSD Duplicate Status vs Nume													******
Matri	ike/Matrix Spike Duplicate Sample Assessment	Sample 1.D.	Sample MS I.D.	Sample MSD 1.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;	sed on the Percent Recoveries) MS/ MSD Duplicate RPD:	MS/ MSD Duplicate Status vs Numerical Indicator:	MS/ MSD Duplicate Status vs RPD:	% RPD Limit
Enter Duplicate sample IDs if other than the space below.	Matrix Sp									(Bas			
		Enter Duplicate	sample IDs if	other than	LCS/LCSD in	the space below.							

LCS55956 LCSD55956 5.086 5.086 1.251 1.234 NO -0.285 5.11% Pass Pass

Sample I.D.:

Sample Result Sample Result (pCill. g. F):

Sample Result Sigma CSU (pCill. g. F):

Sample Duplicate Result 2 Sigma CSU (pCill. g. F):

Sample Duplicate Result 2 Sigma CSU (pCill. g. F):

Are sample and/or duplicate results below RI.?

Duplicate Numerical Performance Indicator:

(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:

Duplicate Status vs Numerical Indicator:

Duplicate Status vs RRD:

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Duplicate Status vs RRD:

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Comments:

A172

September 2020





October 13, 2020

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

RE: Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between September 21, 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,

Kevin Herring

kevin.herring@pacelabs.com

Ken Hung

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.





CERTIFICATIONS

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Pace Analytical Services Charlotte

9800 Kincey Ave. Ste 100, Huntersville, NC 28078 Louisiana/NELAP Certification # LA170028 North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342 North Carolina Wastewater Certification #: 12

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804 Florida/NELAP Certification #: E87648 Massachusetts Certification #: M-NC030

North Carolina Drinking Water Certification #: 37712

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

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

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

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



SAMPLE SUMMARY

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92496524001	HGWA-111		09/18/20 09:43	09/21/20 09:25
92496524002	HGWA-112	Water	09/18/20 11:39	09/21/20 09:25
92496524003	HGWA-47	Water	09/18/20 11:20	09/21/20 09:25
92496524004	HGWA-48D	Water	09/18/20 11:06	09/21/20 09:25
92496524005	FB-04	Water	09/18/20 16:40	09/21/20 09:25
92496524006	HGWA-113	Water	09/22/20 11:30	09/23/20 09:25
92496524007	HGWA-113 FILTERED	Water	09/22/20 12:15	09/23/20 09:25
92496524008	HGWC-102	Water	09/24/20 16:51	09/25/20 10:45
92496524009	HGWC-101	Water	09/24/20 13:25	09/25/20 10:45
92496524010	HGWC-103	Water	09/24/20 18:30	09/25/20 10:45
92496524011	HGWC-105	Water	09/24/20 15:05	09/25/20 10:45
92496524012	FD-04	Water	09/24/20 00:00	09/25/20 10:45
92496524013	HGWC-107	Water	09/24/20 16:56	09/25/20 10:45
92496524014	HGWC-109	Water	09/25/20 16:20	09/28/20 09:40
92496524015	HGWC-117	Water	09/25/20 16:25	09/28/20 09:40
92496524016	HGWC-118	Water	09/28/20 12:56	09/29/20 08:55



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

ab ID	Sample ID	Method	Analysts	Analytes Reported
2496524001	HGWA-111	EPA 6010D	DRB	1
		EPA 6020B	KH	g
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
2496524002	HGWA-112	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
2496524003	HGWA-47	EPA 6010D	DRB	1
		EPA 6020B	KH	13
		EPA 7470A	FFP	1
		SM 2450C-2011	AW1	,
		EPA 300.0 Rev 2.1 1993	CDC	3
2496524004	HGWA-48D	EPA 6010D	DRB	
		EPA 6020B	KH	13
		EPA 7470A	FFP	
		SM 2450C-2011	AW1	
		EPA 300.0 Rev 2.1 1993	CDC	3
2496524005	FB-04	EPA 6010D	DRB	
		EPA 6020B	KH	13
		EPA 7470A	FFP	,
		SM 2450C-2011	AW1	,
		EPA 300.0 Rev 2.1 1993	CDC	3
2496524006	HGWA-113	EPA 6010D	DRB	,
		EPA 6020B	CW1	(
		SM 2450C-2011	AW1	,
		EPA 300.0 Rev 2.1 1993	CDC	3
2496524007	HGWA-113 FILTERED	EPA 6010D	DRB	,
		EPA 6020B	CW1	ę
		SM 2450C-2011	AW1	
		EPA 300.0 Rev 2.1 1993	BRJ	3
496524008	HGWC-102	EPA 6010D	DRB	•
		EPA 6020B	CW1	13
		EPA 7470A	VB	•
		SM 2450C-2011	AW1	,
		EPA 300.0 Rev 2.1 1993	BRJ	3

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Lab ID	Sample ID	Method	Analysts	Analytes Reported	
	_	EPA 6020B	 CW1	9	
		SM 2450C-2011	AW1	1	
		EPA 300.0 Rev 2.1 1993	BRJ	3	
92496524010	HGWC-103	EPA 6010D	DRB	1	
		EPA 6020B	CW1	9	
		SM 2450C-2011	AW1	1	
		EPA 300.0 Rev 2.1 1993	BRJ	3	
92496524011	HGWC-105	EPA 6010D	DRB	1	
		EPA 6020B	CW1	9	
		SM 2450C-2011	AW1	1	
		EPA 300.0 Rev 2.1 1993	BRJ	3	
92496524012	FD-04	EPA 6010D	DRB	1	
		EPA 6020B	CW1	9	
		SM 2450C-2011	AW1	1	
		EPA 300.0 Rev 2.1 1993	CDC	3	
92496524013	HGWC-107	EPA 6010D	DRB	1	
		EPA 6020B	CW1	9	
		SM 2450C-2011	AW1	1	
		EPA 300.0 Rev 2.1 1993	CDC	3	
92496524014	HGWC-109	EPA 6010D	DRB	1	
		EPA 6020B	CW1	9	
		SM 2450C-2011	AW1	1	
		EPA 300.0 Rev 2.1 1993	BRJ	3	
92496524015	HGWC-117	EPA 6010D	DRB	1	
		EPA 6020B	CW1	9	
		SM 2450C-2011	AW1	1	
		EPA 300.0 Rev 2.1 1993	BRJ	3	
92496524016	HGWC-118	EPA 6010D	DRB	1	
		EPA 6020B	KH	9	
		SM 2450C-2011	AW1	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



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2496524001	HGWA-111					
	рH	6.46	Std. Units		09/29/20 12:28	
PA 6010D	Calcium	32.2	mg/L	1.0	09/24/20 19:55	
PA 6020B	Barium	0.024	mg/L	0.010	09/25/20 19:56	
PA 6020B	Boron	0.011J	mg/L	0.10	09/25/20 19:56	
PA 6020B	Chromium	0.00077J	mg/L	0.010	09/25/20 19:56	
PA 6020B	Lead	0.00026J	mg/L	0.0050	09/25/20 19:56	
PA 6020B	Lithium	0.0021J	mg/L	0.030	09/25/20 19:56	
SM 2450C-2011	Total Dissolved Solids	139	mg/L	10.0	09/23/20 13:16	
PA 300.0 Rev 2.1 1993	Chloride	2.6	mg/L	1.0	09/24/20 10:49	
PA 300.0 Rev 2.1 1993	Sulfate	1.0	mg/L	1.0	09/24/20 10:49	
2496524002	HGWA-112					
	рН	5.58	Std. Units		09/29/20 12:28	
EPA 6010D	Calcium	6.5	mg/L	1.0	09/24/20 20:00	
PA 6020B	Barium	0.025	mg/L	0.010	09/25/20 20:02	
PA 6020B	Boron	0.0080J	mg/L	0.10	09/25/20 20:02	
PA 6020B	Chromium	0.0037J	mg/L	0.010	09/25/20 20:02	
PA 6020B	Lead	0.000065J	mg/L	0.0050	09/25/20 20:02	
M 2450C-2011	Total Dissolved Solids	62.0	mg/L	10.0	09/23/20 13:16	
PA 300.0 Rev 2.1 1993	Chloride	5.2	mg/L	1.0	09/24/20 11:33	
2496524003	HGWA-47					
	рH	7.54	Std. Units		09/29/20 12:28	
PA 6010D	Calcium	62.2	mg/L	1.0	09/24/20 20:04	
PA 6020B	Barium	0.026	mg/L	0.010	09/25/20 20:07	
PA 6020B	Boron	0.0082J	mg/L	0.10	09/25/20 20:07	
PA 6020B	Chromium	0.0039J	mg/L	0.010	09/25/20 20:07	
PA 6020B	Cobalt	0.00049J	mg/L	0.0050	09/25/20 20:07	
PA 6020B	Lithium	0.0026J	mg/L	0.030	09/25/20 20:07	
PA 6020B	Molybdenum	0.0015J	mg/L	0.010	09/25/20 20:07	
M 2450C-2011	Total Dissolved Solids	195	mg/L	10.0	09/23/20 13:17	
PA 300.0 Rev 2.1 1993	Chloride	2.7	mg/L	1.0	09/24/20 11:47	
PA 300.0 Rev 2.1 1993	Fluoride	0.067J	mg/L	0.10	09/24/20 11:47	
PA 300.0 Rev 2.1 1993	Sulfate	3.5	mg/L	1.0	09/24/20 11:47	
2496524004	HGWA-48D					
	рН	7.50	Std. Units		09/29/20 12:28	
PA 6010D	Calcium	51.8	mg/L	1.0	09/24/20 20:08	
PA 6020B	Antimony	0.00038J	mg/L		09/25/20 20:13	
PA 6020B	Barium	0.077	mg/L		09/25/20 20:13	
PA 6020B	Boron	0.015J	mg/L		09/25/20 20:13	
PA 6020B	Lithium	0.0051J	mg/L	0.030	09/25/20 20:13	
PA 6020B	Molybdenum	0.0026J	mg/L	0.010	09/25/20 20:13	
M 2450C-2011	Total Dissolved Solids	224	mg/L	10.0	09/23/20 13:17	
PA 300.0 Rev 2.1 1993	Chloride	2.6	mg/L	1.0	09/24/20 12:01	
PA 300.0 Rev 2.1 1993	Fluoride	0.098J	mg/L	0.10	09/24/20 12:01	
PA 300.0 Rev 2.1 1993	Sulfate	9.5	mg/L	1.0	09/24/20 12:01	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Lab Sample ID	Client Sample ID					
Method	Parameters	Result _	Units	Report Limit	Analyzed	Qualifier
2496524006	HGWA-113					
	рН	6.10	Std. Units		09/29/20 12:28	
EPA 6010D	Calcium	7.9	mg/L	1.0	09/25/20 22:03	
PA 6020B	Barium	0.038	mg/L	0.010	09/30/20 19:15	
PA 6020B	Beryllium	0.000099J	mg/L	0.0030	09/30/20 19:15	
PA 6020B	Boron	0.021J	mg/L	0.10	09/30/20 19:15	
PA 6020B	Chromium	0.0046J	mg/L	0.010	09/30/20 19:15	
PA 6020B	Cobalt	0.00074J	mg/L	0.0050	09/30/20 19:15	
PA 6020B	Lead	0.00096J	mg/L	0.0050	09/30/20 19:15	
PA 6020B	Lithium	0.0018J	mg/L	0.030	09/30/20 19:15	
M 2450C-2011	Total Dissolved Solids	84.0	mg/L	10.0	09/24/20 10:29	
PA 300.0 Rev 2.1 1993	Chloride	1.5	mg/L	1.0		
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	09/25/20 22:41	
EPA 300.0 Rev 2.1 1993	Sulfate	5.3	mg/L	1.0	09/25/20 22:41	
		5.5	mg/L	1.0	09/25/20 22:41	
2496524007	HGWA-113 FILTERED pH	6.10	Std. Units		09/29/20 12:28	
PA 6010D	Calcium	7.6		1.0	09/25/20 12:20	
			mg/L	1.0		
PA 6020B	Barium	0.027	mg/L	0.010	09/30/20 19:20	
PA 6020B	Boron	0.015J	mg/L	0.10	09/30/20 19:20	
PA 6020B	Chromium	0.0025J	mg/L	0.010		
PA 6020B	Lead	0.000095J	mg/L	0.0050	09/30/20 19:20	
PA 6020B	Lithium	0.0010J	mg/L	0.030	09/30/20 19:20	
SM 2450C-2011	Total Dissolved Solids	89.0	mg/L	10.0	09/24/20 10:29	
EPA 300.0 Rev 2.1 1993	Chloride	1.3	mg/L	1.0	09/27/20 01:23	
PA 300.0 Rev 2.1 1993	Sulfate	1.8	mg/L	1.0	09/27/20 01:23	
2496524008	HGWC-102					
	Performed by	CUSTOME R			09/29/20 12:28	
	рH	5.82	Std. Units		09/29/20 12:28	
PA 6010D	Calcium	120	mg/L	1.0	10/01/20 17:49	
PA 6020B	Barium	0.029	mg/L	0.010	10/01/20 20:41	
PA 6020B	Boron	2.9	mg/L	0.50	10/03/20 12:10	
PA 6020B	Cadmium	0.00032J	mg/L	0.0025	10/01/20 20:41	
PA 6020B	Cobalt	0.0011J	mg/L	0.0050	10/01/20 20:41	
PA 6020B	Lithium	0.0011J	mg/L	0.030	10/01/20 20:41	
M 2450C-2011	Total Dissolved Solids	696	mg/L	20.0	09/30/20 09:28	
EPA 300.0 Rev 2.1 1993	Chloride	7.2	mg/L		09/29/20 15:09	
PA 300.0 Rev 2.1 1993	Sulfate	370	mg/L		09/29/20 13:09	
	HGWC-101	370	mg/L	0.0	03/23/20 13.23	
2496524009		CUSTOME			09/29/20 12:28	
	Performed by	R			U3/23/2U 12.20	
	рН	5.48	Std. Units		09/29/20 12:28	
PA 6010D	Calcium	20.3	mg/L	1.0	10/01/20 17:53	
PA 6020B	Barium	0.041	mg/L	0.010	10/01/20 20:47	
PA 6020B	Beryllium	0.000048J	mg/L	0.0030	10/01/20 20:47	
PA 6020B	Boron	0.10	mg/L	0.10	10/03/20 12:37	
PA 6020B	Cadmium	0.00014J	mg/L		10/01/20 20:47	

REPORT OF LABORATORY ANALYSIS

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Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

PA 300.0 Rev 2.1 1993 PA 496524010 PA 300.0 Rev 2.1 1993 PA 300.0 Rev 2.1 1993	Parameters HGWC-101 Cobalt Total Dissolved Solids Chloride Sulfate HGWC-103 Performed by	0.0021J 170 5.5 97.0	mg/L mg/L mg/L mg/L	10.0	Analyzed 10/01/20 20:47 09/30/20 09:28	Qualifiers
PA 6020B M 2450C-2011 PA 300.0 Rev 2.1 1993 PA 300.0 Rev 2.1 1993 2496524010	Cobalt Total Dissolved Solids Chloride Sulfate HGWC-103	170 5.5	mg/L mg/L	10.0		
M 2450C-2011 PA 300.0 Rev 2.1 1993 PA 300.0 Rev 2.1 1993 2496524010	Total Dissolved Solids Chloride Sulfate HGWC-103	170 5.5	mg/L mg/L	10.0		
PA 300.0 Rev 2.1 1993 PA 300.0 Rev 2.1 1993 2496524010	Chloride Sulfate HGWC-103	5.5	mg/L		09/30/20 09:28	
PA 300.0 Rev 2.1 1993 2 496524010	Sulfate HGWC-103			1.0	00,00,20 00.20	
2496524010	HGWC-103	97.0		1.0	09/29/20 15:23	
			mg/L	2.0	09/29/20 19:44	
D4 0040D	Performed by					
D4 0040D	•	CUSTOME R			09/29/20 12:28	
DA 0040D	рН	5.60	Std. Units		09/29/20 12:28	
PA 6010D	Calcium	91.3	mg/L	1.0	10/01/20 17:58	
PA 6020B	Barium	0.036	mg/L	0.010	10/01/20 21:22	
PA 6020B	Beryllium	0.000088J	mg/L	0.0030	10/01/20 21:22	
PA 6020B	Boron	2.2	mg/L	0.10	10/01/20 21:22	
PA 6020B	Cadmium	0.00076J	mg/L	0.0025	10/01/20 21:22	
PA 6020B	Chromium	0.000763 0.00081J	mg/L	0.0025	10/01/20 21:22	
PA 6020B		0.000813 0.0019J	_		10/01/20 21:22	
	Cobalt		mg/L	0.0050		
PA 6020B	Lead	0.00028J	mg/L	0.0050	10/01/20 21:22	
PA 6020B	Lithium	0.0017J	mg/L	0.030	10/01/20 21:22	
M 2450C-2011	Total Dissolved Solids	517	mg/L	10.0	09/30/20 09:28	
PA 300.0 Rev 2.1 1993	Chloride	6.0	mg/L	1.0	09/29/20 16:06	
PA 300.0 Rev 2.1 1993	Sulfate	293	mg/L	6.0	09/29/20 19:58	
2496524011	HGWC-105					
	Performed by	CUSTOME R			09/29/20 12:28	
	pH	6.63	Std. Units		09/29/20 12:28	
PA 6010D	Calcium	92.9	mg/L	1.0	10/01/20 18:02	
PA 6020B	Barium	0.075	mg/L	0.010	10/01/20 21:44	
PA 6020B	Boron	1.2	mg/L	0.10	10/01/20 21:44	
PA 6020B	Chromium	0.00064J	mg/L	0.010	10/01/20 21:44	
PA 6020B	Cobalt	0.00044J	mg/L	0.0050	10/01/20 21:44	
PA 6020B	Lead	0.000049J	mg/L	0.0050	10/01/20 21:44	
PA 6020B	Lithium	0.0038J	mg/L	0.030	10/01/20 21:44	
M 2450C-2011	Total Dissolved Solids	411	mg/L	10.0	09/30/20 09:28	
PA 300.0 Rev 2.1 1993	Chloride	3.9	mg/L	1.0	09/29/20 16:21	
PA 300.0 Rev 2.1 1993	Sulfate	177	mg/L	4.0	09/29/20 20:12	
2496524012	FD-04					
PA 6010D	Calcium	85.7	mg/L	1.0	10/01/20 18:06	
PA 6020B	Barium	0.037	mg/L	0.010	10/01/20 21:50	
PA 6020B	Beryllium	0.000067J	mg/L	0.0030	10/01/20 21:50	
PA 6020B	Boron	2.3	mg/L	0.10	10/01/20 21:50	
PA 6020B	Cadmium	0.00079J	mg/L	0.0025	10/01/20 21:50	
PA 6020B	Chromium	0.00098J	mg/L	0.010	10/01/20 21:50	
PA 6020B	Cobalt	0.0019J	mg/L	0.0050	10/01/20 21:50	
PA 6020B	Lead	0.000193 0.00026J	mg/L	0.0050	10/01/20 21:50	
PA 6020B	Lithium	0.000263 0.0017J	•	0.030	10/01/20 21:50	
	Total Dissolved Solids		mg/L		09/30/20 09:29	
M 2450C-2011 PA 300.0 Rev 2.1 1993	Chloride	536 8.9	mg/L mg/L	10.0 1.0	09/30/20 09:29	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Lab Sample ID	Client Sample ID	5 "		D (11.7)		0 1:5
Method —	Parameters —	Result _	Units	Report Limit	Analyzed	Qualifiers
2496524012	FD-04					
EPA 300.0 Rev 2.1 1993	Sulfate	298	mg/L	6.0	09/30/20 02:37	
2496524013	HGWC-107					
	Performed by	CUSTOME R			09/29/20 12:28	
	рН	6.11	Std. Units		09/29/20 12:28	
EPA 6010D	Calcium	55.4	mg/L		10/01/20 18:10	
EPA 6020B	Barium	0.039	mg/L	0.010	10/01/20 21:56	
EPA 6020B	Boron	0.88	mg/L	0.10	10/01/20 21:56	
EPA 6020B	Lead	0.00034J	mg/L	0.0050		
EPA 6020B	Lithium	0.00098J	mg/L	0.030	10/01/20 21:56	
SM 2450C-2011	Total Dissolved Solids	253	mg/L	10.0	09/30/20 09:29	
EPA 300.0 Rev 2.1 1993	Chloride	3.5	mg/L	1.0	09/29/20 21:08	
EPA 300.0 Rev 2.1 1993	Fluoride	0.064J	mg/L	0.10	09/29/20 21:08	
EPA 300.0 Rev 2.1 1993	Sulfate	126	mg/L	3.0	09/30/20 03:39	
2496524014	HGWC-109					
	Performed by	CUSTOME R			09/29/20 12:28	
	рН	6.79	Std. Units		09/29/20 12:28	
PA 6010D	Calcium	48.5	mg/L	1.0	10/02/20 20:24	
PA 6020B	Arsenic	0.0017J	mg/L	0.0050	10/03/20 16:48	
PA 6020B	Barium	0.085	mg/L	0.010	10/03/20 16:48	
PA 6020B	Boron	0.28	mg/L	0.10	10/03/20 16:48	
EPA 6020B	Cobalt	0.0010J	mg/L	0.0050	10/03/20 16:48	
PA 6020B	Lithium	0.0010J	mg/L	0.030	10/03/20 16:48	
SM 2450C-2011	Total Dissolved Solids	188	mg/L	10.0	10/01/20 15:26	
PA 300.0 Rev 2.1 1993	Chloride	4.1	mg/L	1.0	09/30/20 11:19	
PA 300.0 Rev 2.1 1993	Fluoride	0.091J	mg/L	0.10	09/30/20 11:19	
PA 300.0 Rev 2.1 1993	Sulfate	24.7	mg/L	1.0	09/30/20 11:19	
2496524015	HGWC-117					
	Performed by	CUSTOME R			09/29/20 12:28	
	рН	6.01	Std. Units		09/29/20 12:28	
PA 6010D	Calcium	72.8	mg/L	1.0	10/05/20 19:01	M1
EPA 6020B	Barium	0.050	mg/L	0.010	10/03/20 16:54	
EPA 6020B	Beryllium	0.000066J	mg/L		10/03/20 16:54	
PA 6020B	Boron	1.1	mg/L		10/03/20 16:54	
PA 6020B	Cadmium	0.00089J	mg/L		10/03/20 16:54	
PA 6020B	Chromium	0.00067J	mg/L		10/03/20 16:54	
PA 6020B	Cobalt	0.011	mg/L	0.0050	10/03/20 16:54	
PA 6020B	Lead	0.00019J	mg/L	0.0050		
PA 6020B	Lithium	0.0031J	mg/L	0.030		
SM 2450C-2011	Total Dissolved Solids	340	mg/L	10.0		
EPA 300.0 Rev 2.1 1993	Chloride	16.1	mg/L	1.0	09/30/20 11:33	
EPA 300.0 Rev 2.1 1993	Sulfate	146	mg/L	3.0	09/30/20 19:08	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92496524016	HGWC-118					
	Performed by	CUSTOME R			09/29/20 13:39	
	pН	7.03	Std. Units		09/29/20 13:39	
EPA 6010D	Calcium	88.9	mg/L	1.0	10/05/20 19:23	
EPA 6020B	Barium	0.046	mg/L	0.010	10/06/20 17:55	
EPA 6020B	Boron	0.65	mg/L	0.10	10/06/20 17:55	
EPA 6020B	Chromium	0.0017J	mg/L	0.010	10/06/20 17:55	
EPA 6020B	Cobalt	0.00048J	mg/L	0.0050	10/06/20 17:55	
EPA 6020B	Lead	0.00022J	mg/L	0.0050	10/06/20 17:55	
EPA 6020B	Lithium	0.0022J	mg/L	0.030	10/06/20 17:55	
SM 2450C-2011	Total Dissolved Solids	332	mg/L	10.0	10/01/20 15:27	
EPA 300.0 Rev 2.1 1993	Chloride	4.0	mg/L	1.0	10/01/20 15:23	
EPA 300.0 Rev 2.1 1993	Fluoride	0.078J	mg/L	0.10	10/01/20 15:23	
EPA 300.0 Rev 2.1 1993	Sulfate	86.0	mg/L	1.0	10/01/20 15:23	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Sample: HGWA-111	Lab ID:	92496524001	I Collecte	ed: 09/18/20	0 09:43	Received: 09/	/21/20 09:25 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
						· 	· <u> </u>		
Field Data	Analytical		.						
	Pace Anal	ytical Services	s - Charlotte)					
pH	6.46	Std. Units			1		09/29/20 12:28		
6010D ATL ICP	Analytical	Method: EPA	6010D Pre	paration Me	thod: EF	PA 3010A			
	Pace Anal	ytical Services	s - Peachtre	e Corners, 0	SA				
Calcium	32.2	mg/L	1.0	0.070	1	09/24/20 08:45	09/24/20 19:55	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA	6020B Pre	paration Met	hod: EF	PA 3005A			
••••• •	•	ytical Services		•					
Arsenic	ND	mg/L	0.0050	0.00078	1	09/24/20 14:23	09/25/20 19:56	7440-38-2	
Barium	0.024	mg/L	0.010	0.00071	1	09/24/20 14:23	09/25/20 19:56	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/24/20 14:23	09/25/20 19:56	7440-41-7	
Boron	0.011J	mg/L	0.10	0.0052	1	09/24/20 14:23	09/25/20 19:56	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/24/20 14:23	09/25/20 19:56	7440-43-9	
Chromium	0.00077J	mg/L	0.010	0.00055	1	09/24/20 14:23	09/25/20 19:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/24/20 14:23	09/25/20 19:56	7440-48-4	
Lead	0.00026J	mg/L	0.0050	0.000036	1	09/24/20 14:23	09/25/20 19:56	7439-92-1	
Lithium	0.0021J	mg/L	0.030	0.00081	1	09/24/20 14:23	09/25/20 19:56	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 2	2450C-2011						
	Pace Anal	ytical Service:	s - Peachtre	e Corners, 0	SΑ				
Total Dissolved Solids	139	mg/L	10.0	10.0	1		09/23/20 13:16		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
·	Pace Anal	ytical Services	s - Asheville						
Chloride	2.6	mg/L	1.0	0.60	1		09/24/20 10:49	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/24/20 10:49	16984-48-8	
Sulfate	1.0	mg/L	1.0	0.50	1		09/24/20 10:49	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Sample: HGWA-112	Lab ID:	92496524002	Collecte	ed: 09/18/20	11:39	Received: 09/	21/20 09:25 Ma	atrix: Water	
D .	D "	11.76	Report	MDI	55			0404	•
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	- Charlotte	;					
рН	5.58	Std. Units			1		09/29/20 12:28		
6010D ATL ICP	Analytical	Method: EPA	6010D Pre	paration Met	hod: El	PA 3010A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Calcium	6.5	mg/L	1.0	0.070	1	09/24/20 08:45	09/24/20 20:00	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA	6020B Pre	paration Met	hod: Ef	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Arsenic	ND	mg/L	0.0050	0.00078	1	09/24/20 14:23	09/25/20 20:02	7440-38-2	
Barium	0.025	mg/L	0.010	0.00071	1	09/24/20 14:23	09/25/20 20:02	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/24/20 14:23	09/25/20 20:02	7440-41-7	
Boron	0.0080J	mg/L	0.10	0.0052	1	09/24/20 14:23	09/25/20 20:02	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/24/20 14:23	09/25/20 20:02	7440-43-9	
Chromium	0.0037J	mg/L	0.010	0.00055	1	09/24/20 14:23	09/25/20 20:02	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/24/20 14:23	09/25/20 20:02	7440-48-4	
Lead	0.000065J	mg/L	0.0050	0.000036	1	09/24/20 14:23	09/25/20 20:02	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/24/20 14:23	09/25/20 20:02	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Anal	ytical Services	- Peachtre	e Corners, C	§A				
Total Dissolved Solids	62.0	mg/L	10.0	10.0	1		09/23/20 13:16		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
	Pace Anal	ytical Services	- Asheville						
Chloride	5.2	mg/L	1.0	0.60	1		09/24/20 11:33	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/24/20 11:33	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		09/24/20 11:33	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Sample: HGWA-47	Lab ID:	92496524003	Collecte	ed: 09/18/20	11:20	Received: 09/	21/20 09:25 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	- Charlotte	:					
рН	7.54	Std. Units			1		09/29/20 12:28		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	hod: EF	PA 3010A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Calcium	62.2	mg/L	1.0	0.070	1	09/24/20 08:45	09/24/20 20:04	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: EF	PA 3005A			
	-	ytical Services							
Antimony	ND	mg/L	0.0030	0.00028	1	09/24/20 14:23	09/25/20 20:07	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/24/20 14:23	09/25/20 20:07		
Barium	0.026	mg/L	0.010	0.00071	1	09/24/20 14:23			
Beryllium	ND	mg/L	0.0030	0.000046	1	09/24/20 14:23			
Boron	0.0082J	mg/L	0.10	0.0052	1	09/24/20 14:23	09/25/20 20:07		
Cadmium	ND	mg/L	0.0025	0.00012	1	09/24/20 14:23			
Chromium	0.0039J	mg/L	0.010	0.00012	1		09/25/20 20:07		
Cobalt	0.000330 0.00049J	mg/L	0.0050	0.00038	1	09/24/20 14:23	09/25/20 20:07		
Lead	ND	mg/L	0.0050	0.000036	1	09/24/20 14:23	09/25/20 20:07		
Lithium	0.0026J	mg/L	0.030	0.00081	1	09/24/20 14:23			
Molybdenum	0.0015J	mg/L	0.010	0.00069	1	09/24/20 14:23			
Selenium	0.00133 ND	mg/L	0.010	0.00009	1	09/24/20 14:23			
Thallium	ND ND	mg/L	0.010	0.0010	1	09/24/20 14:23	09/25/20 20:07		
7470 Mercury	Analytical	Method: EPA 7	470A Prei	paration Met	hod [.] FF	A 7470A			
	•	ytical Services							
Mercury	ND	mg/L	0.00050	0.000078	1	09/22/20 11:15	09/23/20 10:36	7439-97-6	
2540C Total Dissolved Solids	Analytical	Method: SM 24	450C-2011						
	Pace Anal	ytical Services	- Peachtre	e Corners, C	βA				
Total Dissolved Solids	195	mg/L	10.0	10.0	1		09/23/20 13:17		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0 Rev 2	2.1 1993					
	Pace Anal	ytical Services	- Asheville						
Chloride	2.7	mg/L	1.0	0.60	1		09/24/20 11:47	16887-00-6	
Fluoride	0.067J	mg/L	0.10	0.050	1		09/24/20 11:47		
Sulfate	3.5	mg/L	1.0	0.50	1		09/24/20 11:47		



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Sample: HGWA-48D	Lab ID:	92496524004	Collecte	d: 09/18/20	11:06	Received: 09/	21/20 09:25 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte						
pH	7.50	Std. Units			1		09/29/20 12:28		
6010D ATL ICP	Analytical	Method: EPA 6	010D Prep	aration Met	thod: EF	PA 3010A			
	Pace Ana	lytical Services	- Peachtree	Corners, C	3A				
Calcium	51.8	mg/L	1.0	0.070	1	09/24/20 08:45	09/24/20 20:08	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	020B Prep	aration Met	hod: EF	PA 3005A			
	-	lytical Services							
Antimony	0.00038J	mg/L	0.0030	0.00028	1	09/24/20 14:23	09/25/20 20:13	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/24/20 14:23	09/25/20 20:13	7440-38-2	
Barium	0.077	mg/L	0.010	0.00071	1	09/24/20 14:23	09/25/20 20:13	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/24/20 14:23	09/25/20 20:13	7440-41-7	
Boron	0.015J	mg/L	0.10	0.0052	1	09/24/20 14:23	09/25/20 20:13		
Cadmium	ND	mg/L	0.0025	0.00012	1	09/24/20 14:23	09/25/20 20:13	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/24/20 14:23	09/25/20 20:13	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/24/20 14:23	09/25/20 20:13	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/24/20 14:23	09/25/20 20:13	7439-92-1	
Lithium	0.0051J	mg/L	0.030	0.00081	1	09/24/20 14:23	09/25/20 20:13	7439-93-2	
Molybdenum	0.0026J	mg/L	0.010	0.00069	1	09/24/20 14:23	09/25/20 20:13	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	09/24/20 14:23	09/25/20 20:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	09/24/20 14:23	09/25/20 20:13	7440-28-0	
7470 Mercury	Analytical	Method: EPA 7	470A Prep	aration Met	hod: EF	PA 7470A			
	Pace Ana	lytical Services	- Peachtree	Corners, C	βA				
Mercury	ND	mg/L	0.00050	0.000078	1	09/22/20 11:15	09/23/20 10:38	7439-97-6	
2540C Total Dissolved Solids	Analytical	Method: SM 24	150C-2011						
	Pace Ana	lytical Services	- Peachtree	Corners, C	βA				
Total Dissolved Solids	224	mg/L	10.0	10.0	1		09/23/20 13:17		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0 Rev 2	.1 1993					
•	-	lytical Services							
Chloride	2.6	mg/L	1.0	0.60	1		09/24/20 12:01	16887-00-6	
Fluoride	0.098J	mg/L	0.10	0.050	1		09/24/20 12:01		
Sulfate	9.5	mg/L	1.0	0.50	1		09/24/20 12:01		



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Sample: FB-04	Lab ID:	92496524005	Collecte	ed: 09/18/20	16:40	Received: 09/	21/20 09:25 Ma	atrix: Water				
			Report									
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua			
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Me	hod: EF	PA 3010A						
	Pace Anal	ytical Services	- Peachtre	e Corners, 0	βA							
Calcium	ND	mg/L	1.0	0.070	1	09/24/20 08:45	09/24/20 20:13	7440-70-2				
6020 MET ICPMS	Analytical	Method: EPA 6	6020B Pre	paration Met	hod: EF	PA 3005A						
	Pace Anal	Pace Analytical Services - Peachtree Corners, GA										
Antimony	ND	mg/L	0.0030	0.00028	1	09/24/20 14:23	09/25/20 20:19	7440-36-0				
Arsenic	ND	mg/L	0.0050	0.00078	1	09/24/20 14:23	09/25/20 20:19	7440-38-2				
Barium	ND	mg/L	0.010	0.00071	1	09/24/20 14:23	09/25/20 20:19	7440-39-3				
Beryllium	ND	mg/L	0.0030	0.000046	1	09/24/20 14:23	09/25/20 20:19	7440-41-7				
Boron	ND	mg/L	0.10	0.0052	1	09/24/20 14:23	09/25/20 20:19	7440-42-8				
Cadmium	ND	mg/L	0.0025	0.00012	1	09/24/20 14:23	09/25/20 20:19	7440-43-9				
Chromium	ND	mg/L	0.010	0.00055	1	09/24/20 14:23	09/25/20 20:19	7440-47-3				
Cobalt	ND	mg/L	0.0050	0.00038	1	09/24/20 14:23	09/25/20 20:19	7440-48-4				
₋ead	ND	mg/L	0.0050	0.000036	1	09/24/20 14:23	09/25/20 20:19	7439-92-1				
₋ithium	ND	mg/L	0.030	0.00081	1	09/24/20 14:23	09/25/20 20:19	7439-93-2				
Molybdenum	ND	mg/L	0.010	0.00069	1	09/24/20 14:23	09/25/20 20:19	7439-98-7				
Selenium	ND	mg/L	0.010	0.0016	1	09/24/20 14:23	09/25/20 20:19	7782-49-2				
Γhallium	ND	mg/L	0.0010	0.00014	1	09/24/20 14:23	09/25/20 20:19	7440-28-0				
7470 Mercury	Analytical	Method: EPA 7	7470A Prej	paration Met	hod: EF	PA 7470A						
	Pace Anal	ytical Services	- Peachtre	e Corners, 0	βA							
Mercury	ND	mg/L	0.00050	0.000078	1	09/22/20 11:15	09/23/20 10:41	7439-97-6				
2540C Total Dissolved Solids	Analytical	Method: SM 24	450C-2011									
	Pace Anal	ytical Services	- Peachtre	e Corners, 0	βA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		09/23/20 13:17					
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993											
	Pace Anal	ytical Services	- Asheville									
Chloride	ND	mg/L	1.0	0.60	1		09/24/20 12:45	16887-00-6				
Fluoride	ND	mg/L	0.10	0.050	1		09/24/20 12:45	16984-48-8				
Sulfate	ND	mg/L	1.0	0.50	1		09/24/20 12:45					



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Sample: HGWA-113	Lab ID:	92496524006	Collecte	ed: 09/22/20	11:30	Received: 09/	23/20 09:25 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	- Charlotte	;					
рН	6.10	Std. Units			1		09/29/20 12:28		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	hod: Ef	PA 3010A			
	Pace Analy	ytical Services	- Peachtre	e Corners, C	βA				
Calcium	7.9	mg/L	1.0	0.070	1	09/24/20 14:20	09/25/20 22:03	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Arsenic	ND	mg/L	0.0050	0.00078	1	09/29/20 14:13	09/30/20 19:15	7440-38-2	
Barium	0.038	mg/L	0.010	0.00071	1	09/29/20 14:13	09/30/20 19:15	7440-39-3	
Beryllium	0.000099J	mg/L	0.0030	0.000046	1	09/29/20 14:13	09/30/20 19:15	7440-41-7	
Boron	0.021J	mg/L	0.10	0.0052	1	09/29/20 14:13	09/30/20 19:15	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/29/20 14:13	09/30/20 19:15	7440-43-9	
Chromium	0.0046J	mg/L	0.010	0.00055	1	09/29/20 14:13	09/30/20 19:15	7440-47-3	
Cobalt	0.00074J	mg/L	0.0050	0.00038	1	09/29/20 14:13	09/30/20 19:15	7440-48-4	
Lead	0.00096J	mg/L	0.0050	0.000036	1	09/29/20 14:13	09/30/20 19:15	7439-92-1	
Lithium	0.0018J	mg/L	0.030	0.00081	1	09/29/20 14:13	09/30/20 19:15	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 24	150C-2011						
	Pace Anal	ytical Services	- Peachtre	e Corners, C	βA				
Total Dissolved Solids	84.0	mg/L	10.0	10.0	1		09/24/20 10:29		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0 Rev 2	2.1 1993					
	Pace Anal	ytical Services	- Asheville						
Chloride	1.5	mg/L	1.0	0.60	1		09/25/20 22:41	16887-00-6	
Fluoride	0.16	mg/L	0.10	0.050	1		09/25/20 22:41	16984-48-8	
Sulfate	5.3	mg/L	1.0	0.50	1		09/25/20 22:41	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Sample: HGWA-113 FILTERED	Lab ID:	92496524007		ed: 09/22/20	12:15	Received: 09/	23/20 09:25 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	- Charlotte						
pH	6.10	Std. Units			1		09/29/20 12:28		
6010D ATL ICP	Analytical	Method: EPA	6010D Pre	paration Met	hod: El	PA 3010A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	βA				
Calcium	7.6	mg/L	1.0	0.070	1	09/24/20 14:20	09/25/20 22:07	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA	6020B Pre	paration Met	hod: Ef	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	βA				
Arsenic	ND	mg/L	0.0050	0.00078	1	09/29/20 14:13	09/30/20 19:20	7440-38-2	
Barium	0.027	mg/L	0.010	0.00071	1	09/29/20 14:13	09/30/20 19:20	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/29/20 14:13	09/30/20 19:20	7440-41-7	
Boron	0.015J	mg/L	0.10	0.0052	1	09/29/20 14:13	09/30/20 19:20	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/29/20 14:13	09/30/20 19:20	7440-43-9	
Chromium	0.0025J	mg/L	0.010	0.00055	1	09/29/20 14:13	09/30/20 19:20	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/29/20 14:13	09/30/20 19:20	7440-48-4	
Lead	0.000095J	mg/L	0.0050	0.000036	1	09/29/20 14:13	09/30/20 19:20	7439-92-1	
Lithium	0.0010J	mg/L	0.030	0.00081	1	09/29/20 14:13	09/30/20 19:20	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Total Dissolved Solids	89.0	mg/L	10.0	10.0	1		09/24/20 10:29		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
	Pace Anal	ytical Services	- Asheville						
Chloride	1.3	mg/L	1.0	0.60	1		09/27/20 01:23	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/27/20 01:23	16984-48-8	
Sulfate	1.8	mg/L	1.0	0.50	1		09/27/20 01:23	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Sample: HGWC-102	Lab ID:	92496524008	Collecte	ed: 09/24/20	16:51	Received: 09/	/25/20 10:45 Ma	atrix: Water	
			Report					0.10.11	
Parameters	Results -	Units	Limit	MDL_	DF ——	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte	;					
Performed by	CUSTOME R				1		09/29/20 12:28		
рН	5.82	Std. Units			1		09/29/20 12:28		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Me	thod: El	PA 3010A			
	Pace Ana	lytical Services	- Peachtre	e Corners, 0	βA				
Calcium	120	mg/L	1.0	0.070	1	09/29/20 18:44	10/01/20 17:49	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: Ef	PA 3005A			
	•	lytical Services							
Antimony	ND	mg/L	0.0030	0.00028	1	09/30/20 14:00	10/01/20 20:41	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 20:41		
Barium	0.029	mg/L	0.010	0.00071	1		10/01/20 20:41		
Beryllium	ND	mg/L	0.0030	0.000046	1		10/01/20 20:41		
Boron	2.9	mg/L	0.50	0.026	5	09/30/20 14:00	10/03/20 12:10		
Cadmium	0.00032J	mg/L	0.0025	0.00012	1		10/03/20 12:10		
Chromium	0.000320 ND	mg/L	0.010	0.00012	1		10/01/20 20:41		
Cobalt	0.0011J	mg/L	0.0050	0.00033	1		10/01/20 20:41		
Lead	0.00113 ND	mg/L	0.0050	0.00036	1	09/30/20 14:00	10/01/20 20:41		
Lithium	0.0011J	-		0.000030	1				
		mg/L	0.030				10/01/20 20:41		
Molybdenum	ND	mg/L	0.010	0.00069	1		10/01/20 20:41		
Selenium	ND	mg/L	0.010	0.0016	1		10/01/20 20:41		
Thallium	ND	mg/L	0.0010	0.00014	1	09/30/20 14:00	10/01/20 20:41	7440-28-0	
7470 Mercury	Analytical	Method: EPA 7	470A Pre	paration Met	hod: EF	PA 7470A			
	Pace Ana	lytical Services	- Peachtre	e Corners, 0	ЭΑ				
Mercury	ND	mg/L	0.00050	0.000078	1	09/28/20 12:05	09/29/20 14:15	7439-97-6	
2540C Total Dissolved Solids	Analytical	Method: SM 24	150C-2011						
	•	lytical Services		e Corners, 0	3A				
Total Dissolved Solids	696	mg/L	20.0	20.0	1		09/30/20 09:28		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0 Rev 2	2.1 1993					
•	Pace Ana	lytical Services	- Asheville						
Chloride	7.2	mg/L	1.0	0.60	1		09/29/20 15:09	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/29/20 15:09	16984-48-8	
Sulfate	370	mg/L	8.0	4.0	8		09/29/20 19:29		



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Sample: HGWC-101	Lab ID:	92496524009	Collecte	ed: 09/24/20	13:25	Received: 09/	25/20 10:45 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	- Charlotte)					
Performed by	CUSTOME R				1		09/29/20 12:28		
рН	5.48	Std. Units			1		09/29/20 12:28		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	thod: El	PA 3010A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	βA				
Calcium	20.3	mg/L	1.0	0.070	1	09/29/20 18:44	10/01/20 17:53	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: Ef	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	3A				
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 14:00	10/01/20 20:47	7440-38-2	
Barium	0.041	mg/L	0.010	0.00071	1	09/30/20 14:00	10/01/20 20:47	7440-39-3	
Beryllium	0.000048J	mg/L	0.0030	0.000046	1	09/30/20 14:00	10/01/20 20:47	7440-41-7	
Boron	0.10	mg/L	0.10	0.0052	1	09/30/20 14:00	10/03/20 12:37	7440-42-8	
Cadmium	0.00014J	mg/L	0.0025	0.00012	1	09/30/20 14:00	10/01/20 20:47	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 14:00	10/01/20 20:47	7440-47-3	
Cobalt	0.0021J	mg/L	0.0050	0.00038	1	09/30/20 14:00	10/01/20 20:47	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	09/30/20 14:00	10/01/20 20:47	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	09/30/20 14:00	10/01/20 20:47	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 24	150C-2011						
	Pace Anal	ytical Services	- Peachtre	e Corners, C	3A				
Total Dissolved Solids	170	mg/L	10.0	10.0	1		09/30/20 09:28		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0 Rev 2	2.1 1993					
- -	Pace Anal	ytical Services	- Asheville						
Chloride	5.5	mg/L	1.0	0.60	1		09/29/20 15:23	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/29/20 15:23	16984-48-8	
Sulfate	97.0	mg/L	2.0	1.0	2		09/29/20 19:44	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Sample: HGWC-103	Lab ID:	92496524010	Collecte	ed: 09/24/20	18:30	Received: 09/	25/20 10:45 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical	Method:							
	Pace Anal	lytical Services	- Charlotte)					
Performed by	CUSTOME R				1		09/29/20 12:28		
рН	5.60	Std. Units			1		09/29/20 12:28		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	thod: El	PA 3010A			
	Pace Anal	lytical Services	- Peachtre	ee Corners, C	ЭΑ				
Calcium	91.3	mg/L	1.0	0.070	1	09/29/20 18:44	10/01/20 17:58	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: Ef	PA 3005A			
	Pace Anal	lytical Services	- Peachtre	ee Corners, C	SA				
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 17:45	10/01/20 21:22	7440-38-2	
Barium	0.036	mg/L	0.010	0.00071	1	09/30/20 17:45	10/01/20 21:22	7440-39-3	
Beryllium	0.000088J	mg/L	0.0030	0.000046	1	09/30/20 17:45	10/01/20 21:22	7440-41-7	
Boron	2.2	mg/L	0.10	0.0052	1	09/30/20 17:45	10/01/20 21:22	7440-42-8	
Cadmium	0.00076J	mg/L	0.0025	0.00012	1	09/30/20 17:45	10/01/20 21:22	7440-43-9	
Chromium	0.00081J	mg/L	0.010	0.00055	1	09/30/20 17:45	10/01/20 21:22	7440-47-3	
Cobalt	0.0019J	mg/L	0.0050	0.00038	1	09/30/20 17:45	10/01/20 21:22	7440-48-4	
Lead	0.00028J	mg/L	0.0050	0.000036	1	09/30/20 17:45	10/01/20 21:22	7439-92-1	
Lithium	0.0017J	mg/L	0.030	0.00081	1	09/30/20 17:45	10/01/20 21:22	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 24	150C-2011						
	Pace Anal	lytical Services	- Peachtre	e Corners, C	βA				
Total Dissolved Solids	517	mg/L	10.0	10.0	1		09/30/20 09:28		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0 Rev 2	2.1 1993					
	Pace Anal	lytical Services	- Asheville	;					
Chloride	6.0	mg/L	1.0	0.60	1		09/29/20 16:06	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/29/20 16:06	16984-48-8	
Sulfate	293	mg/L	6.0	3.0	6		09/29/20 19:58	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Sample: HGWC-105	Lab ID:	92496524011	Collecte	ed: 09/24/20	15:05	Received: 09/	25/20 10:45 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical	Method:							
	Pace Anal	lytical Services	- Charlotte)					
Performed by	CUSTOME R				1		09/29/20 12:28		
рН	6.63	Std. Units			1		09/29/20 12:28		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	hod: EF	PA 3010A			
	Pace Anal	lytical Services	- Peachtre	e Corners, C	SA.				
Calcium	92.9	mg/L	1.0	0.070	1	09/29/20 18:44	10/01/20 18:02	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Anal	lytical Services	- Peachtre	e Corners, C	SA				
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 17:45	10/01/20 21:44	7440-38-2	
Barium	0.075	mg/L	0.010	0.00071	1	09/30/20 17:45	10/01/20 21:44	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 17:45	10/01/20 21:44	7440-41-7	
Boron	1.2	mg/L	0.10	0.0052	1	09/30/20 17:45	10/01/20 21:44	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 17:45	10/01/20 21:44	7440-43-9	
Chromium	0.00064J	mg/L	0.010	0.00055	1	09/30/20 17:45	10/01/20 21:44	7440-47-3	
Cobalt	0.00044J	mg/L	0.0050	0.00038	1	09/30/20 17:45	10/01/20 21:44	7440-48-4	
Lead	0.000049J	mg/L	0.0050	0.000036	1	09/30/20 17:45	10/01/20 21:44	7439-92-1	
Lithium	0.0038J	mg/L	0.030	0.00081	1	09/30/20 17:45	10/01/20 21:44	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Anal	lytical Services	- Peachtre	e Corners, C	SA.				
Total Dissolved Solids	411	mg/L	10.0	10.0	1		09/30/20 09:28		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0 Rev 2	2.1 1993					
•		lytical Services							
Chloride	3.9	mg/L	1.0	0.60	1		09/29/20 16:21	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/29/20 16:21	16984-48-8	
Sulfate	177	mg/L	4.0	2.0	4		09/29/20 20:12	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Sample: FD-04	Lab ID:	92496524012	Collecte	ed: 09/24/20	00:00	Received: 09/	25/20 10:45 Ma	atrix: Water		
	Report									
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010D ATL ICP	Analytical l	Method: EPA 6	010D Pre	paration Met	hod: El	PA 3010A				
	Pace Analy	ytical Services	- Peachtre	e Corners, C	SA.					
Calcium	85.7	mg/L	1.0	0.070	1	09/29/20 18:44	10/01/20 18:06	7440-70-2		
6020 MET ICPMS	Analytical l	Method: EPA 6	020B Pre	paration Met	hod: El	PA 3005A				
	Pace Analy	tical Services	- Peachtre	e Corners, C	βA					
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 17:45	10/01/20 21:50	7440-38-2		
Barium	0.037	mg/L	0.010	0.00071	1	09/30/20 17:45	10/01/20 21:50	7440-39-3		
Beryllium	0.000067J	mg/L	0.0030	0.000046	1	09/30/20 17:45	10/01/20 21:50	7440-41-7		
Boron	2.3	mg/L	0.10	0.0052	1	09/30/20 17:45	10/01/20 21:50	7440-42-8		
Cadmium	0.00079J	mg/L	0.0025	0.00012	1	09/30/20 17:45	10/01/20 21:50	7440-43-9		
Chromium	0.00098J	mg/L	0.010	0.00055	1	09/30/20 17:45	10/01/20 21:50	7440-47-3		
Cobalt	0.0019J	mg/L	0.0050	0.00038	1	09/30/20 17:45	10/01/20 21:50	7440-48-4		
Lead	0.00026J	mg/L	0.0050	0.000036	1	09/30/20 17:45	10/01/20 21:50	7439-92-1		
Lithium	0.0017J	mg/L	0.030	0.00081	1	09/30/20 17:45	10/01/20 21:50	7439-93-2		
2540C Total Dissolved Solids	Analytical l	Method: SM 24	450C-2011							
	Pace Analy	tical Services	- Peachtre	e Corners, C	βA					
Total Dissolved Solids	536	mg/L	10.0	10.0	1		09/30/20 09:29			
300.0 IC Anions 28 Days	Analytical l	Method: EPA 3	00.0 Rev 2	2.1 1993						
-	Pace Analy	tical Services	- Asheville							
Chloride	8.9	mg/L	1.0	0.60	1		09/29/20 20:26	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		09/29/20 20:26		M1	
Sulfate	298	mg/L	6.0	3.0	6		09/30/20 02:37			



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Sample: HGWC-107	Lab ID:	92496524013	Collecte	ed: 09/24/20	16:56	Received: 09/	25/20 10:45 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical	Method:							
	Pace Anal	lytical Services	- Charlotte)					
Performed by	CUSTOME R				1		09/29/20 12:28		
рН	6.11	Std. Units			1		09/29/20 12:28		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	hod: Ef	PA 3010A			
	Pace Anal	lytical Services	- Peachtre	e Corners, C	SA.				
Calcium	55.4	mg/L	1.0	0.070	1	09/29/20 18:44	10/01/20 18:10	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Anal	lytical Services	- Peachtre	e Corners, C	βA				
Arsenic	ND	mg/L	0.0050	0.00078	1	09/30/20 17:45	10/01/20 21:56	7440-38-2	
Barium	0.039	mg/L	0.010	0.00071	1	09/30/20 17:45	10/01/20 21:56	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	09/30/20 17:45	10/01/20 21:56	7440-41-7	
Boron	0.88	mg/L	0.10	0.0052	1	09/30/20 17:45	10/01/20 21:56	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	09/30/20 17:45	10/01/20 21:56	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	09/30/20 17:45	10/01/20 21:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	09/30/20 17:45	10/01/20 21:56	7440-48-4	
Lead	0.00034J	mg/L	0.0050	0.000036	1	09/30/20 17:45	10/01/20 21:56	7439-92-1	
Lithium	0.00098J	mg/L	0.030	0.00081	1	09/30/20 17:45	10/01/20 21:56	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 24	450C-2011						
	Pace Anal	lytical Services	- Peachtre	e Corners, C	SA.				
Total Dissolved Solids	253	mg/L	10.0	10.0	1		09/30/20 09:29		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0 Rev	2.1 1993					
·	Pace Anal	lytical Services	- Asheville	:					
Chloride	3.5	mg/L	1.0	0.60	1		09/29/20 21:08	16887-00-6	
Fluoride	0.064J	mg/L	0.10	0.050	1		09/29/20 21:08	16984-48-8	
Sulfate	126	mg/L	3.0	1.5	3		09/30/20 03:39	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Sample: HGWC-109	Lab ID:	92496524014	Collecte	ed: 09/25/20	16:20	Received: 09/	28/20 09:40 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	- Charlotte)					
Performed by	CUSTOME R				1		09/29/20 12:28		
рН	6.79	Std. Units			1		09/29/20 12:28		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	hod: EF	PA 3010A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	βA				
Calcium	48.5	mg/L	1.0	0.070	1	10/01/20 15:00	10/02/20 20:24	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: EF	PA 3005A			
	-	ytical Services							
Arsenic	0.0017J	mg/L	0.0050	0.00078	1	10/01/20 19:00	10/03/20 16:48	7440-38-2	
Barium	0.085	mg/L	0.010	0.00071	1	10/01/20 19:00	10/03/20 16:48	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/01/20 19:00	10/03/20 16:48	7440-41-7	
Boron	0.28	mg/L	0.10	0.0052	1	10/01/20 19:00	10/03/20 16:48	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/01/20 19:00	10/03/20 16:48	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	10/01/20 19:00	10/03/20 16:48	7440-47-3	
Cobalt	0.0010J	mg/L	0.0050	0.00038	1	10/01/20 19:00	10/03/20 16:48	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	10/01/20 19:00	10/03/20 16:48	7439-92-1	
Lithium	0.0010J	mg/L	0.030	0.00081	1	10/01/20 19:00	10/03/20 16:48	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 24	150C-2011						
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Total Dissolved Solids	188	mg/L	10.0	10.0	1		10/01/20 15:26		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0 Rev 2	2.1 1993					
•	Pace Anal	ytical Services	- Asheville						
Chloride	4.1	mg/L	1.0	0.60	1		09/30/20 11:19	16887-00-6	
Fluoride	0.091J	mg/L	0.10	0.050	1		09/30/20 11:19	16984-48-8	
Sulfate	24.7	mg/L	1.0	0.50	1		09/30/20 11:19	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Sample: HGWC-117	Lab ID:	92496524015	Collecte	ed: 09/25/20	16:25	Received: 09/	/28/20 09:40 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical								
	Pace Anal	lytical Services	- Charlotte	;					
Performed by	CUSTOME R				1		09/29/20 12:28		
рН	6.01	Std. Units			1		09/29/20 12:28		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	hod: EF	PA 3010A			
	Pace Anal	lytical Services	- Peachtre	e Corners, C	SA.				
Calcium	72.8	mg/L	1.0	0.070	1	10/01/20 18:49	10/05/20 19:01	7440-70-2	M1
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Anal	lytical Services	- Peachtre	e Corners, C	§A				
Arsenic	ND	mg/L	0.0050	0.00078	1	10/01/20 19:00	10/03/20 16:54	7440-38-2	
Barium	0.050	mg/L	0.010	0.00071	1	10/01/20 19:00	10/03/20 16:54	7440-39-3	
Beryllium	0.000066J	mg/L	0.0030	0.000046	1	10/01/20 19:00	10/03/20 16:54	7440-41-7	
Boron	1.1	mg/L	0.10	0.0052	1	10/01/20 19:00	10/03/20 16:54	7440-42-8	
Cadmium	0.00089J	mg/L	0.0025	0.00012	1	10/01/20 19:00	10/03/20 16:54	7440-43-9	
Chromium	0.00067J	mg/L	0.010	0.00055	1	10/01/20 19:00	10/03/20 16:54	7440-47-3	
Cobalt	0.011	mg/L	0.0050	0.00038	1	10/01/20 19:00	10/03/20 16:54	7440-48-4	
Lead	0.00019J	mg/L	0.0050	0.000036	1	10/01/20 19:00	10/03/20 16:54	7439-92-1	
Lithium	0.0031J	mg/L	0.030	0.00081	1	10/01/20 19:00	10/03/20 16:54	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 24	150C-2011						
	Pace Anal	lytical Services	- Peachtre	e Corners, C	€A				
Total Dissolved Solids	340	mg/L	10.0	10.0	1		10/01/20 15:26		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0 Rev 2	2.1 1993					
	Pace Anal	lytical Services	- Asheville						
Chloride	16.1	mg/L	1.0	0.60	1		09/30/20 11:33	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/30/20 11:33	16984-48-8	
Sulfate	146	mg/L	3.0	1.5	3		09/30/20 19:08	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Sample: HGWC-118	Lab ID:	92496524016	Collecte	ed: 09/28/20	12:56	Received: 09/	29/20 08:55 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte)					
Performed by	CUSTOME R				1		09/29/20 13:39		
рН	7.03	Std. Units			1		09/29/20 13:39		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	thod: El	PA 3010A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	ЭΑ				
Calcium	88.9	mg/L	1.0	0.070	1	10/01/20 18:49	10/05/20 19:23	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	6020B Pre	paration Met	hod: Ef	PA 3005A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	3A				
Arsenic	ND	mg/L	0.0050	0.00078	1	10/02/20 15:00	10/06/20 17:55	7440-38-2	
Barium	0.046	mg/L	0.010	0.00071	1	10/02/20 15:00	10/06/20 17:55	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	10/02/20 15:00	10/06/20 17:55	7440-41-7	
Boron	0.65	mg/L	0.10	0.0052	1	10/02/20 15:00	10/06/20 17:55	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	10/02/20 15:00	10/06/20 17:55	7440-43-9	
Chromium	0.0017J	mg/L	0.010	0.00055	1	10/02/20 15:00	10/06/20 17:55	7440-47-3	
Cobalt	0.00048J	mg/L	0.0050	0.00038	1	10/02/20 15:00	10/06/20 17:55	7440-48-4	
Lead	0.00022J	mg/L	0.0050	0.000036	1	10/02/20 15:00	10/06/20 17:55	7439-92-1	
Lithium	0.0022J	mg/L	0.030	0.00081	1	10/02/20 15:00	10/06/20 17:55	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 24	450C-2011						
	Pace Ana	lytical Services	- Peachtre	e Corners, C	βA				
Total Dissolved Solids	332	mg/L	10.0	10.0	1		10/01/20 15:27		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0 Rev 2	2.1 1993					
-	Pace Ana	lytical Services	- Asheville						
Chloride	4.0	mg/L	1.0	0.60	1		10/01/20 15:23	16887-00-6	
Fluoride	0.078J	mg/L	0.10	0.050	1		10/01/20 15:23	16984-48-8	
Sulfate	86.0	mg/L	1.0	0.50	1		10/01/20 15:23	14808-79-8	



QUALITY CONTROL DATA

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Calcium

Date: 10/13/2020 04:40 PM

QC Batch: 568426 Analysis Method: EPA 6010D QC Batch Method: EPA 3010A Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92496524001, 92496524002, 92496524003, 92496524004, 92496524005

METHOD BLANK: 3011664 Matrix: Water

Associated Lab Samples: 92496524001, 92496524002, 92496524003, 92496524004, 92496524005

 Parameter
 Units
 Blank Reporting Result
 Limit
 MDL
 Analyzed
 Qualifiers

 mg/L
 ND
 1.0
 0.070
 09/24/20 18:01

LABORATORY CONTROL SAMPLE: 3011665

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Calcium 0.92J 92 80-120 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011666 3011667

MSD MS 92495870006 Spike Spike MS MSD MS MSD % Rec Max Units Conc. Result Result % Rec % Rec **RPD** RPD Parameter Result Conc. Limits Qual 20 M1 Calcium mg/L 2.8 3.6 3.5 85 75-125

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011668 3011669

MS MSD 92495870007 MS MSD MS MSD Spike Spike % Rec Max RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** Qual Calcium 14.3 1 1 33.9 34.3 1960 2000 75-125 20 M1 mg/L

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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

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: 92496524006, 92496524007

METHOD BLANK: 3013298 Matrix: Water

Associated Lab Samples: 92496524006, 92496524007

 Parameter
 Units
 Blank Reporting Result
 Reporting Limit
 MDL
 Analyzed
 Qualifiers

 Calcium
 mg/L
 ND
 1.0
 0.070
 09/25/20 20:40

LABORATORY CONTROL SAMPLE: 3013299

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Calcium 0.95J 95 80-120 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3013300 3013301

MS MSD

92495894022 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Conc. Result Result % Rec % Rec **RPD** RPD Qual Result Limits 75.3 79.7 20 M1 Calcium mg/L 76.2 438 83 75-125

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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Calcium

Date: 10/13/2020 04:40 PM

QC Batch: 569777 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92496524008, 92496524009, 92496524010, 92496524011, 92496524012, 92496524013

METHOD BLANK: 3018389 Matrix: Water

Associated Lab Samples: 92496524008, 92496524009, 92496524010, 92496524011, 92496524012, 92496524013

 Parameter
 Units
 Result
 Limit
 MDL
 Analyzed
 Qualifiers

 mg/L
 ND
 1.0
 0.070
 10/01/20 16:18

LABORATORY CONTROL SAMPLE: 3018390

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Calcium 0.99J 99 80-120 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3018391 3018392

MSD MS 92496914014 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Result Result % Rec % Rec **RPD** RPD Qual Result Conc. Limits 20 M1 Calcium mg/L 36.9 39.2 39.8 237 295 75-125

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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

QC Batch: 570301 Analysis Method: EPA 6010D QC Batch Method: EPA 3010A Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92496524014

METHOD BLANK: 3020964 Matrix: Water

Associated Lab Samples: 92496524014

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Calcium mg/L ND 1.0 0.070 10/02/20 18:13

LABORATORY CONTROL SAMPLE: 3020965

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Calcium mg/L 1.0 102 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3020966 3020967

MS MSD

92497149010 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Conc. Result Result % Rec % Rec **RPD** RPD Qual Result Limits 37.8 20 M1 Calcium mg/L 38.6 1 39.0 -77 45 75-125

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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Calcium

QC Batch: 570395
QC Batch Method: EPA 3010A

Analysis Method: EPA 6010D Analysis Description: 6010D ATL

Laboratory:

Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92496524015, 92496524016

METHOD BLANK: 3021771 Matrix: Water

Associated Lab Samples: 92496524015, 92496524016

 Parameter
 Units
 Blank Reporting Result
 Limit
 MDL
 Analyzed
 Qualifiers

 mg/L
 ND
 1.0
 0.070
 10/05/20 18:52

LABORATORY CONTROL SAMPLE: 3021772

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Calcium 1.0 102 80-120 mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3021773 3021774

MS MSD

92496524015 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Result Result % Rec % Rec **RPD** RPD Qual Result Conc. Limits 72.8 73.5 70 20 M1 Calcium mg/L 75.1 232 75-125

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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

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: 92496524001, 92496524002, 92496524003, 92496524004, 92496524005

METHOD BLANK: 3013302 Matrix: Water

Associated Lab Samples: 92496524001, 92496524002, 92496524003, 92496524004, 92496524005

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND 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					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% 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 SP	IKE DUPL	ICATE: 3013	304		3013305							
			MS	MSD								
		92495894014	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
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	

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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

MATRIX SPIKE & MATRIX	SPIKE DUPLIC	CATE: 3013	304		3013305							
Parameter	g Units	92495894014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.099	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	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

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: 92496524006, 92496524007

METHOD BLANK: 3017842 Matrix: Water

Associated Lab Samples: 92496524006, 92496524007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	 mg/L	ND 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	

LABORATORY	CONTROL	CAMPLE.	2047042
LABURATURT	CONTROL	SAIVIPLE.	3017843

Date: 10/13/2020 04:40 PM

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
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	

MATRIX SPIKE & MATRIX	SPIKE DUPLIC	CATE: 3017	844		3017845							
Parameter	g Units	2495894020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.39	0.1	0.1	0.48	0.48	88	90	75-125	1	20	
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	

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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

QC Batch: 570006 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92496524008, 92496524009

METHOD BLANK: 3019444 Matrix: Water

Associated Lab Samples: 92496524008, 92496524009

·		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	10/01/20 18:07	
Arsenic	mg/L	ND	0.0050	0.00078	10/01/20 18:07	
Barium	mg/L	ND	0.010	0.00071	10/01/20 18:07	
Beryllium	mg/L	ND	0.0030	0.000046	10/01/20 18:07	
Boron	mg/L	ND	0.10	0.0052	10/01/20 18:07	
Cadmium	mg/L	ND	0.0025	0.00012	10/01/20 18:07	
Chromium	mg/L	ND	0.010	0.00055	10/01/20 18:07	
Cobalt	mg/L	ND	0.0050	0.00038	10/01/20 18:07	
Lead	mg/L	ND	0.0050	0.000036	10/01/20 18:07	
Lithium	mg/L	ND	0.030	0.00081	10/01/20 18:07	
Molybdenum	mg/L	ND	0.010	0.00069	10/01/20 18:07	
Selenium	mg/L	ND	0.010	0.0016	10/01/20 18:07	
Thallium	mg/L	ND	0.0010	0.00014	10/01/20 18:07	

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
antimony	mg/L	0.1	0.092	92	80-120	
rsenic	mg/L	0.1	0.097	97	80-120	
arium	mg/L	0.1	0.095	95	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	0.95	95	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.095	95	80-120	
Cobalt	mg/L	0.1	0.094	94	80-120	
ead	mg/L	0.1	0.094	94	80-120	
ithium	mg/L	0.1	0.094	94	80-120	
Nolybdenum	mg/L	0.1	0.093	93	80-120	
Selenium	mg/L	0.1	0.10	105	80-120	
hallium	mg/L	0.1	0.096	96	80-120	

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 3019	446		3019447							
			MS	MSD								
		92496914011	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Antimony	mg/L	0.00080J	0.1	0.1	0.096	0.098	95	97	75-125	2	20	
Arsenic	mg/L	0.0064	0.1	0.1	0.10	0.11	98	101	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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

MATRIX SPIKE & MATRIX	SPIKE DUPLI	CATE: 3019	446		3019447							
Parameter	Units	92496914011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.11	0.1	0.1	0.20	0.21	97	99	75-125	1	20	
Beryllium	mg/L	0.000050J	0.1	0.1	0.095	0.095	95	95	75-125	1	20	
Boron	mg/L	0.045J	1	1	0.96	0.95	92	91	75-125	1	20	
Cadmium	mg/L	ND	0.1	0.1	0.098	0.10	98	101	75-125	3	20	
Chromium	mg/L	ND	0.1	0.1	0.095	0.096	95	95	75-125	0	20	
Cobalt	mg/L	0.010	0.1	0.1	0.11	0.11	95	97	75-125	2	20	
Lead	mg/L	0.000060J	0.1	0.1	0.094	0.095	94	95	75-125	1	20	
Lithium	mg/L	0.025J	0.1	0.1	0.12	0.12	91	92	75-125	1	20	
Molybdenum	mg/L	ND	0.1	0.1	0.094	0.096	94	95	75-125	2	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	102	104	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.097	0.097	97	97	75-125	1	20	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

LABORATORY CONTROL SAMPLE:

Lead

Lithium

Date: 10/13/2020 04:40 PM

QC Batch: 570088 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Peachtree Corners, GA

104

97

80-120

80-120

Associated Lab Samples: 92496524010, 92496524011, 92496524012, 92496524013

METHOD BLANK: 3020035 Matrix: Water
Associated Lab Samples: 92496524010, 92496524011, 92496524012, 92496524013

3020036

mg/L

mg/L

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	0.00078	10/01/20 21:10	
Barium	mg/L	ND	0.010	0.00071	10/01/20 21:10	
Beryllium	mg/L	ND	0.0030	0.000046	10/01/20 21:10	
Boron	mg/L	ND	0.10	0.0052	10/01/20 21:10	
Cadmium	mg/L	ND	0.0025	0.00012	10/01/20 21:10	
Chromium	mg/L	ND	0.010	0.00055	10/01/20 21:10	
Cobalt	mg/L	ND	0.0050	0.00038	10/01/20 21:10	
Lead	mg/L	ND	0.0050	0.000036	10/01/20 21:10	
Lithium	mg/L	ND	0.030	0.00081	10/01/20 21:10	

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.10	104	80-120	
Beryllium	mg/L	0.1	0.099	99	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	0.099	99	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	

0.1

0.1

MATRIX SPIKE & MATRIX	SPIKE DUPL	ICATE: 3020			3020038							
Parameter	Units	92496524010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	0.1	0.1	0.098	0.099	97	99	75-125	1	20	
Barium	mg/L	0.036	0.1	0.1	0.14	0.14	102	104	75-125	2	20	
Beryllium	mg/L	0.000088J	0.1	0.1	0.093	0.094	93	94	75-125	1	20	
Boron	mg/L	2.2	1	1	3.3	3.3	108	107	75-125	0	20	
Cadmium	mg/L	0.00076J	0.1	0.1	0.094	0.096	93	95	75-125	2	20	
Chromium	mg/L	0.00081J	0.1	0.1	0.096	0.099	96	98	75-125	3	20	
Cobalt	mg/L	0.0019J	0.1	0.1	0.096	0.099	94	97	75-125	3	20	
Lead	mg/L	0.00028J	0.1	0.1	0.095	0.098	95	97	75-125	2	20	
Lithium	mg/L	0.0017J	0.1	0.1	0.093	0.095	92	93	75-125	2	20	

0.10 0.097

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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

QC Batch: 570375 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92496524014, 92496524015

METHOD BLANK: 3021668 Matrix: Water

Associated Lab Samples: 92496524014, 92496524015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	0.00078	10/03/20 14:31	
Barium	mg/L	ND	0.010	0.00071	10/03/20 14:31	
Beryllium	mg/L	ND	0.0030	0.000046	10/03/20 14:31	
Boron	mg/L	ND	0.10	0.0052	10/03/20 14:31	
Cadmium	mg/L	ND	0.0025	0.00012	10/03/20 14:31	
Chromium	mg/L	ND	0.010	0.00055	10/03/20 14:31	
Cobalt	mg/L	ND	0.0050	0.00038	10/03/20 14:31	
Lead	mg/L	ND	0.0050	0.000036	10/03/20 14:31	
Lithium	mg/L	ND	0.030	0.00081	10/03/20 14:31	

LABORATORY CONTROL SAMPLE:	3021669					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Arsenic	mg/L	0.1	0.092	92	80-120	
Barium	mg/L	0.1	0.098	98	80-120	
Beryllium	mg/L	0.1	0.10	101	80-120	
Boron	mg/L	1	1.0	104	80-120	
Cadmium	mg/L	0.1	0.096	96	80-120	
Chromium	mg/L	0.1	0.098	98	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.095	95	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX	SPIKE DUPLI	CATE: 3021		MOD	3021671							
Parameter	(Units	92497125010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	0.1	0.1	0.095	0.094	94	94	75-125	1	20	
Barium	mg/L	0.023	0.1	0.1	0.12	0.12	97	99	75-125	1	20	
Beryllium	mg/L	0.0015J	0.1	0.1	0.098	0.10	97	100	75-125	3	20	
Boron	mg/L	1.1	1	1	2.1	2.2	101	114	75-125	6	20	
Cadmium	mg/L	0.00066J	0.1	0.1	0.097	0.097	96	97	75-125	0	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	100	101	75-125	1	20	
Cobalt	mg/L	0.0053	0.1	0.1	0.10	0.10	98	99	75-125	1	20	
Lead	mg/L	0.00011J	0.1	0.1	0.095	0.095	95	95	75-125	1	20	
Lithium	mg/L	0.0010J	0.1	0.1	0.10	0.10	100	103	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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

SAMPLE DUPLICATE: 3021683						
		92497981001	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Arsenic	mg/L	ND	0.0078	4	20	
Barium	mg/L	ND	0.0046J		20	
Beryllium	mg/L	ND	ND		20	
Boron	mg/L	ND	0.018J		20	
Cadmium	mg/L	ND	ND		20	
Chromium	mg/L	ND	0.00061J		20	
Cobalt	mg/L	ND	0.00074J		20	
Lead	mg/L	ND	0.00016J		20	
Lithium	mg/L	ND	ND		20	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

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: 92496524016

METHOD BLANK: 3022872 Matrix: Water

Associated Lab Samples: 92496524016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
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	

LABORATORY CONTROL SAMPLE:	3022873					
Darameter	Units	Spike	LCS	LCS % Rec	% Rec	Ouglifiers
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
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	

MATRIX SPIKE & MATRIX	SPIKE DUPLIC	CATE: 3022			3022875							
Parameter	g Units	2496914020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	2	20	
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	

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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

QC Batch: 568007 Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92496524003, 92496524004, 92496524005

METHOD BLANK: 3009608 Matrix: Water

Associated Lab Samples: 92496524003, 92496524004, 92496524005

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Mercury mg/L ND 0.00050 0.000078 09/23/20 09:49

LABORATORY CONTROL SAMPLE: 3009609

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3009610 3009611

MS MSD

92496278002 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Conc. Result Result % Rec % Rec **RPD** RPD Qual Result Limits ND 0.0025 0.0024 20 Mercury mg/L 0.0025 0.0025 95 99 75-125

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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

QC Batch: 569307 Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92496524008

METHOD BLANK: 3016316 Matrix: Water

Associated Lab Samples: 92496524008

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Mercury mg/L ND 0.00050 0.000078 09/29/20 13:13

LABORATORY CONTROL SAMPLE: 3016317

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3016318 3016319

MS MSD

92497532001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual ND 0.0025 0.0025 101 20 Mercury mg/L 0.0025 0.0025 99 75-125



HAMMOND AP-4 SEMIANNUAL Project:

Pace Project No.: 92496524

QC Batch Method:

QC Batch:

568395

SM 2450C-2011

Analysis Method:

SM 2450C-2011

Analysis Description:

2540C Total Dissolved Solids

Laboratory:

Pace Analytical Services - Peachtree Corners, GA

Qualifiers

92496524001, 92496524002, 92496524003, 92496524004, 92496524005 Associated Lab Samples:

METHOD BLANK: Matrix: Water

Associated Lab Samples: 92496524001, 92496524002, 92496524003, 92496524004, 92496524005

> Blank Reporting

MDL Qualifiers Parameter Units Result Limit Analyzed

Total Dissolved Solids ND 10.0 10.0 09/23/20 13:15 mg/L

LABORATORY CONTROL SAMPLE: 3011477

> Spike LCS LCS % Rec Conc. Result % Rec Limits Parameter Units

Total Dissolved Solids 400 375 94 84-108 mg/L

SAMPLE DUPLICATE: 3011478

92495894018 Dup Max Parameter Units Result Result **RPD RPD** Qualifiers 382 **Total Dissolved Solids** 404 6 mg/L 10

SAMPLE DUPLICATE: 3011479

Date: 10/13/2020 04:40 PM

92495870020 Dup Max RPD RPD Parameter Units Result Result Qualifiers Total Dissolved Solids 93.0 2 10 mg/L 91.0



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

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: 92496524006, 92496524007

METHOD BLANK: 3012738 Matrix: Water

Associated Lab Samples: 92496524006, 92496524007

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 09/24/20 10:26

LABORATORY CONTROL SAMPLE: 3012739

Spike LCS LCS % Rec
Parameter Units Conc. Result % Rec Limits Qualifiers

Total Dissolved Solids mg/L 400 390 98 84-108

SAMPLE DUPLICATE: 3012740

 Parameter
 Units
 92497007001 Result
 Dup Result
 Max RPD
 Max RPD
 Qualifiers

 Total Dissolved Solids
 mg/L
 207
 204
 1
 10

SAMPLE DUPLICATE: 3012944

Date: 10/13/2020 04:40 PM

92496771001 Dup Max RPD RPD Parameter Units Result Result Qualifiers Total Dissolved Solids 158 157 10 mg/L 1



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

QC Batch: 569874 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: 92496524008, 92496524009, 92496524010, 92496524011, 92496524012, 92496524013

METHOD BLANK: 3018862 Matrix: Water

Associated Lab Samples: 92496524008, 92496524009, 92496524010, 92496524011, 92496524012, 92496524013

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 10.0 09/30/20 09:26

LABORATORY CONTROL SAMPLE: 3018863

Spike LCS LCS % Rec Conc. % Rec Limits Qualifiers Parameter Units Result **Total Dissolved Solids** 400 389 97 84-108 mg/L

SAMPLE DUPLICATE: 3018864

92497404001 Dup Max Parameter Units Result Result **RPD RPD** Qualifiers 130 **Total Dissolved Solids** 150 10 D6 mg/L 14

SAMPLE DUPLICATE: 3018865

Date: 10/13/2020 04:40 PM

92495894026 Dup Max RPD RPD Parameter Units Result Result Qualifiers Total Dissolved Solids 790 774 2 10 mg/L

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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

QC Batch: 570220

QC Batch Method: SM 2450C-2011

Analysis Method: SM 2450C-2011

Analysis Description: 2

Laboratory:

2540C Total Dissolved Solids
Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92496524014, 92496524015, 92496524016

METHOD BLANK: 3020462 Matrix: Water

Associated Lab Samples: 92496524014, 92496524015, 92496524016

Blank Reporting

Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 10.0 10/01/20 15:26

LABORATORY CONTROL SAMPLE: 3020463

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units **Total Dissolved Solids** mg/L 400 411 103 84-108

SAMPLE DUPLICATE: 3020464

Date: 10/13/2020 04:40 PM

92496524014 Dup Max **RPD** Parameter Units Result Result **RPD** Qualifiers 188 **Total Dissolved Solids** 205 9 mg/L 10



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

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: 92496524001, 92496524002, 92496524003, 92496524004, 92496524005

METHOD BLANK: 3011350 Matrix: Water

Associated Lab Samples: 92496524001, 92496524002, 92496524003, 92496524004, 92496524005

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND 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 LCS Spike LCS % Rec Qualifiers Parameter Units Conc. Result % Rec Limits Chloride 50 101 90-110 mg/L 50.7 Fluoride 2.5 102 90-110 mg/L 2.6 Sulfate 90-110 mg/L 50 50.1 100

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3011352 3011353												
			MS	MSD								
		92495656005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
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 SP	IKE DUPL	ICATE: 3011	354	3011355								
			MS	MSD								
		92496524001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
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	

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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

QC Batch Method:

QC Batch: 568980

EPA 300.0 Rev 2.1 1993

Analysis Method: Analysis Description: EPA 300.0 Rev 2.1 1993

300.0 IC Anions

1.0

Laboratory:

Pace Analytical Services - Asheville

0.50

09/25/20 15:28

Associated Lab Samples: 92496524006

METHOD BLANK: 3014524

Matrix: Water

Associated Lab Samples: 92496524006

LABORATORY CONTROL SAMPLE:

Date: 10/13/2020 04:40 PM

Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/25/20 15:28	
Fluoride	ma/L	ND	0.10	0.050	09/25/20 15:28	

ND

Sulfate mg/L

301/525

LABORATORT CONTROL SAMFLE.	30 14323					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	50	53.0	106	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	53.2	106	90-110	

MATRIX SPIKE & MATRIX S	PIKE DUPL	ICATE: 3014		3014527								
Parameter	Units	92496890001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	31.5	50	50	84.6	84.7	106	106	90-110	0	10	
Fluoride	mg/L	0.19	2.5	2.5	2.9	2.9	108	108	90-110	0	10	
Sulfate	mg/L	23.8	50	50	77.4	77.5	107	107	90-110	0	10	

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 3014		3014529								
			MS	MSD								
		92496895002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	66.1	50	50	122	123	113	113	90-110	0	10	M1
Fluoride	mg/L	0.38	2.5	2.5	3.0	3.1	106	107	90-110	1	10	
Sulfate	mg/L	47.6	50	50	91.1	91.4	87	88	90-110	0	10	M1

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



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

QC Batch Method:

QC Batch: 569204

EPA 300.0 Rev 2.1 1993

Analysis Method:

EPA 300.0 Rev 2.1 1993

Analysis Description: Laboratory:

300.0 IC Anions
Pace Analytical Services - Asheville

Associated Lab Samples: 92496524007

LABORATORY CONTROL SAMPLE: 2015016

METHOD BLANK: 3015915 Associated Lab Samples: 9

Date: 10/13/2020 04:40 PM

Matrix: Water

92496524007

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/26/20 18:53	
Fluoride	mg/L	ND	0.10	0.050	09/26/20 18:53	
Sulfate	mg/L	ND	1.0	0.50	09/26/20 18:53	

LABORATORY CONTROL SAMPLE.	3013910					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% 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	52.6	105	90-110	

MATRIX SPIKE & MATRIX SP	IKE DUPLI	CATE: 3015	917		3015918							
			MS	MSD								
	(92497425005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L		50	50	61.6	57.4	107	98	90-110	7	10	
Fluoride	mg/L		2.5	2.5	2.7	2.6	108	103	90-110	5	10	
Sulfate	mg/L	4.1	50	50	56.2	55.8	104	103	90-110	1	10	

MATRIX SPIKE & MATRIX SP	IKE DUPL	LICATE: 3015		3015920								
			MS	MSD								
		92497391003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	8.8	50	50	61.1	61.5	104	105	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.3	2.3	91	92	90-110	1	10	
Sulfate	mg/L	0.73J	50	50	52.1	53.1	103	105	90-110	2	10	

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



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

QC Batch: 569516 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: 92496524008, 92496524009, 92496524010, 92496524011

METHOD BLANK: 3017410 Matrix: Water

Associated Lab Samples: 92496524008, 92496524009, 92496524010, 92496524011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND ND	1.0	0.60	09/29/20 08:53	
Fluoride	mg/L	ND	0.10	0.050	09/29/20 08:53	
Sulfate	mg/L	ND	1.0	0.50	09/29/20 08:53	

LABORATORY CONTROL SAMPLE: 3017411

Date: 10/13/2020 04:40 PM

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	50	54.8	110	90-110	
Fluoride	mg/L	2.5	2.7	109	90-110	
Sulfate	mg/L	50	54.9	110	90-110	

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 3017	412		3017413							
			MS	MSD								
		92497532015	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	ND	50	50	52.8	52.1	106	104	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	106	104	90-110	1	10	
Sulfate	mg/L	ND	50	50	52.5	52.0	105	104	90-110	1	10	

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 3017	414		3017415							
			MS	MSD								
		92495894027	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	ND	50	50	52.5	52.9	105	105	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	105	104	90-110	1	10	
Sulfate	mg/L	ND	50	50	52.1	52.0	104	104	90-110	0	10	

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



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

QC Batch: 569577

Analysis Method: QC Batch Method: EPA 300.0 Rev 2.1 1993

Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

EPA 300.0 Rev 2.1 1993

Associated Lab Samples: 92496524012, 92496524013

METHOD BLANK: 3017567 Matrix: Water

Associated Lab Samples: 92496524012, 92496524013

LABORATORY CONTROL SAMPLE: 2017560

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/29/20 17:37	
Fluoride	mg/L	ND	0.10	0.050	09/29/20 17:37	
Sulfate	mg/L	ND	1.0	0.50	09/29/20 17:37	

LABORATORY CONTROL SAMPLE.	3017300					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L		50.9	102	90-110	
Fluoride	mg/L	2.5	2.7	109	90-110	
Sulfate	mg/L	50	50.7	101	90-110	

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 3017	569		3017570							
			MS	MSD								
		92496524012	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	8.9	50	50	59.8	60.2	102	103	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.2	2.5	89	99	90-110	10	10	M1
Sulfate	mg/L	298	50	50	347	351	98	106	90-110	1	10	

MATRIX SPIKE & MATRIX SP	IKE DUP	LICATE: 3017	571		3017572							
			MS	MSD								
		92497532021	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	449	50	50	491	491	85	84	90-110	0	10	M6
Fluoride	mg/L	0.097J	2.5	2.5	2.6	2.6	100	101	90-110	2	10	
Sulfate	mg/L	393	50	50	441	441	97	98	90-110	0	10	

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

Qualifiers



QUALITY CONTROL DATA

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

QC Batch Method:

Chloride

Fluoride

Sulfate

QC Batch: 569831 Analysis Method:

EPA 300.0 Rev 2.1 1993

Analysis Description:

300.0 IC Anions

Laboratory:

Pace Analytical Services - Asheville

92496524014, 92496524015 Associated Lab Samples:

METHOD BLANK:

Matrix: Water

Associated Lab Samples: 92496524014, 92496524015

EPA 300.0 Rev 2.1 1993

Blank Reporting Limit MDL Result

Parameter Units Analyzed Chloride mg/L ND 1.0 0.60 09/30/20 10:50 Fluoride mg/L ND 0.10 0.050 09/30/20 10:50 Sulfate mg/L ND 0.50 09/30/20 10:50 1.0

LABORATORY CONTROL SAMPLE: 3018764

Parameter

Date: 10/13/2020 04:40 PM

Units

mg/L

mg/L

mg/L

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers 108 50 53.8 90-110 2.5 90-110 2.7 110 50 53.1 106 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3018766 3018765

		92496574018	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	ND	50	50	52.4	52.1	105	104	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	105	104	90-110	1	10	
Sulfate	mg/L	ND	50	50	52.1	51.8	104	104	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3018767 3018768

Parameter	Units	92496941026 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	ND	50	50	52.0	51.8	104	104	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	104	104	90-110	0	10	
Sulfate	mg/L	ND	50	50	51.7	51.4	103	103	90-110	0	10	

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



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

QC Batch: 570137

QC Batch Method: EPA 300.0 Rev 2.1 1993

Analysis Method: EPA 300.0 Rev 2.1 1993

Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92496524016

METHOD BLANK: 3020267 Matrix: Water

Associated Lab Samples: 92496524016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND 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					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% 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 SF	PIKE DUPL	ICATE: 3020	269		3020270							
			MS	MSD								
		92495894028	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	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 SP	IKE DUPL	ICATE: 3020	271		3020272							
			MS	MSD								
		92496914018	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	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 ľ	M 1
Sulfate	mg/L	110	50	50	160	161	101	103	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.



QUALIFIERS

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

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

Date: 10/13/2020 04:40 PM

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.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

92496524002 HGWA-112 EPA 3010A 568426 EPA 6010D 5686 92496524003 HGWA-48D EPA 3010A 568426 EPA 6010D 5686 92496524005 FB-04 EPA 3010A 568426 EPA 6010D 5686 92496524006 HGWA-113 EPA 3010A 568426 EPA 6010D 5686 92496524007 HGWA-113 EPA 3010A 568748 EPA 6010D 5686 92496524007 HGWA-113 FILTERED EPA 3010A 568748 EPA 6010D 5686 92496524008 HGWC-102 EPA 3010A 569777 EPA 6010D 5696 92496524009 HGWC-101 EPA 3010A 569777 EPA 6010D 5696 9249652401 HGWC-103 EPA 3010A 569777 EPA 6010D 5696 9249652401 HGWC-105 EPA 3010A 569777 EPA 6010D 5696 9249652401 HGWC-105 EPA 3010A 569777 EPA 6010D 5696 9249652401 HGWC-105 EPA 3010A 569777 EPA 6010D 5696 9249652401 HGWC-105 EPA 3010A 569777 EPA 6010D 5696 9249652401 HGWC-105 EPA 3010A 569777 EPA 6010D 5696 9249652401 HGWC-107 EPA 3010A 569777 EPA 6010D 5696 9249652401 HGWC-108 EPA 3010A 569777 EPA 6010D 5696 9249652401 HGWC-108 EPA 3010A 569777 EPA 6010D 5696 9249652401 HGWC-108 EPA 3010A 569777 EPA 6010D 5696 9249652401 HGWC-108 EPA 3010A 569777 EPA 6010D 5696 9249652401 HGWC-118 EPA 3010A 570301 EPA 6010D 5703 9249652401 HGWC-118 EPA 3010A 570395 EPA 6010D 5704 9249652401 HGWC-118 EPA 3010A 570395 EPA 6010D 5704 92496524001 HGWA-111 EPA 3010A 570395 EPA 6010D 5704 92496524001 HGWA-111 EPA 3005A 568749 EPA 6020B 5686 92496524001 HGWA-48D EPA 3005A 568749 EPA 6020B 5686 92496524001 HGWA-48D EPA 3005A 568749 EPA 6020B 5686 92496524006 HGWA-48D EPA 3005A 568749 EPA 6020B 5686 92496524006 HGWA-48D EPA 3005A 568749 EPA 6020B 5686 92496524006 HGWA-48D EPA 3005A 568749 EPA 6020B 5686 92496524006 HGWA-113 FILTERED EPA 3005A 56970 EPA 6020B 5686 92496524006 HGWA-113 FILTERED EPA 3005A 569670 EPA 6020B 5686 92496524008 HGWC-102 EPA 3005A 569670 EPA 6020B 5697 92496524001 HGWC-101 EPA 3005A 570086 EPA 6020B 5700 92496524001 HGWC-101 EPA 3005A 570086 EPA 6020B 5700 92496524001 HGWC-101 EPA 3005A 570088 EPA 6020B 5700 92496524011 HGWC-105 EPA 3005A 570088 EPA 6020B 5700 92496524011 HGWC-105 EPA 3005A 570088 EPA 6020B 5700	Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytica Batch
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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92496524

Date: 10/13/2020 04:40 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytica Batch
92496524015	HGWC-117	EPA 3005A	570375	EPA 6020B	570411
92496524016	HGWC-118	EPA 3005A	570626	EPA 6020B	570683
92496524003	HGWA-47	EPA 7470A	568007	EPA 7470A	568119
92496524004	HGWA-48D	EPA 7470A	568007	EPA 7470A	568119
2496524005	FB-04	EPA 7470A	568007	EPA 7470A	568119
2496524008	HGWC-102	EPA 7470A	569307	EPA 7470A	569460
2496524001	HGWA-111	SM 2450C-2011	568395		
2496524002	HGWA-112	SM 2450C-2011	568395		
2496524003	HGWA-47	SM 2450C-2011	568395		
92496524004	HGWA-48D	SM 2450C-2011	568395		
92496524005	FB-04	SM 2450C-2011	568395		
92496524006	HGWA-113	SM 2450C-2011	568648		
92496524007	HGWA-113 FILTERED	SM 2450C-2011	568648		
92496524008	HGWC-102	SM 2450C-2011	569874		
2496524009	HGWC-101	SM 2450C-2011	569874		
2496524010	HGWC-103	SM 2450C-2011	569874		
2496524011	HGWC-105	SM 2450C-2011	569874		
2496524012	FD-04	SM 2450C-2011	569874		
2496524013	HGWC-107	SM 2450C-2011	569874		
92496524014	HGWC-109	SM 2450C-2011	570220		
92496524015	HGWC-117	SM 2450C-2011	570220		
2496524016	HGWC-118	SM 2450C-2011	570220		
92496524001	HGWA-111	EPA 300.0 Rev 2.1 1993	568377		
92496524002	HGWA-112	EPA 300.0 Rev 2.1 1993	568377		
2496524003	HGWA-47	EPA 300.0 Rev 2.1 1993	568377		
2496524004	HGWA-48D	EPA 300.0 Rev 2.1 1993	568377		
92496524005	FB-04	EPA 300.0 Rev 2.1 1993	568377		
92496524006	HGWA-113	EPA 300.0 Rev 2.1 1993	568980		
2496524007	HGWA-113 FILTERED	EPA 300.0 Rev 2.1 1993	569204		
2496524008	HGWC-102	EPA 300.0 Rev 2.1 1993	569516		
2496524009	HGWC-101	EPA 300.0 Rev 2.1 1993	569516		
2496524010	HGWC-103	EPA 300.0 Rev 2.1 1993	569516		
2496524011	HGWC-105	EPA 300.0 Rev 2.1 1993	569516		
2496524012	FD-04	EPA 300.0 Rev 2.1 1993	569577		
92496524013	HGWC-107	EPA 300.0 Rev 2.1 1993	569577		
2496524014	HGWC-109	EPA 300.0 Rev 2.1 1993	569831		
92496524015	HGWC-117	EPA 300.0 Rev 2.1 1993	569831		

Pace Analytical

Client Name: 4 A Power

	6	-6-10		- 111		
Courier: Fed Ex UPS USPS Clie	nt 🗆 Comm	ercial	Pace Other	924	96524 Proj. Name.	
Custody Seal on Cooler/Box Present:	T no	Seals	intact:	no		
Packing Material: Bubble Wrap Bubble	Bags T	one	Other			
Thermometer Used 214	Type of Ice	Wet	Blue None	□ sa	amples on ice, cooling process has b	
Cooler Temperature 3.6 C	Biological '	rissue	is Frozen: Yes Comments:	No	Date and Ipidals of person exam contents:	ining 14
Chain of Custody Present:	☐Yes □No	□n/A	1.			
Chain of Custody Filled Out:	Yes ONo	□N/A	2.			
Chain of Custody Relinquished:	DY68 DNo	□N/A	3.			
Sampler Name & Signature on COC:	Yes ONo	□N/A	4.			
Samples Arrived within Hold Time:	BYes DNo	□N/A	5.			
Short Hold Time Analysis (<72hr):	☐Yes ☐No	□N/A	6.			
Rush Turn Around Time Requested:	□Yes - HNo	□N/A	7.			
Sufficient Volume:	☐Yes ☐No	□N/A	8.			
Correct Containers Used:	₽Yes □No	□N/A	9.			
-Pace Containers Used:	Yes ONo	□n/A				
Containers Intact:	Paes □No	□N/A	10.			
Filtered volume received for Dissolved tests	□Yes □No	DAMA	11.			
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix:	UYes UNO	□n/a	12.			
All containers needing preservation have been checked.	☐Yes □No	□N/A	13.			
All containers needing preservation are found to be in compliance with EPA recommendation.	ØYes □No	□N/A		-		
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	□Yes ☑Mo	-	Initial when completed	100.0	eservative	
Samples checked for dechlorination:	□Yes □No	DN/A	14.			
Headspace in VOA Vials (>6mm):	□Yes □No	ØN/A	15.			
Trip Blank Present:	□Yes □No	BNA	16.			
Trip Blank Custody Seals Present	☐Yes ☐No	ØN/A				
Pace Trip Blank Lot # (if purchased):						
Client Notification/ Resolution:				F	eld Data Required? Y / I	N
Person Contacted:	-	_Date/	Time:		_	
Comments/ Resolution:						
	. 12				т	
Project Manager Peview					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)

W0#:92496524

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

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			Apr 111 8 14 retals: As, Oa, Be, B, Cd, Ca, Cr, Co	L. HB. Ma. Sa. T. (WA)	Thease note dry wells, strike though any wells not sampled, and note when the last sample for the event has been taken.	ADDITIONAL COMMENTS							HGW4-112	111-YM2H	FB-04	CISP-AAW	WW-47	HGWC-102	Sample IDs MUST BE UNIQUE Tresue		WATER	Section D Valid M Required Clest Information MATRIX		requested the Date/IAT: 10 bay		SCS Contacts		Atlanta, GA	GA Power	Section A Required Client Information:	
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"important Note By signing that form you are accepting Pace's NET 30 day payment forms and agreeng to late changes of 1.5% per month for any invoices not paid within 30 days.

Face Analytical	CHAIN The Chain-	CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.	ocument leted accurately.
Section A Required Client Information.	Section B Required Project Information.	Section C	9
Company: GA Power	Report To: SCS Contacts	Attention: Southern Co.	
Address Atlanta, GA	Copy To Geosyntec Contacts	Company Name	REGULATORY AGENCY
		Address	☐ NPDES ☐ GROUND WATE DRINKING WATER
Email To SCS Contacts	Purchase Order No :	Paca Quote	RCRA
Phone	Project Name: Plant Hammond AP-4 Semiannual/BKG 08	Jal/BKG 08 Pace Project Kevin Herring	
Requested Due Date/TAT: 10 Day	Project Number: GW6581	Peca Profes # 10839-448839-2-(17)	STATE: CA
		Requests	Requested Analysis Filtered (YIN)
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Important Note: By signing this form you are accepting Place's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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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.

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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.

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

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 invokes not paid within 30 days.

Section A Required Client Information. Company GA Power Address Please note dry wells, satike thorugh any wells not sampled, and note whon the last sample for the event has been taken. Full App, III & IV Metals=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Lr, Hg, Me, Se, Tl mail To ITEM# 6 quested Due Date/TAT: lequired Client Information ection D (A-Z, 0-8 / -) Sample IDs MUST BE UNIQUE "Important Note: By signing this form you are Atlanta, GA SCS Contacts SAMPLE ID ADDITIONAL COMMENTS NW 480 10 Day Fax HGWC-102 Valid Matrix Codes MATRIX CODE DRIBBOT WATER WY WATER WASTE WATER WASTE WATER PRODUCT OL OIL WIPE AIR OT-ER OT-ER OT TISSIN CODE VAR OT TISSIN COD TISSIN accepting Pace's NET 30 day Section B Required Project Information. Project Number: GW6581 Report To: SCS Contacts Copy To Geosyntec Con a roject Name urchase Order Noche M M MATRIX CODE (see yald codes to left) RELINQUISHED ON CLOSE ! Plant Harr G SAMPLE TYPE (G=GRAB C=COMP) mond AP-4 Semiannual/BKG 08 AFFILATION Z = SAMPLER NAME AND SIGNATURE 18 COLLECTED PEINT Name of SAMPLER: SIGNATURE OF SAMPLER: CORA CHAIN-OF-CUSTODY / Analytical Request Document he Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately. DATE charges of 1.5% per morth for any invoices not paid within 30 days 4216 9/15/10 125/00 TIME DATE SAMPLE TEMP AT COLLECTION Pacs Quote Reference: Pacs Project Manager GE 07 1245 Address: Company Name Attention: # OF CONTAINERS Profile 6: 10838-4/46836-2 1237 MILL Unpreserved H₂SO₄ BUS50 Reuse HNO₃ Kevin Herring Southern Co. HCI loura M 60 NaOH Na₂S₂O₃ ACCEPTED BY / AFFILIATION Methanol Other **Analysis Test** Y/ N when geo Chloride, Fluoride, Sulfate DATE Signed 4/24/2520 Requested Analysis Fittered (YIN) TDS Full App II & IV Metals 6010/6020 z RAD 226/228 REGULATORY AGENCY Site Location 1521/20123 UST 0201 02/12/L 136/3 NPDES [DATE STATE: 1045 THE GROUND WATE 8 Page: F-ALL-Q-020rev.07, 15-Feb-2007 Temp in *C Residual Chlorine (Y/N) PH = 5.82 Pace Project No./ Lab I.D. SAMPLE CONDITIONS Ice (Y/N) 2 OTHER CCR Custody DRINKING WATER Sealed Cooler (Y/N) 008 Samples Intaci (Y/N)

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Required Clent Information: mail To. equested Due Date/TAT: lease note dry wells, strike thorugh any wells not sampled, and tote when the last sample for the event has been taken App. IV Metals= As, Ba, Be, B, Cd, Ce, Cr, Co, Pb, Li ITEM# 10 Section D

Required Client Information Pace Analytical (A-Z, 0-91 -)
Sample IDs MUST BE UNIQUE Atlanta, GA **GA Power** *Important Note: By signing this form you are accepting Pace's NET 30 day payment SCS Contacts SAMPLE ID ADDITIONAL COMMENTS 116WA-112 10 Day HOWC-110 HGWC-103 HGWA 113 10WA-111 HOWC-17 HCWC 100 HOMG 187 HGWC-105 **HGWC-101** FD-04 DRINGING WATER
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WASTE WATER
PRODUCT
SOILSOLID
OIL
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TISSUE Valid Matrix Codes 103 \$ 0 \$ 0 \$ 4 8 Project Number: GW6581 Report To: SCS Contacts Section B Required Project Information. Copy To: urchase Order No. NEWS CARRIED OF STREET Geosyntec Contacts RELINQUISHED BY / AFTILIATION 3 ş S MATRIX CODE (see valid codes to left) Plant Hammon 0 (G=GRAB C=COMP) G G SAMPLE TYPE 8-14-2 R-17-6 9-14-10 DATE 8 ME AP-4 Sem MPLER NAME AND SIGNATURE CLECTED 350 1000 PRINT Name of SAMPLER: V SIGNATURE of SAMPLER: CHAIN-OF-CUSTODY / Analytical Request Document Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately annual/BKG 08 es of 1 5% per month for any 9/25/25 9/25/20 12-11-6 45/12 TIME DATE 19 SAMPLE TEMP AT COLLECTION 9 Pace Quote Reference Pace Project Manager Pace Profile #: 130 Pear Attention. Address Company Name Invoice Information # OF CONTAINERS 5401 1233 TIME invoices not paid within 30 days Unpreserved N H₂SO₄ Preservatives Southern Co. HNO₃ 10839-12 **Kevin Herring** Mac a HCI San NaOH Na₂S₂O₃ ACCEPTED BY / AFFILIATION Methanol Other Muran Y/ N **Analysis Test** Chloride Fluoride Sulfate DATE Signed (MM/DD/YY): Requested Analysis Fittered (Y/N) TDS an App III & IV Metals 6010/6020* × 0 RAD 226/228 REGULATORY AGENCY Site Location 9-14-10 124/20 TSU NPDES 12/6 STATE: DATE 1730 2030 1846 TIME RCRA GROUND WATE B F-ALL-Q-020rev.07 15-Feb-2007 Temp in *C * * 12 Residual Chlorine (Y/N) z z 9 PH=5.48 रा PH= 5.60 PH = 6,63 Received or Pace Project No./ Lab I.D. SAMPLE CONDITIONS Ice (Y/N) 2 Custody OTHER COR DRINKING WATER Sealed Cooler (Y/N) 010 00 Samples Intact 077 (Y/N) age 63 of 67

Section A Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken. "App. IV Metals" As, Ba, Be, B, Cd, Ca, Co, Pb, Li mail To: ddress Requested Due Date/TAT: ITEM# Section D lequired Client Information ace Analytical (A-Z, 0-91.)
Sample IDs MUST BE UNIQUE "Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and **GA Power** SCS Contacts Atlanta, GA SAMPLE ID ADDITIONAL COMMENTS HGWC-109 HGWC-105 HOWC-103 10 Day HGWC-118 **HGWC-107** HOMC-101 HGWA-113 HGWA-112 HGWA-111 HGWC-117 ED 04 Valid Matrix Codes

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Required Project Information Project Number GW6581 Report To: SCS Contacts roject Name: Purchase Order No. Copy To: Geosyntec Contacts Thomas hegs WI G WT G RELINQUISHED BY 1 A × WTG 3 MATRIX CODE (see valid codes to laft) Plant Hammon G G ၈ SAMPLE TYPE (G=GRAB C=COMP) 12/18 DATE NOTAL 00 AP-4 Semi ing to late charges of 1.5% per month for any invoices not paid within 30 days MPLER NAME AND SIGNATURE ano X OLLECTED PRINT Name of SAMPLER: SIGNATURE of SAMPLER: The C CHAIN-OF-CUSTODY / Analytical Request Document annual/BKG 08 hain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately 9/25/20 12/PS) 0/25/20 かりち DATE I SAMPLE TEMP AT COLLECTION Pace Quote Reference Pace Project Attention Section C 2630 Madia Address Company Name hvoice Information Page Profile # 10839-12 # OF CONTAINERS 1930 Somon TIME Unpreserved H₂SO₄ Preservatives HNO₃ Southern Co **Kevin Heming** HCI NaOH Na₂S₂O₃ ACCEPTED BY / AFFILIATION 10554 Methanol Other Y/ N **Analysis Test** chlonde Fluoride, Sulfate z DATE Signed (MM/DD/YY): luntar Requested Analysis Filtered (Y/N) TDS z App. III & IV Metals 6010/6020* z RAD 226/228 Z 121160 REGULATORY AGENCY Site Location aprile 2/85/25 NA UST NPDES DATE STATE: 123 2030 る大 1730 TIME RCRA GROUND WATE GA Page: F-ALL-Q-020rev 07, 15-Feb-2007 Temp in °C Z N N ZZ 2 z z Residual Chlonne (Y/N) W PH-4 pH = Hq = Hd pH= pH = 와=6. रा Received on Pace Project No./ Lab I.D. ice (Y/N) SAMPLE CONDITIONS 12372CV 2 Custody OTHER CER DRINKING WATER Sealed Coole (Y/N) W Samples Intact (Y/N) age 64 of 67

				App N	Please n		12	=	5	9	05	7	6	5	4	u	2	-	ITEM#			yadaaa		Phone of	Email To	Address	Company	Section A	1
				*App. IV Metals= As, Be, Be, B, Cd, Ca, Cr, Co, Pb, Li	ote dry wells, strike thorugh any wells not sampled. I the last sample for the event has been taken.	ADDITIONAL COMMENTS		FD-04	HGWC-118	HGWC-1+7	HGWC-109	HGWC-107	HGWC-105	HGWC-103	H6WC-101	HGWA-113	HGWA-112	HGWA-111	SAMPLE ID SAMPLE ID WATE WATE WATE WATE WATE WATE WATE WATE WATE WATE WATE	Section D Valid Matrix Codes Required Client Information MATRIX CODE		vodnastar nas name iv it		oco contacts	200	Atlanta, GA	y GA Power	Clier P	wnv.pecelabs.com
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HIGHES & Idessile DATE Signed	170°	1860 rd m /ha	Heur	2000	W	TIME ACCEPTED BY / AFFILIATION		2 3	\perp	2 3	-	2 3 3 × × ×	x :	×	5 2 3 × × × ×	5 2 3 × × ×	5 2 3 × × × ×	*	Methanol Other Analysis Test Chloride Fluoride, Sulfate CDS App III & IV Metals 6010/8020*	Preservatives S N N N N	Requested	Pace Profile # 10839-12	Pace Project Kevin Herring	Pace Quote Reference	Address	Company Name	Attention Southern Co.	Section C Invoice Information	
77137190		1/26/20	2/2/2	1165	212	DATE															Requested Analysis Filtered (Y/N)	STATE:	Sits Location	T UST T	☐ NPDES ☐	REGULATORY AGENCY			
Temp in	·c	040	80	3 6	127	JME -			1												(N/N)	GA		RCRA	GROUND WATE	GENCY		Page:	
Received Ice (Y/N) Custody Gealed Cor (Y/N) amples in (Y/N)	on i)					SAMPLE CONDITIONS		2 3	N OH I	911	N DH = 6.79 MU	2	N PH PH	2 1	N DH =	N DH II	N DT I	N DH	Residual Chlorine (Y/N) AZWA6524						WATE DRINKING WATER			- a	

						App. N.	Please no	12	=	10		8	7	6	ch	4	ω	2		ITEM#					9	1	Address	Compan	Section	1
					source that the tree to be the total to the	note when the last sample for the event has been taken. "App. IV Metals= As. Ba. Be. B. Cd. Ca. Cr. Co. Ph. I.	ADDITIONAL COMMENTS Please note for wells strike though any wells not complete and		-FD 04	-HGWC-118	HGWC-117	HCWC 100	'HGWC 107	HCWC 106	HCWC 103	HGWC 101	-HCWA 113	HCW/A-112	HGWA-111	SAMPLE ID (A-Z, 0-9/.) Sample IDs MUST BE UNIQUE T SULSOLID OIL ONE (A-Z, 0-9/.) T SULE T SULE	Required Circli Information MATRIX CODE		representation to the state of		oco contacts		Atlanta, GA	GA Power	Section A Required Clent Information:	more pecelebs com
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SIGNA	PRINT Na	SAMPLER NAME	(5	Jun lass	200		NOTTAL			H	25									TAY!	COLLECTED			PP-4			Ť			
SIGNATURE of SAMPLER:	Name of SAMPLER:	ME AND SIGNATURE	19/20/20								1								Ħ	7	Ð			Semiamual/BKG 08						
R. C.	R. WISMIN THURSE	TURE	1350	0940 Km	268 Moder 1	-	TIME ACCEP			5 2			6 /	Ħ				en e		# OF CONTAINERS Unpreserved H2SO4 HNO3 HCI NaOH Na ₂ S ₂ O ₃ Methanol Dither	Preservatives		Pace Profile #: 10839-12		Pace Quote Reference:	Address.	Company Name.	Attention Southern Co.	Section C Invoice information	
Carin office				/l'acc	Mustin Gro	1500	TED BY / AFFILIATION		* * * * * * * * * * * * * * * * * * * *	*	× × × × × ×	k 2	* * *	x 2	* 2	* ;		* 2 * 2 * 2		Analysis Test hlonde, Fluoride, Sulfate DS pp. III & IV Metals 6010/5020*	Y/N Z Z Z	Requested				and the same of th				
ところ	-		1	1/26/2	9/11/2	Selle	DATE													9410		Analysis Filtered	STATE:	Site Location	T UST	☐ NPDES	REGULATO			
2				, 940	0	1500	TIME														_	lered (Y/N)	E:		□ RCRA	□ GRO	REGULATORY AGENCY	F	7	
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(ustodied Co	y					SAMPLE CONDITIONS			000	" 1								and the foot took man the	N2594N2Y					OTHER CCR	DRINKI			8	
arn	ples Ir (Y/N)	ntact				1	SNOI			0.0	712								and man inc.	224					COR	DRINKING WATER			2	



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 Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken. "App. IV Metals= As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li Email To. Address requested Due Date/TAT: ompany: ITEM# 12 3 10 Required Client Information (A-Z 0-91,-) Sample IDs MUST BE UNIQUE SCS Contacts **GA Power** Atlanta, GA SAMPLE ID ADDITIONAL COMMENTS 10 Day HGWC-118 **HGWC-107** HOWC-117 HOWC-109 HGWC-103 HGWC-105 HOVC-101 HGWA-113 HGWA-172-HGWA-111 1004 Project Number GW6581 Purchase Order No. Report To. SCS Contacts Section B Required Project Information. Copy To: Geosyntec Contacts homes thusby Modico refundan WTG RELINQUISHED BY I AFFILIATION ≦| ¥ E Ş WI G MATRIX CODE (see valid codes to left) 821b 5 Plant Hammond AP-4 Semianmual/BKG 08 6 SAMPLE TYPE 1 Conservation 3521 SAMPLER NAME AND SIGNATURE COLLECTED SIGNATURE of SAMPLER: PRINT Name of SAMPLER: DATE 9/20/24 2580 m/B 16 DATE 82 SAMPLE TEMP AT COLLECTION 0752 Attention: 1130 Address: Company Name Section C **200** # OF CONTAINERS ace Quote Thomas TIME Unpreserved H₂SO₄ Modera Southern Co HNO₃ Preservatives 10839-12 Kevin Henring HCI NaOH ACCEPTED BY / AFFILIATION Na₂S₂O₃ Kosc Methanol Other **Analysis Test** Y/N Chloride, Fluoride, Sulfate DATE Signed (MM/DD/YY): Requested Analysis Filtered (Y/N) z des App. III & IV Metals 6010/6020* z RAD 226/228 REGULATORY AGENCY 09126120 Site Location 9/20/20 9-28 UST NPDES DATE STATE: 2540 2.28 2000 HE RCRA GROUND WATE SA Page: Temp in 'C 2 Z Z Z Z Z Residual Chlorine (Y/N) 4 pH = PH = PH-만= रा Received on Pace Project No./ Lab I.D. Ice (Y/N) SAMPLE CONDITIONS 9 Custody DRINKING WATER OTHER Sealed Cool (Y/N) lest own Samples Intaci (Y/N) Page 67 of 67

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





October 30, 2020

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

RE: Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between September 21, 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

Revision 1 - This report replaces the October 21, 2020 report. This project was revised on October 30, 2020 in order to report results from re-analyses. (Greensburg, PA)

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

Sincerely,

Kevin Herring

Ken der

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.





CERTIFICATIONS

Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

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 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

Missouri Certification #: 235

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



SAMPLE SUMMARY

Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92496518001	HGWA-111	Water	09/18/20 09:43	09/21/20 09:25
92496518002	HGWA-112	Water	09/18/20 11:39	09/21/20 09:25
92496518003	HGWA-47	Water	09/18/20 11:20	09/21/20 09:25
92496518004	HGWA-48D	Water	09/18/20 11:06	09/21/20 09:25
92496518005	FB-04	Water	09/18/20 16:40	09/21/20 09:25
92496518006	HGWA-113	Water	09/22/20 11:30	09/23/20 09:25
92496518007	HGWA-113 FILTERED	Water	09/22/20 12:15	09/23/20 09:25
92496518008	HGWC-102	Water	09/24/20 16:51	09/25/20 10:45
92496518009	HGWC-101	Water	09/24/20 13:25	09/25/20 10:45
92496518010	HGWC-103	Water	09/24/20 18:30	09/25/20 10:45
92496518011	HGWC-105	Water	09/24/20 15:05	09/25/20 10:45
92496518012	FD-04	Water	09/24/20 00:00	09/25/20 10:45
92496518013	HGWC-107	Water	09/24/20 16:56	09/25/20 10:45
92496518014	HGWC-109	Water	09/25/20 16:20	09/28/20 09:40
92496518015	HGWC-117	Water	09/25/20 16:25	09/28/20 09:40
92496518016	HGWC-118	Water	09/28/20 12:56	09/29/20 08:55



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92496518001	HGWA-111	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92496518002	HGWA-112	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92496518003	HGWA-47	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92496518004	HGWA-48D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92496518005	FB-04	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92496518006	HGWA-113	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92496518007	HGWA-113 FILTERED	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92496518008	HGWC-102	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92496518009	HGWC-101	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92496518010	HGWC-103	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92496518011	HGWC-105	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92496518012	FD-04	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92496518013	HGWC-107	EPA 9315	LAL	1	PASI-PA



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92496518014	HGWC-109	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92496518015	HGWC-117	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92496518016	HGWC-118	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



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Lab Sample ID Method	Client Sample ID Parameters	Result	l Inita	Report Limit Analyzed Qualit	ioro
			Units	Report Limit Analyzed Qualif	
92496518001	HGWA-111				
EPA 9315	Radium-226	0.362 ± 0.241 (0.325)	pCi/L	09/30/20 07:07	
EPA 9320	Radium-228	C:95% T:NA 0.466 ± 0.560 (1.18) C:61%	pCi/L	10/26/20 15:11	
Total Radium Calculation	Total Radium	T:81% 0.828 ± 0.801 (1.51)	pCi/L	10/27/20 12:55	
92496518002	HGWA-112				
EPA 9315	Radium-226	0.109 ± 0.166 (0.355) C:92% T:NA	pCi/L	09/30/20 07:11	
EPA 9320	Radium-228	1.04 ± 0.612 (1.16) C:59% T:86%	pCi/L	10/07/20 13:25	
Total Radium Calculation	Total Radium	1.15 ± 0.778 (1.52)	pCi/L	10/19/20 11:59	
2496518003	HGWA-47				
EPA 9315	Radium-226	0.146 ± 0.166 (0.308) C:88% T:NA	pCi/L	09/30/20 07:11	
EPA 9320	Radium-228	0.964 ± 0.630 (1.19) C:68% T:80%	pCi/L	10/26/20 15:11	
Total Radium Calculation	Total Radium	1.11 ± 0.796 (1.50)	pCi/L	10/27/20 12:55	
2496518004	HGWA-48D				
EPA 9315	Radium-226	0.215 ± 0.258 (0.538) C:90% T:NA	pCi/L	09/30/20 07:11	
EPA 9320	Radium-228	1.28 ± 0.696 (1.30) C:68% T:74%	pCi/L	10/07/20 13:25	
Total Radium Calculation	Total Radium	1.50 ± 0.954 (1.84)	pCi/L	10/19/20 11:59	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92496518005	FB-04					
EPA 9315	Radium-226	0.0878 ± 0.157 (0.352) C:90% T:NA	pCi/L		09/30/20 07:11	
EPA 9320	Radium-228	0.412 ± 0.387 (0.789) C:69% T:84%	pCi/L		10/07/20 13:42	
Total Radium Calculation	Total Radium	0.500 ± 0.544 (1.14)	pCi/L		10/19/20 11:59	
92496518006	HGWA-113					
EPA 9315	Radium-226	0.241 ± 0.203 (0.330) C:89% T:NA	pCi/L		10/14/20 08:15	
EPA 9320	Radium-228	0.310 ± 0.353 (0.738) C:77% T:77%	pCi/L		10/15/20 11:06	
Total Radium Calculation	Total Radium	0.551 ± 0.556 (1.07)	pCi/L		10/20/20 09:06	
92496518007	HGWA-113 FILTERED					
EPA 9315	Radium-226	0.151 ± 0.194 (0.400) C:91% T:NA	pCi/L		10/14/20 06:37	
EPA 9320	Radium-228	0.172 ± 0.372 (0.822) C:81% T:78%	pCi/L		10/15/20 11:06	
Total Radium Calculation	Total Radium	0.323 ± 0.566 (1.22)	pCi/L		10/20/20 09:06	
92496518008	HGWC-102					
EPA 9315	Radium-226	0.187 ± 0.254 (0.539)	pCi/L		10/15/20 07:05	
EPA 9320	Radium-228	C:79% T:NÁ 1.23 ± 0.524 (0.860) C:68% T:85%	pCi/L		10/15/20 10:54	
Total Radium Calculation	Total Radium	1.65% 1.42 ± 0.778 (1.40)	pCi/L		10/20/20 09:06	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92496518009	HGWC-101					
EPA 9315	Radium-226	0.161 ± 0.254 (0.563)	pCi/L		10/15/20 07:05	
EPA 9320	Radium-228	C:85% T:NA 0.464 ± 0.468 (0.969) C:69%	pCi/L		10/15/20 11:12	
Total Radium Calculation	Total Radium	T:77% 0.625 ± 0.722 (1.53)	pCi/L		10/20/20 09:06	
2496518010	HGWC-103					
EPA 9315	Radium-226	0.188 ± 0.234 (0.488) C:93% T:NA	pCi/L		10/15/20 07:05	
EPA 9320	Radium-228	0.616 ± 0.436 (0.846) C:72% T:81%	pCi/L		10/15/20 11:12	
Total Radium Calculation	Total Radium	0.804 ± 0.670 (1.33)	pCi/L		10/20/20 09:06	
92496518011	HGWC-105					
EPA 9315	Radium-226	0.0383 ± 0.200 (0.515) C:85% T:NA	pCi/L		10/15/20 07:05	
EPA 9320	Radium-228	1.07 ± 0.555 (1.01) C:71% T:79%	pCi/L		10/15/20 11:12	
Total Radium Calculation	Total Radium	1.11 ± 0.755 (1.53)	pCi/L		10/20/20 09:06	
2496518012	FD-04					
EPA 9315	Radium-226	0.0497 ± 0.220 (0.550) C:92% T:NA	pCi/L		10/15/20 07:05	
EPA 9320	Radium-228	0.52% 1.NA 1.08 ± 0.586 (1.07) C:67% T:80%	pCi/L		10/15/20 11:31	
Total Radium Calculation	Total Radium	1.13 ± 0.806 (1.62)	pCi/L		10/20/20 10:07	

REPORT OF LABORATORY ANALYSIS

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Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92496518013	HGWC-107					
EPA 9315	Radium-226	0.355 ± 0.286 (0.518)	pCi/L		10/15/20 07:05	
EPA 9320	Radium-228	C:88% T:NA 0.221 ± 0.413 (0.905) C:72%	pCi/L		10/15/20 11:31	
Total Radium Calculation	Total Radium	T:79% 0.576 ± 0.699 (1.42)	pCi/L		10/20/20 10:07	
92496518014	HGWC-109					
EPA 9315	Radium-226	0.262 ± 0.257 (0.489) C:82% T:NA	pCi/L		10/15/20 07:07	
EPA 9320	Radium-228	0.322 ± 0.451 (0.968) C:71% T:80%	pCi/L		10/15/20 11:12	
Total Radium Calculation	Total Radium	0.584 ± 0.708 (1.46)	pCi/L		10/20/20 10:07	
92496518015	HGWC-117					
EPA 9315	Radium-226	0.0913 ± 0.181 (0.419) C:87% T:NA	pCi/L		10/15/20 07:32	
EPA 9320	Radium-228	0.0637 ± 0.424 (0.967) C:68% T:81%	pCi/L		10/15/20 11:12	
Total Radium Calculation	Total Radium	0.155 ± 0.605 (1.39)	pCi/L		10/20/20 10:07	
92496518016	HGWC-118					
EPA 9315	Radium-226	0.228 ± 0.259 (0.527)	pCi/L		10/15/20 07:06	
EPA 9320	Radium-228	C:86% T:NA 0.385 ± 0.408 (0.850) C:70%	pCi/L		10/15/20 11:14	
Total Radium Calculation	Total Radium	T:85% 0.613 ± 0.667 (1.38)	pCi/L		10/20/20 10:07	

REPORT OF LABORATORY ANALYSIS

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Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Sample: HGWA-111 PWS:	Lab ID: 924965 Site ID:	Collected: 09/18/20 09:43 Sample Type:	Received:	09/21/20 09:25	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	ervices - Greensburg				
Radium-226	EPA 9315	0.362 ± 0.241 (0.325) C:95% T:NA	pCi/L	09/30/20 07:07	7 13982-63-3	
	Pace Analytical Se	ervices - Greensburg				
Radium-228	EPA 9320	0.466 ± 0.560 (1.18) C:61% T:81%	pCi/L	10/26/20 15:11	15262-20-1	
	Pace Analytical Se	ervices - Greensburg				
Total Radium	Total Radium Calculation	0.828 ± 0.801 (1.51)	pCi/L	10/27/20 12:55	5 7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Sample: HGWA-112 PWS:	Lab ID: 9249 Site ID:	6518002 Collected: 09/18/20 11:39 Sample Type:	Received:	09/21/20 09:25	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.109 ± 0.166 (0.355) C:92% T:NA	pCi/L	09/30/20 07:11	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	1.04 ± 0.612 (1.16) C:59% T:86%	pCi/L	10/07/20 13:25	5 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	1.15 ± 0.778 (1.52)	pCi/L	10/19/20 11:59	7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Sample: HGWA-47 PWS:	Lab ID: 9249 Site ID:	6518003 Collected: 09/18/20 11:20 Sample Type:	Received:	09/21/20 09:25	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.146 ± 0.166 (0.308) C:88% T:NA	pCi/L	09/30/20 07:1	1 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.964 ± 0.630 (1.19) C:68% T:80%	pCi/L	10/26/20 15:11	1 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	1.11 ± 0.796 (1.50)	pCi/L	10/27/20 12:5	5 7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Sample: HGWA-48D PWS:	Lab ID: 9249651 Site ID:	8004 Collected: 09/18/20 11:06 Sample Type:	Received:	09/21/20 09:25	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Ser	vices - Greensburg				
Radium-226	EPA 9315	0.215 ± 0.258 (0.538) C:90% T:NA	pCi/L	09/30/20 07:1	1 13982-63-3	
	Pace Analytical Ser	vices - Greensburg				
Radium-228	EPA 9320	1.28 ± 0.696 (1.30) C:68% T:74%	pCi/L	10/07/20 13:25	5 15262-20-1	
	Pace Analytical Ser	vices - Greensburg				
Total Radium	Total Radium Calculation	1.50 ± 0.954 (1.84)	pCi/L	10/19/20 11:59	7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Sample: FB-04 PWS:	Lab ID: 9249 Site ID:	6518005 Collected: 09/18/20 16:40 Sample Type:	Received:	09/21/20 09:25	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.0878 ± 0.157 (0.352) C:90% T:NA	pCi/L	09/30/20 07:11	1 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.412 ± 0.387 (0.789) C:69% T:84%	pCi/L	10/07/20 13:42	2 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.500 ± 0.544 (1.14)	pCi/L	10/19/20 11:59	7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Sample: HGWA-113 PWS:	Lab ID: 9249 Site ID:	6518006 Collected: 09/22/20 11:30 Sample Type:	Received:	09/23/20 09:25	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.241 ± 0.203 (0.330) C:89% T:NA	pCi/L	10/14/20 08:1	5 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.310 ± 0.353 (0.738) C:77% T:77%	pCi/L	10/15/20 11:06	5 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.551 ± 0.556 (1.07)	pCi/L	10/20/20 09:00	6 7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Sample: HGWA-113 FILTERED PWS:	Lab ID: 924965 1 Site ID:	18007 Collected: 09/22/20 12:15 Sample Type:	Received:	09/23/20 09:25	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	rvices - Greensburg				
Radium-226	EPA 9315	0.151 ± 0.194 (0.400) C:91% T:NA	pCi/L	10/14/20 06:3	7 13982-63-3	
	Pace Analytical Se	rvices - Greensburg				
Radium-228	EPA 9320	0.172 ± 0.372 (0.822) C:81% T:78%	pCi/L	10/15/20 11:06	5 15262-20-1	
	Pace Analytical Se	rvices - Greensburg				
Total Radium	Total Radium Calculation	0.323 ± 0.566 (1.22)	pCi/L	10/20/20 09:00	6 7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Sample: HGWC-102 PWS:	Lab ID: 9249 Site ID:	6518008 Collected: 09/24/20 16:51 Sample Type:	Received:	09/25/20 10:45	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.187 ± 0.254 (0.539) C:79% T:NA	pCi/L	10/15/20 07:0	5 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	1.23 ± 0.524 (0.860) C:68% T:85%	pCi/L	10/15/20 10:54	4 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	1.42 ± 0.778 (1.40)	pCi/L	10/20/20 09:00	7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Sample: HGWC-101 PWS:	Lab ID: 9249 Site ID:	6518009 Collected: 09/24/20 13:25 Sample Type:	Received:	09/25/20 10:45	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.161 ± 0.254 (0.563) C:85% T:NA	pCi/L	10/15/20 07:05	5 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.464 ± 0.468 (0.969) C:69% T:77%	pCi/L	10/15/20 11:12	2 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.625 ± 0.722 (1.53)	pCi/L	10/20/20 09:06	6 7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Sample: HGWC-103 PWS:	Lab ID: 924965 Site ID:	18010 Collected: 09/24/20 18:30 Sample Type:	Received:	09/25/20 10:45	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	ervices - Greensburg				
Radium-226	EPA 9315	0.188 ± 0.234 (0.488) C:93% T:NA	pCi/L	10/15/20 07:0	5 13982-63-3	
	Pace Analytical Se	ervices - Greensburg				
Radium-228	EPA 9320	0.616 ± 0.436 (0.846) C:72% T:81%	pCi/L	10/15/20 11:12	2 15262-20-1	
	Pace Analytical Se	ervices - Greensburg				
Total Radium	Total Radium Calculation	0.804 ± 0.670 (1.33)	pCi/L	10/20/20 09:00	7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Sample: HGWC-105 PWS:	Lab ID: 92496 Site ID:	518011 Collected: 09/24/20 15:05 Sample Type:	Received:	09/25/20 10:45	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 9315	0.0383 ± 0.200 (0.515) C:85% T:NA	pCi/L	10/15/20 07:05	5 13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 9320	1.07 ± 0.555 (1.01) C:71% T:79%	pCi/L	10/15/20 11:12	2 15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	1.11 ± 0.755 (1.53)	pCi/L	10/20/20 09:06	6 7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Sample: FD-04 PWS:	Lab ID: 9249 Site ID:	6518012 Collected: 09/24/20 00:00 Sample Type:	Received:	09/25/20 10:45	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.0497 ± 0.220 (0.550) C:92% T:NA	pCi/L	10/15/20 07:05	5 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	1.08 ± 0.586 (1.07) C:67% T:80%	pCi/L	10/15/20 11:31	1 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	1.13 ± 0.806 (1.62)	pCi/L	10/20/20 10:07	7 7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Sample: HGWC-107 PWS:	Lab ID: 9249 Site ID:	6518013 Collected: 09/24/20 16:56 Sample Type:	Received:	09/25/20 10:45	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.355 ± 0.286 (0.518) C:88% T:NA	pCi/L	10/15/20 07:05	5 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.221 ± 0.413 (0.905) C:72% T:79%	pCi/L	10/15/20 11:31	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.576 ± 0.699 (1.42)	pCi/L	10/20/20 10:07	7 7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Sample: HGWC-109 PWS:	Lab ID: 924965 Site ID:	18014 Collected: 09/25/20 16:20 Sample Type:	Received:	09/28/20 09:40	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	ervices - Greensburg				
Radium-226	EPA 9315	0.262 ± 0.257 (0.489) C:82% T:NA	pCi/L	10/15/20 07:07	7 13982-63-3	
	Pace Analytical Se	ervices - Greensburg				
Radium-228	EPA 9320	0.322 ± 0.451 (0.968) C:71% T:80%	pCi/L	10/15/20 11:12	2 15262-20-1	
	Pace Analytical Se	ervices - Greensburg				
Total Radium	Total Radium Calculation	0.584 ± 0.708 (1.46)	pCi/L	10/20/20 10:07	7 7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Sample: HGWC-117 PWS:	Lab ID: 924965 ⁻² Site ID:	18015 Collected: 09/25/20 16:25 Sample Type:	Received:	09/28/20 09:40	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Se	rvices - Greensburg				
Radium-226	EPA 9315	0.0913 ± 0.181 (0.419) C:87% T:NA	pCi/L	10/15/20 07:32	2 13982-63-3	
	Pace Analytical Se	rvices - Greensburg				
Radium-228	EPA 9320	0.0637 ± 0.424 (0.967) C:68% T:81%	pCi/L	10/15/20 11:12	2 15262-20-1	
	Pace Analytical Se	rvices - Greensburg				
Total Radium	Total Radium Calculation	0.155 ± 0.605 (1.39)	pCi/L	10/20/20 10:07	7 7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Sample: HGWC-118 PWS:	Lab ID: 9249 Site ID:	26518016 Collected: 09/28/20 12:56 Sample Type:	Received:	09/29/20 08:55	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.228 ± 0.259 (0.527) C:86% T:NA	pCi/L	10/15/20 07:06	6 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.385 ± 0.408 (0.850) C:70% T:85%	pCi/L	10/15/20 11:14	1 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.613 ± 0.667 (1.38)	pCi/L	10/20/20 10:07	7 7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

QC Batch: 415405 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92496518001, 92496518002, 92496518003, 92496518004, 92496518005

METHOD BLANK: 2008975 Matrix: Water

Associated Lab Samples: 92496518001, 92496518002, 92496518003, 92496518004, 92496518005

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-228
 0.857 ± 0.536 (1.02) C:66% T:74%
 pCi/L
 10/07/20 10:40

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.



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

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: 92496518006, 92496518007

METHOD BLANK: 2016817 Matrix: Water

Associated Lab Samples: 92496518006, 92496518007

Act ± Unc (MDC) Carr Trac Units Analyzed Qualifiers Parameter 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.



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

QC Batch: 415404 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92496518001, 92496518002, 92496518003, 92496518004, 92496518005

METHOD BLANK: 2008974 Matrix: Water

Associated Lab Samples: 92496518001, 92496518002, 92496518003, 92496518004, 92496518005

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-226
 0.298 ± 0.243 (0.419) C:95% T:NA
 pCi/L
 09/30/20 07:06

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.



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

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: 92496518006, 92496518007

METHOD BLANK: 2016818 Matrix: Water

Associated Lab Samples: 92496518006, 92496518007

 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.



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

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: 92496518008, 92496518009, 92496518010, 92496518011, 92496518012, 92496518013, 92496518014,

92496518015, 92496518016

METHOD BLANK: 2016820 Matrix: Water

Associated Lab Samples: 92496518008, 92496518009, 92496518010, 92496518011, 92496518012, 92496518013, 92496518014,

92496518015, 92496518016

 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.



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

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: 92496518008, 92496518009, 92496518010, 92496518011, 92496518012, 92496518013, 92496518014,

92496518015, 92496518016

METHOD BLANK: 2016821 Matrix: Water

92496518008, 92496518009, 92496518010, 92496518011, 92496518012, 92496518013, 92496518014, Associated Lab Samples:

92496518015, 92496518016

Parameter Act ± Unc (MDC) Carr Trac Units Analyzed Qualifiers 0.369 ± 0.373 (0.768) C:73% T:75% 10/15/20 11:15 Radium-228 pCi/L

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.



QUALIFIERS

Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

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.

SAMPLE QUALIFIERS

Sample: 92496518001

[1] Sample re-analyzed due to the presence of radon daughter products causing elevated beta count rates which biased the Ra-228 activity result high. Re-analysis results reported.

Sample: 92496518003

Date: 10/30/2020 03:53 PM

[1] Sample re-analyzed due to the presence of radon daughter products causing elevated beta count rates which biased the Ra-228 activity result high. Re-analysis results reported.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Date: 10/30/2020 03:53 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytica Batch
92496518001	HGWA-111	EPA 9315	415404		
2496518002	HGWA-112	EPA 9315	415404		
2496518003	HGWA-47	EPA 9315	415404		
2496518004	HGWA-48D	EPA 9315	415404		
2496518005	FB-04	EPA 9315	415404		
2496518006	HGWA-113	EPA 9315	417134		
2496518007	HGWA-113 FILTERED	EPA 9315	417134		
2496518008	HGWC-102	EPA 9315	417136		
2496518009	HGWC-101	EPA 9315	417136		
2496518010	HGWC-103	EPA 9315	417136		
2496518011	HGWC-105	EPA 9315	417136		
2496518012	FD-04	EPA 9315	417136		
2496518013	HGWC-107	EPA 9315	417136		
2496518014	HGWC-109	EPA 9315	417136		
2496518015	HGWC-117	EPA 9315	417136		
2496518016	HGWC-118	EPA 9315	417136		
2496518001	HGWA-111	EPA 9320	415405		
2496518002	HGWA-112	EPA 9320	415405		
2496518003	HGWA-47	EPA 9320	415405		
2496518004	HGWA-48D	EPA 9320	415405		
2496518005	FB-04	EPA 9320	415405		
2496518006	HGWA-113	EPA 9320	417135		
2496518007	HGWA-113 FILTERED	EPA 9320	417135		
2496518008	HGWC-102	EPA 9320	417137		
2496518009	HGWC-101	EPA 9320	417137		
2496518010	HGWC-103	EPA 9320	417137		
2496518011	HGWC-105	EPA 9320	417137		
2496518012	FD-04	EPA 9320	417137		
2496518013	HGWC-107	EPA 9320	417137		
2496518014	HGWC-109	EPA 9320	417137		
2496518015	HGWC-117	EPA 9320	417137		
2496518016	HGWC-118	EPA 9320	417137		
2496518001	HGWA-111	Total Radium Calculation	420380		
2496518002	HGWA-112	Total Radium Calculation	419145		
2496518003	HGWA-47	Total Radium Calculation	420380		
2496518004	HGWA-48D	Total Radium Calculation	419145		
2496518005	FB-04	Total Radium Calculation	419145		
2496518006	HGWA-113	Total Radium Calculation	419263		
2496518007	HGWA-113 FILTERED	Total Radium Calculation	419263		
2496518008	HGWC-102	Total Radium Calculation	419263		
2496518009	HGWC-101	Total Radium Calculation	419263		
2496518010	HGWC-103	Total Radium Calculation	419263		
2496518011	HGWC-105	Total Radium Calculation	419263		



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92496518

Date: 10/30/2020 03:53 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92496518012	FD-04	Total Radium Calculation	419264		
92496518013	HGWC-107	Total Radium Calculation	419264		
92496518014	HGWC-109	Total Radium Calculation	419264		
92496518015	HGWC-117	Total Radium Calculation	419264		
92496518016	HGWC-118	Total Radium Calculation	419264		

Pace Analytical

Sample Condition Upon Rece

Client Name: 6 A Power

WO#:92496518

Courier: Fed Ex UPS USPS Clier Tracking #:	nt Commercia	Pace Othe	96518 Proj. p. c
Custody Seal on Cooler/Box Present: yes	no Sea	als intact: yes	no Proj. Name:
Packing Material: Bubble Wrap Bubble Thermometer Used Cooler Temperature Temp should be above freezing to 6°C	Type of Ice W	Other Blue None Le is Frozen: Yes No Comments:	Samples on ice, cooling process has begun Date and Ipigals of person examining contents:
Chain of Custody Present:	DYES DNo DN	/A 1.	
Chain of Custody Filled Out:	Yes ONO ON		
Chain of Custody Relinquished:	edge Joynati- mię wię	I/A 3.	
Sampler Name & Signature on COC:	Yes ONO ON	WA 4.	
Samples Arrived within Hold Time:	BYes □No □N	I/A 5.	
Short Hold Time Analysis (<72hr):	□Yes □No □N	1/A 6.	
Rush Turn Around Time Requested:	□Yes -□No □N	I/A 7.	
Sufficient Volume:	☐Yes □No □N	VA 8.	
Correct Containers Used:	er ONO ON	1/A 9.	
-Pace Containers Used:	Yes DNo DN	I/A	
Containers Intact:	Des DNo DN	VA 10.	
Filtered volume received for Dissolved tests	□Yes □No □4	HA 11.	
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix:	Wes ONO ON	I/A 12.	
All containers needing preservation have been checked. All containers needing preservation are found to be in compliance with EPA recommendation.	PYES (INO (IN	I/A Initial when	Lot # of added
exceptions: VOA, collform, TOC, O&G, WI-DRO (water)		completed	preservative
Samples checked for dechlorination:	Yes DNo QTA		
Headspace in VOA Vials (>6mm):	Yes No O		
Trip Blank Present: Trip Blank Custody Seals Present Pace Trip Blank Lot # (if purchased):	□Yes □No ☑N	16. 4/A	
Client Notification/ Resolution: Person Contacted: Comments/ Resolution:	Da	te/Time:	Field Data Required? Y / N
Project Manager Review:			Date:

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

F-ALLC003rev.3, 11September2006

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

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		Apr 111 2 IV Metals: As, Oa, Be, B, Cd, Ca, Cr, 6	L. Hg. MA. Se TI (MM)	reass note dry wets, strike fronch any wets not sampled, and note when the last sample for the event has been taken.	ADDITIONAL COMMENTS						Life Constitution			CISP-AAIM	WWW-47	HGWC-102	Δ.	WATER WATER WASTEWNER PRODUCT SOLUSOLID OIL OIL OIL OIL OIL OIL OIL OIL OIL OIL	Section D Valid Market MATRIX Required Client Information MATRIX Detaction of the control of the		Requested Due Date/TAT: 10 Day	Fig.	SCS Contacts		Atlanta, GA	GA Power	Required Client Information
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"important Note. By signing the form you are accepting Pace's NET 30 day payment forms and agreeng 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.

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'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.

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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.

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Requ	Section D Valid Matrix Codes Required Cleri Information MATRIX COI
_	DRINING WATER
ITEM#	300E
-	HGWA-111
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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

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

Pace Analytical memperature com

Quality Control Sample Performance Assessment

Ra-226	LAL 9/29/2020 56348 DW	
Test	Analyst Date: Worklist: Matrix:	

2008974 0.298 0.239 0.419 2.44 N/A Pass

M/B Counting Uncertainty: MB MDC;

MB Numerical Performance Indicator: MB Status vs Numerical Indicator: MB Status vs. MDC:

MB Sample ID MB concentration:

Method Blank Assessmen

Count Date: Spike I.D.:

Laboratory Control Sample Assessmen

Decay Corrected Spike Concentration (pCi/mL):

Volume Used (mL):

	Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
	Sample Collection Date:		
	Sample I.D.		
	Sample MS I.D.		
	Sample MSD I.D.		
	Spike I.D.:		
	MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
	Spike Volume Used in MS (mL):		
	Spike Volume Used in MSD (mL):		
	MS Aliquot (L, g, F):		
	MS Target Conc.(pCi/L, g, F):		
	MSD Aliquot (L, g, F):		
	MSD Target Conc. (pCi/L, g, F).		
	MS Spike Uncertainty (calculated):		
_	MSD Spike Uncertainty (calculated):	·	
	Sample Result:	•	
_	Sample Result Counting Uncertainty (pCl/L, g, F):		
	Sample Matrix Spike Result:		
_	Matrix Spike Result Counting Uncertainty (pCl/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:		

ימים לבוצה סובה ומווול (הפוכחים)	MSD Spike Uncertainty (calculated):	Sample Result:	Sample Result Counting Uncertainty (pCl/L, g, F):	Sample Matrix Spike Result:	Matrix Spike Result Counting Uncertainty (pCl/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:
	¥	LCSD56348	9/30/2020	19-033	24.044	0.10	0.513	4.688	0.056	4.064	0.714	-1.71	86.68%	A/N	Pass	125%	75%
	LCSD (Y or N)?	LCS56348	9/30/2020	19-033	24.044	0.10	0.506	4.749	0.057	4.576	0.754	-0.45	96.35%	A/N	Pass	125%	75%
	2																

Numerical Performance Indicator:

Percent Recovery:

Status vs Numerical Indicator.

Status vs Recovery.
Upper % Recovery Limits:
Lower % Recovery Limits:

Duplicate Sample Assessment

Aliquot Volume (L. g. F):
Target Cornc. (pC/kl. g. F):
Uncertainty (Calculated):
Result (pC/kl. g. F):
LCS/LCSD Counting Uncertainty (pC/kl. g. F):

LCS56348 LCSD56348 4.576 0.754 4.064 0.714 NO 0.966 10.56% N/A Pass 25%

Sample I.D.:
Duplicate Sample I.D.:
Sample Result (pCi/L, g, F):
Sample Result Counting Uncertainty (pCi/L, g, F):
Sample Duplicate Result (pCi/L, g, F):
Sample Duplicate Result (pCi/L, g, F):
Are sample and/or duplicate results below RL?

(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:

Duplicate Status vs Numerical Indicator:

Duplicate Status vs RPD:

% RPD Limit:

Duplicate Numerical Performance Indicator;

	O ())	2)1/01///
## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.	Comments:	

UAM 10/11/2020

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

MS/MSD 2

MS/MSD 1

Sample 1.D. Sample MS 1.D.

Sample Collection Date

Sample MSD I.D. Spike I.D.: MS/MSD Decay Corrected Spike Concentration (pCl/mL):

Spike Volume Used in MS (mil.): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F):

Sample Matrix Spike Control Assessment Ra-226 LAL Test: Analyst: Date:

Pace Analytical"

10/13/2020 Worklist: Matrix:

2016817 0.280 0.235 0.418 2.33 N/A Pass MB Sample ID MB concantration: M/B Counting Uncertainty: MB MDC: MB Numerical Performance Indicator, MB Status vs Numerical Indicator: MB Status vs. MDC Method Blank Assessment

	-		
MB Numerical Performance Indicator,	2.33		MS Target Conc.(pCi/L, g, F):
MB Status vs Numerical Indicator:	Α'N		MSD Aliquot (L, g, F):
MB Status vs. MDC:	Pass		MSD Target Conc. (pCVL, g, F):
			MS Spike Uncertainty (calculated):
rol Sample Assessment	LCSD (Y or N)?	\	MSD Spike Uncertainty (calculated):
•	LCS56591	LCSD56591	Sample Result:
Count Date:	10/14/2020	10/14/2020	Sample Result Counting Uncertainty (pCi/L, g, F):
Spike I.D.:	19-033	19-033	Sample Matrix Spike Result:
Decay Corrected Spike Concentration (pCi/mL):	24.044	24.044	Matrix Spike Result Counting Uncertainty (PCVL, g, F):
Volume Used (mL):	0.10	0.10	Sample Matrix Spike Duplicate Result:
Aliquot Volume (L, g, F):	0.512	0.510	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Target Conc. (pCi/L, g, F):	4.697	4.711	MS Numerical Performance Indicator:
Uncertainty (Calculated):	0,056	0.057	MSD Numerical Performance Indicator:
Result (pCi/L, g, F):	4,666	4.350	MS Percent Recovery:
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.761	0.758	MSD Percent Recovery:
Numerical Performance Indicator:	80,0	-0.93	MS Status vs Numerical Indicator:
Percent Recovery:	99.33%	92.35%	MSD Status vs Numerical Indicator:
Status vs Numerical Indicator:	ΑΝ	√,X	MS Status vs Recovery:
Status vs Recovery:	Pass	Pass	MSD Status vs Recovery:
Upper % Recovery Limits:	125%	125%	MS/MSD Upper % Recovery Limits:
Lower % Recovery Limits:	75%	75%	MS/MSD Lower % Recovery Limits:

Laboratory Control Sample Assessment

Duplicate Sample Assessment			Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample J.D.:	LCS56591	Enter Duplicate	Sample
Duplicate Sample I.D.	LCSD56591	sample iDs if	Sample MS
Sample Result (pCi/L, q, F):	4.666	other than	Sample MS[
Sample Result Counting Uncertainty (pCi/L, g, F):	0.761	LCS/LCSD in	Sample Matrix Spike R
Sample Duplicate Result (pCi/L, g, F):	4.350	the space below.	Matrix Spike Result Counting Uncertainty (pCi/L.
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.758		Sample Matrix Spike Duplicate R
Are sample and/or duplicate results below RL?	9		Matrix Spike Duplicate Result Counting Uncertainty (pCi/L,
Duplicate Numerical Performance Indicator:	0.577	92496904020	Duplicate Numerical Performance Indio
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	7.29%	92496904020DUP	(Based on the Percent Recoveries) MS/ MSD Duplicate
Duplicate Status vs Numerical Indicator:	N/A		MS/ MSD Duplicate Status vs Numerical India
Duplicate Status vs RPD:	Pass		MS/ MSD Duplicate Status vs
% RPD Limit:	25%		% RPD

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 Duplicate Numerical Performance Indicator

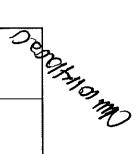
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): (Based on the Percent Recoveries) MS/ MSD Duplicate RPD:

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

Comments:

32/101 St

MS/ MSD Duplicate Status vs Numerical Indicator: MS/ MSD Duplicate Status vs RPD: % RPD Limit:



TAR_56591_W.xls Total Alpha Radium (R104-3 11Feb2019).xls

TAR DW QC Printed: 10/14/2020 9:59 AM

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Quality Control Sample Performance Assessment

Ra-226 LAL 10/13/2020 56591 DW Test: Analyst: Date: Worklist: Matrix:

MS/MSD 2

MS/MSD 1

Sample I.D. Sample MS I.D. Sample MSD I.D.

Spike LD.

Sample Collection Date:

Sample Matrix Spike Control Assessment

MS/MSD Decay Corrected Spike Concentration (pCi/mL):

Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL):

Analyst Must Manually Enter All Fields Highlighted in Yellow.

2016817 0,280 0,235 0,418 2.33 N/A MB concentration:
M/B Counting Uncertainty:
MB MDC: MB Numerical Performance Indicator: MB Status vs Numerical Indicator: MB Sample ID Method Blank Assessment

	z
Pass	LCSD (Y or N)?
MB Status vs. MDC:	Laboratory Control Sample Assessment

Court Date:

Spike I.D.

Spine Volume Used in MSD (int.). MS Aliquot (L, g, F):	MS Target Conc.(pCi/L, g, F):	MSD Aliquot (L, g, F);	MSD Target Conc. (pCi/L, g, F):	MS Spike Uncertainty (calculated):	MSD Spike Uncertainty (calculated):	Sample Result:	Sample Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Result:	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	MS Numerical Performance Indicator;	MSD Numerical Performance Indicator:	MS Percent Recovery:	MSD Percent Recovery:	MS Status vs Numerical Indicator:	MSD Status vs Numerical Indicator:	MS Status vs Recovery:	MSD Status vs Recovery:	MS/MSD Upper % Recovery Limits:	MS/MSD Lower % Recovery Limits:
					z	LCSD56591						•									

7/14/2020 19-033 24-044 0.10 0.512 0.055 4.666 0.761 -0.08 99.33% N/A Pass 125%

Uncertainty (Calculated):
Result (pCi/L, g. F):
LCS/LCSD Counting Uncertainty (pCi/L, g. F):

Numerical Performance Indicator:

Percent Recovery: Status vs Recovery: Upper % Recovery Limits: Lower % Recovery Limits:

Status vs Numerical Indicator

Duplicate Sample Assessment

Volume Used (mL): Aliquot Volume (L, g, F): Target Conc. (pCi/L, g, F):

Decay Corrected Spike Concentration (pCi/mL):

sate Sample Assessment		
Sample I.D.:	Sample I.D.: 92496904020	Enter Duplicate
Duplicate Sample I.D. 92496904020DUP	92496904020DUP	sample iDs if
Sample Result (pCi/L, g, F):	0.317	other than
Sample Result Counting Uncertainty (pCi/L, g, F):	0.241	LCS/LCSD in
Sample Duplicate Result (pCi/L, g, F):	0,374	the space below.
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.240	
Are sample and/or duplicate results below RL?	See Below 株	
Duplicate Numerical Performance Indicator;	-0.331	92496904020
Duplicate RPD:	16.61%	32496904020DUP
Duplicate Status vs Numerical Indicator:	A/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:

r In In In In In In In In In In In In In	Sample Mat Sample Matrix Spike Result Counting Uncertain Sample Matrix Spike D Matrix Spike Duplicate Result Counting Uncertain Duplicate Numerical Perform (Based on the Percent Recoveries) MS/ MSD MS/ MSD Duplicate Status vs Num MS/ MSD Duplicate Status vs Num	Sample I.D. Sample MS I.D. Sample MS I.D. strix Spike Result: anny (pCtd., g, F); Duplicate Result: mance Indicator: D Ouplicate RPD: mencial Indicator: e Sattury & RPD: e Sattury & RPD: e Sattury & RPD: e Sattury & RPD:
		Matrix Sp

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Jan 10/14/2020

TAR_56591_W.xls Total Alpha Radium (R104-3 11Feb2019).xls

1 of 1

TAR DW QC Printed: 10/14/2020 9:59 AM

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Quality Control Sample Performance Assessment

LAL 10/14/2020 Test Date

MS/MSD 2

MS/MSD 1

Sample MS I.D. Sample MSD I.D. Spike I.D.

Sample Collection Date Sample I.D.

Sample Matrix Spike Control Assessment

MS/MSD Decay Corrected Spike Concentration (pCi/mL):

Spike Volume Used in MS (mL):

Spike Volume Used in MSD (mL) MS Target Conc.(pCi/L, g, F):

MS Aliquot (L, g, F):

MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F):

Sample Result:

Analyst Must Manually Enter All Fields Highlighted in Yellow

56593 DW Analyst Worklist: Matrix:

2016820 0.127 -0.32 N/A Pass -0.021 MB Numerical Performance Indicator: MB Sample ID M/B Counting Uncertainty: MB MDC: MB Status vs Numerical Indicator: MB Status vs. MDC Method Blank Assessment

Laboratory Control Sample Assessmen

MS Spike Uncertainty (calculated): 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: MSD Spike Uncertainty (calculated): MS Percent Recovery MSD Percent Recovery. MS Status vs Numerical Indicator. MSD Status vs Numerical Indicator. Matrix Spike Result Counting Uncertainty (pCi/L, g, F) MSD Numerical Performance Indicator LCSD56593 0.10 -1.46 87.27% 24.044 0.10 0.508 4.737 0.057 4.134 0.806

Result (pC/I/L, g, F): LCS/LCSD Counting Uncertainty (pC/I/L, g, F): Numerical Performance Indicator;

Percent Recovery:

Status vs Numerical Indicator: Status vs Recovery

Upper % Recovery Limits: Lower % Recovery Limits:

Duplicate Sample Assessmen

Aliquot Volume (L, g, F): Target Conc. (pCi/L, g, F):

Volume Used (mL):

Decay Corrected Spike Concentration (pCi/mL):

Spike I.D.

Uncertainty (Calculated):

MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits: Matrix Spike/Matrix Spike Duplicate Sample Assessment Sample I.D.

MS Status vs Recovery

MSD Status vs Recovery

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):

LCS/LCSD in the space below.

0.155 -0.014 0.204

Sample Result (DCI/L., g, F):
Sample Result Counting Uncertainty (pCi/L., g, F):
Sample Duplicate Result (pCi/L., g, F):
Sample Duplicate Result (pCi/L., g, F):

other than

92495887027DUP

-0.019

92495887027

Sample I.D.: Duplicate Sample I.D.

92495887027

See Below 排 -0.035 -27.96%

Are sample and/or duplicate results below RL?

Duplicate Numerical Performance Indicator:

Duplicate RPD:

Duplicate Status vs Numerical Indicator:

N/A Pass 25%

Duplicate Status vs RPD: % RPD Limit:

Enter Duplicate sample IDs if Duplicate Numerical Performance Indicator:

MS/ MSD Dupilcate Status vs RPD: % RPD Limit: (Based on the Percent Recoveries) MS/ MSD Duplicate RPD: MS/ MSD Duplicate Status vs Numerical Indicator

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

Comments:

Printed: 10/21/2020 10:35 AM TAR DW QC

Quality Control Sample Performance Assessment

MS/MSD 2

MS/MSD

Sample I.D. Sample MS I.D. Sample MSD I.D.

Spike 1.D.

MS/MSD Decay Corrected Spike Concentration (pCl/mL):

Spike Volume Used in MS (mL):

Sample Collection Date:

Sample Matrix Spike Control Assessment

Spike Volume Used in MSD (mL):
MS Aliquot (L, g, F):
MS Target Conc.(pC/L, g, F):
MSD Target Conc. (pC/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:

Sample Result:

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Ra-228 VAL. 9/29/2020 56349 WT		2008975	0.857	0.536	1.016	3.14	Fail*	Pass
Test: Analyst: Date: Worklist: Matrix:		MB Sample ID	MB concentration:	M/B 2 Sigma CSU:	MB MDC:	MB Numerical Performance Indicator:	MB Status vs Numerical Indicator:	MB Status vs. MDC:
E C	-							

Method Blank Assessment

1	C114.20	,
ssment	CSD (Y or N)?	-
	LCS56349	LCSD56349
Count Date:	10/7/2020	10/7/2020
Spike I.D.:	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL):	38.119	38.119
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.816	0.804
Target Conc. (pCi/L, g, F):	4.670	4.742
Uncertainty (Calculated):	0.229	0.232

le Assessment	LCSD (Y or N)?	>
	LCS56349	LCSD56349
Count Date:	10/7/2020	10/7/2020
Spike I.D.:	20-030	20-030
Corrected Spike Concentration (pCi/mL):	38.119	38.119
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.816	0.804
Target Conc. (pCi/L, g, F):	4.670	4.742
Uncertainty (Calculated):	0.229	0.232
Result (pCi/L, g, F):	4,366	5.332
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.021	1,251
Numerical Performance Indicator:	-0.57	0.91
Percent Recovery:	93.48%	112.43%
Status vs Numerical Indicator:	Α/N	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	%09	%09

Matrix Spike/Matrix Spike Duplicate Sample Assessment	Sample I.D.	Sample MS I.D.	Sample MSD 1.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

LCS/LCSD in the space below.

1.021 5.332 1.251 NO -1.172 18.40%

Sample Result 2 Sigma CSU (pCiA., 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:

(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD

Pass

Duplicate Status vs RPD

Duplicate Status vs Numerical Indicator

Enter Duplicate sample IDs if other than

LCSD56349

Sample I.D.: Duplicate Sample I.D.

Duplicate Sample Assessment

Sample Result (pCi/L, g, F):

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.



10/16/2020 56592 WT Ra-228 Š Test Analyst: Date: Worklist: Matrix:

MB Sample ID

Method Blank Assessment

MB concentration: M/B 2 Sigma CSU: MB MDC MB Numerical Performance Indicator: MB Status vs Numerical Indicator: MB Status vs. MDC:

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Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow

MS/MSD 2 MS/MSD 1 Sample I.D. Sample MS I.D. Sample MSD I.D. MS Target Conc.(pCi/L, g, F): MSD Target Conc. (pCi/L, g, F): Sample Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Result: MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): MS Aliquot (L, g, F): MS Spike Uncertainty (calculated): Sample 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 Status vs Numerical Indicator: MSD Status vs Numerical Indicator: Sample Collection Date Spike Volume Used in MSD (mL) MSD Spike Uncertainty (calculated) MS Numerical Performance Indicator MS Percent Recovery MSD Percent Recovery MS Status vs Recovery MSD Numerical Performance Indicator MSD Status vs Recovery Sample Matrix Spike Control Assessment 20-030 37.968 0.10 0.836 4.542 0.223 4.409 1.018 -0.25

MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits

₹

ĕ

Percent Recovery. Status vs Numerical Indicator: Status vs Recovery:

Upper % Recovery Limits: Lower % Recovery Limits:

Duplicate Sample Assessment

10/19/2020 20-030 37.968 0.10 0.813 4.670 4.645 1.050 -0.04

Aliquot Volume (L, g, F): Target Conc. (pCi/L, g, F):

Uncertainty (Calculated): Result (pCi/L, g, F):

LCS/LCSD 2 Sigma CSU (PCi/L, g, F) Numerical Performance Indicator.

Volume Used (mL):

Spike I.D.:

Decay Corrected Spike Concentration (pCi/mL):

Laboratory Control Sample Assessment

plicate Sample Assessment			Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.:	LCS56592	Enter Duplicate	Sample
Duplicate Sample I.D.	LCSD56592	sample IDs if	Sample MS
Sample Result (pCi/L, g, F):	4.645	other than	Sample MSI
Sample Result 2 Sigma CSU (pCi/L, g, F):	1,050	LCS/LCSD in	Sample Matrix Spike Re
Sample Duplicate Result (pCi/L, g, F):	4.409	the space below.	Matrix Spike Result 2 Sigma CSU (pCi/L,
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.018		Sample Matrix Spike Duplicate Re
Are sample and/or duplicate results below RL?	N N		Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L,
Duplicate Numerical Performance Indicator:	0.317		Duplicate Numerical Performance Indic
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	2.46%		(Based on the Percent Recoveries) MS/ MSD Duplicate I
Duplicate Status vs Numerical Indicator:	Pass		MS/ MSD Duplicate Status vs Numerical Indic
Duplicate Status vs RPD:	Pass		MS/ MSD Duplicate Status vs
HE! 1 CON %	7055		Cdd %

Sample I.D. Sample MSI.D. Sample MSI.D. Sample MSI.D. Sample Matrix Spike Result Sample Matrix Spike Result Matrix Spike Pesult 2 Signa CSU (pCi/L. g, F): Sample Matrix Spike Duplicate Result Duplicate Result 2 Signa 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: MS/ MSD Duplicate Status vs RPD: % RPD Limit:
DC.

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MD

Comments:

6 of 10

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Quality Control Sample Performance Assessment

VAL 10/13/2020 Ra-228 56592 WT

2016818 0.274 0.291 0.602 1.85 Pass

MB concentration: MB 2 Sigma CSU: MB MDC:

MB Numerical Performance Indicator: MB Status vs Numerical Indicator; MB Status vs. MDC:

MB Sample ID

Method Blank Assessment

Test. Analyst. Date: Worklist: Matrix:

Sample Matrix Spike Control Assessment	MS/MSD 1	Σ
Sample Collection Date:		

Analyst Must Manually Enter All Fields Highlighted in Yellow.

	Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
	Sample Collection Date:		
	Sample I.D.		
	Sample MS I.D.		
	Sample MSD I.D.		
	Spike I.D.:		
	MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
	Spike Volume Used in MS (mL):		
	Spike Volume Used in MSD (mL):		
	MS Aliquot (L, g, F):		
	MS Target Conc.(pCi/L, g, F):		
	MSD Aliquot (L, g, F):		
	MSD Target Conc. (pCi/L, g, F):		
	MS Spike Uncertainty (calculated):		
_	MSD Spike Uncertainty (calculated):		
	Sample Result:		
	Sample Result 2 Sigma CSU (pCi/L, g, F):		
	Sample Matrix Spike Result:		
	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:		

							_									
Y	LCSD56592	10/15/2020	20-030	38.018	0.10	0.836	4.548	0,223	2.963	0.764	3.91	65.14%	N/A	Pass	135%	%09
CCSD (Y or N)?	LCS56592	10/15/2020	20-030	38.018	0,10	0.813	4.676	0.229	2.226	0.629	-7.18	47,60%	Failt	Fail Low**	135%	%09
Laboratory Control Sample Assessment		Count Date:	Spike I.D.:	Decay Corrected Spike Concentration (pCi/mL):	Volume Used (mL):	Aliquot Volume (1, g, F):	Target Conc. (pCi/L, g, F):	Uncertainty (Calculated):	Result (pCi/L, g, F):	LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	Numerical Performance Indicator:	Percent Recovery:	Status vs Numerical Indicator:	Status vs Recovery:	Upper % Recovery Limits:	Lower % Recovery Limits:

Matrix Spike/Matrix Spike Duplicate Sample Assessment	Enter Duplicate Sample 1.D.	sample IDs if Sample MS I.D.	other than Sample MSD 1.D.	LCS/LCSD in Sample Matrix Spike Result:	the space below.	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:
	LCS56592	LCSD56592	2.226	0.629	2.963	0.764	9 N	-1.460	31,10%	Pass	Pass	36%
plicate 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:	(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	Duplicate Status vs Numerical Indicator:	Duplicate Status vs RPD:	% RPD Limit

tus vs Numerical Indicator. D Duplicate Status vs RPD: % RPD Limit:

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

Duplicate Sample Assessment

Comments:

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

6 of 10

Quality Control Sample Performance Assessment

10/13/2020 56594 WT Ϋ́ Test: Worklist: Matrix: Date Analyst:

Pace Analytical

MS/MSD 2

MS/MSD 1

Sample I.D. Sample MS I.D. Sample MSD I.D.

Spike I.D.:

Sample Collection Date:

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 Target Conc. (pCi/L, g, F):

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment

2016821 0.359

(Yor N)? 0.373 0.768 1.94 Pass Pass MB Status vs Numericel Indicator: MB Status vs. MDC Laboratory Control Sample Assessment

MB Numerical Performance Indicator:

MB MDC:

MB Sample ID

Method Blank Assessment

MB concentration: M/B 2 Sigma CSU

Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result: A Sigma CSU (pCl/L, g, F): Sample Result 2 Sigma CSU (pCl/L, g, F): Sample Matrix Spike Result. Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated): MS Status vs Numerical Indicator MSD Status vs Numerical Indicator MS/MSD Upper % Recovery Limits MS/MSD Lower % Recovery Limits MS Numerical Performance Indicator MSD Numerical Performance Indicator 0/15/2020 20-030 38.016 0.10 0.815 4.867 0.229 1.152 0.38 104.82% 1.152 0.38 LCS56594 10/15/2020 20-030 38.018 0.10 0.813 4.674 6.229 3.952 0.918 -1.49 84.57% N/A Aliquot Volume (L, g, F): Target Conc. (pCi/L, g, F): Result (pCi/L, g, F): LCS/LCSD 2 Sigma CSU (pCi/L, g, F): Upper % Recovery Limits: Count Date: Spike I.D.: Decay Corrected Spike Concentration (pCt/mL): Volume Used (mL): Uncertainty (Calculated): Numerical Performance Indicator: Percent Recovery: Status vs Recovery: Status vs Numerical Indicator Lower % Recovery Limits

MS Percent Recovery: MSD Percent Recovery: MS Status vs Recovery MSD Status vs Recovery

Sample Result

Sample I.D. Sample MS I.D. Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCI/I, g, F): Sample MSD I.D. Sample Matrix Spike Result: Matrix Spike 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 Matrix Spike/Matrix Spike Duplicate Sample Assessment Enter Duplicate he space below LCS/LCSD in sample iDs if other than

LCS56594 LCSD56594

Sample I.D.: Duplicate Sample I.D.

Duplicate Sample Assessment

3.952

0.918

Sample Result 2 Sigma CSU (pCi/L, g. F):

Sample Result (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?

1.152

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.

Duplicate Status vs RPD:

% RPD Limit

NO -1.250 21.38% Pass Pass 36%

Duplicate Numerical Performance Indicator: (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: Duplicate Status vs Numerical Indicator:

Ra-228 NELAC DW2 Printed: 10/16/2020 8:20 AM

Ra-228_56594_W.xls Ra-228 (R086-8 04Sep2019).xls

November 2020





November 30, 2020

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

RE: Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

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

Ken Herry

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.





CERTIFICATIONS

Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

Pace Analytical Services Charlotte

9800 Kincey Ave. Ste 100, Huntersville, NC 28078 Louisiana/NELAP Certification # LA170028 North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342 North Carolina Wastewater Certification #: 12

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804 Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

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

South Carolina Certification #: 99006001

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

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

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

Virginia Certification #: 460204



SAMPLE SUMMARY

Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

Lab ID	Sample ID	Matrix	Date Collected	Date Received	
92505478001	HGWA-47	Water	11/10/20 12:44	11/11/20 12:12	
92505478002	EB-01	Water	11/10/20 16:10	11/11/20 12:12	
92505478003	HGWA-48D	Water	11/11/20 10:10	11/12/20 16:47	



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92505478001	HGWA-47	EPA 6010D	— <u>———</u> КН	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92505478002	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
92505478003	HGWA-48D	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



SUMMARY OF DETECTION

Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92505478001	HGWA-47					
	Performed by	CUSTOME R			11/11/20 17:42	
	рН	7.34	Std. Units		11/11/20 17:42	
EPA 6010D	Calcium	73.3	mg/L	1.0	11/19/20 01:41	M1
EPA 6020B	Barium	0.027	mg/L	0.010	11/19/20 19:09	
EPA 6020B	Boron	0.0064J	mg/L	0.10	11/19/20 19:09	
EPA 6020B	Lithium	0.0028J	mg/L	0.030	11/19/20 19:09	
SM 2450C-2011	Total Dissolved Solids	229	mg/L	10.0	11/13/20 14:22	
EPA 300.0 Rev 2.1 1993	Chloride	2.7	mg/L	1.0	11/14/20 17:02	
EPA 300.0 Rev 2.1 1993	Fluoride	0.065J	mg/L	0.10	11/14/20 17:02	
EPA 300.0 Rev 2.1 1993	Sulfate	2.3	mg/L	1.0	11/14/20 17:02	
92505478002	EB-01					
SM 2450C-2011	Total Dissolved Solids	13.0	mg/L	10.0	11/13/20 14:21	
2505478003	HGWA-48D					
	Performed by	CUSTOME R			11/13/20 11:10	
	рН	7.40	Std. Units		11/13/20 11:10	
EPA 6010D	Calcium	61.3	mg/L	1.0	11/19/20 03:25	
EPA 6020B	Antimony	0.00031J	mg/L	0.0030	11/19/20 20:01	В
EPA 6020B	Barium	0.078	mg/L	0.010	11/19/20 20:01	
EPA 6020B	Boron	0.014J	mg/L	0.10	11/19/20 20:01	
EPA 6020B	Lithium	0.0036J	mg/L	0.030	11/19/20 20:01	
EPA 6020B	Molybdenum	0.0012J	mg/L	0.010	11/19/20 20:01	
SM 2450C-2011	Total Dissolved Solids	221	mg/L	10.0	11/17/20 16:04	
EPA 300.0 Rev 2.1 1993	Chloride	2.6	mg/L	1.0	11/18/20 06:11	
EPA 300.0 Rev 2.1 1993	Fluoride	0.083J	mg/L	0.10	11/18/20 06:11	
EPA 300.0 Rev 2.1 1993	Sulfate	4.5	mg/L	1.0	11/18/20 06:11	



ANALYTICAL RESULTS

Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

Date: 11/30/2020 04:07 PM

Sample: HGWA-47	Lab ID:	92505478001	Collecte	ed: 11/10/20	12:44	Received: 11/	11/20 12:12 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte						
Performed by	CUSTOME R				1		11/11/20 17:42		
pH	7.34	Std. Units			1		11/11/20 17:42		
6010D ATL ICP	•	Method: EPA 6				PA 3010A			
Calcium	73.3	mg/L	1.0	0.070	1	11/17/20 11:51	11/19/20 01:41	7440-70-2	M1
6020 MET ICPMS	Analytical	Method: EPA 6	6020B Prep	paration Met	hod: EF	A 3005A			
	Pace Ana	lytical Services	- Peachtre	e Corners, 0	βA				
Antimony	ND	mg/L	0.0030	0.00028	1	11/19/20 08:40	11/19/20 19:09	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	11/19/20 08:40	11/19/20 19:09		
Barium	0.027	mg/L	0.010	0.00071	1	11/19/20 08:40	11/19/20 19:09		
Beryllium	ND	mg/L	0.0030	0.000046	1	11/19/20 08:40	11/19/20 19:09		
Boron	0.0064J	mg/L	0.10	0.0052	1	11/19/20 08:40	11/19/20 19:09		
Cadmium	ND	mg/L	0.0025	0.00012	1	11/19/20 08:40	11/19/20 19:09		
Chromium	ND	mg/L	0.010	0.00055	1	11/19/20 08:40	11/19/20 19:09		
Cobalt	ND	mg/L	0.0050	0.00038	1	11/19/20 08:40	11/19/20 19:09		
Lead	ND	mg/L	0.0050	0.000036	1	11/19/20 08:40	11/19/20 19:09		
Lithium	0.0028J	mg/L	0.030	0.00081	1	11/19/20 08:40	11/19/20 19:09		
Molybdenum	ND	mg/L	0.010	0.00069	1	11/19/20 08:40	11/19/20 19:09		
Selenium	ND	mg/L	0.010	0.0016	1	11/19/20 08:40	11/19/20 19:09		
Thallium	ND	mg/L	0.0010	0.00014	1	11/19/20 08:40	11/19/20 19:09		
7470 Mercury	Analytical	Method: EPA	7470A Prei	paration Met	hod: EF	A 7470A			
	•	lytical Services							
Mercury	ND	mg/L	0.00050	0.000078	1	11/16/20 08:00	11/18/20 14:04	7439-97-6	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Ana	lytical Services	- Peachtre	e Corners, (βA				
Total Dissolved Solids	229	mg/L	10.0	10.0	1		11/13/20 14:22		
300.0 IC Anions 28 Days	•	Method: EPA 3		2.1 1993					
Chloride	2.7	mg/L	1.0	0.60	1		11/14/20 17:02	16887-00-6	
Fluoride	0.065J	mg/L	0.10	0.050	1		11/14/20 17:02		
Sulfate	2.3	mg/L	1.0	0.50	1		11/14/20 17:02		



ANALYTICAL RESULTS

Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

Date: 11/30/2020 04:07 PM

Sample: EB-01	Lab ID: 92505478002 Collected: 11/10/20 16:10 Received: 11/11/20 12:12 Matrix: Wa							atrix: Water			
			Report								
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua		
6010D ATL ICP	Analytical I	Method: EPA 6	010D Pre	paration Me	thod: EF	A 3010A					
	Pace Analy	tical Services	- Peachtre	e Corners, 0	SΑ						
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 I	Method: EPA 6	020B Pre	paration Met	hod: EF	A 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			
₋ead	ND	mg/L	0.0050	0.000036	1	11/19/20 08:40	11/19/20 18:52	7439-92-1			
ithium	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			
⁻ hallium	ND	mg/L	0.0010	0.00014	1	11/19/20 08:40	11/19/20 18:52	7440-28-0			
7470 Mercury	Analytical I	Method: EPA 7	470A Pre	paration Met	hod: EP	A 7470A					
	Pace Analy	tical Services	- Peachtre	e Corners, 0	3A						
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 I	Method: SM 24	150C-2011								
	Pace Analy	tical Services	- Peachtre	e Corners, 0	3A						
Total Dissolved Solids	13.0	mg/L	10.0	10.0	1		11/13/20 14:21				
300.0 IC Anions 28 Days	Analytical I	Method: EPA 3	00.0 Rev 2	2.1 1993							
	Pace Analy	tical 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				



ANALYTICAL RESULTS

Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

Date: 11/30/2020 04:07 PM

Sample: HGWA-48D	Lab ID:	92505478003	Collecte	ed: 11/11/20	10:10	Received: 11/	/12/20 16:47 N	latrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte						
Performed by	CUSTOME R				1		11/13/20 11:10)	
pH	7.40	Std. Units			1		11/13/20 11:10)	
6010D ATL ICP	•	Method: EPA 6 lytical Services				PA 3010A			
Calcium	61.3	mg/L	1.0	0.070	1	11/18/20 15:19	11/19/20 03:25	7440-70-2	
6020 MET ICPMS	•	Method: EPA 6				PA 3005A			
	Pace Ana	lytical Services	- Peachtre	e Corners, (Aخ				
Antimony	0.00031J	mg/L	0.0030	0.00028	1	11/19/20 08:40	11/19/20 20:01		В
Arsenic	ND	mg/L	0.0050	0.00078	1	11/19/20 08:40	11/19/20 20:01	7440-38-2	
Barium	0.078	mg/L	0.010	0.00071	1	11/19/20 08:40	11/19/20 20:01	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	11/19/20 08:40	11/19/20 20:01	7440-41-7	
Boron	0.014J	mg/L	0.10	0.0052	1	11/19/20 08:40	11/19/20 20:01	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	11/19/20 08:40	11/19/20 20:01	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	11/19/20 08:40	11/19/20 20:01	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	11/19/20 08:40	11/19/20 20:01	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	11/19/20 08:40	11/19/20 20:01	7439-92-1	
Lithium	0.0036J	mg/L	0.030	0.00081	1	11/19/20 08:40	11/19/20 20:01	7439-93-2	
Molybdenum	0.0012J	mg/L	0.010	0.00069	1	11/19/20 08:40	11/19/20 20:01		
Selenium	ND	mg/L	0.010	0.0016	1	11/19/20 08:40	11/19/20 20:01		
Thallium	ND	mg/L	0.0010	0.00014	1	11/19/20 08:40	11/19/20 20:01		
7470 Mercury	Analytical	Method: EPA 7	7470A Prep	paration Met	thod: EF	A 7470A			
	Pace Ana	lytical Services	- Peachtre	e Corners, 0	GΑ				
Mercury	ND	mg/L	0.00050	0.000078	1	11/16/20 08:00	11/18/20 14:26	7439-97-6	
2540C Total Dissolved Solids	Analytical	Method: SM 24	450C-2011						
	Pace Ana	lytical Services	- Peachtre	e Corners, 0	GΑ				
Total Dissolved Solids	221	mg/L	10.0	10.0	1		11/17/20 16:04	ļ	
300.0 IC Anions 28 Days	•	Method: EPA 3 lytical Services		2.1 1993					
Chloride	2.6	mg/L	1.0	0.60	1		11/18/20 06:11	16887-00-6	
Fluoride	0.083J	mg/L	0.10	0.050	1		11/18/20 06:11		
Sulfate	4.5	mg/L	1.0	0.50	1		11/18/20 06:11		



Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

Date: 11/30/2020 04:07 PM

QC Batch: 580529 QC Batch Method: EPA 3010A

Analysis Method:

10A Analysis Description:

Laboratory:

6010D ATL
Pace Analytical Services - Peachtree Corners, GA

EPA 6010D

Associated Lab Samples: 92505478002

METHOD BLANK: 3070802 Matrix: Water

Associated Lab Samples: 92505478002

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Calcium mg/L ND 1.0 0.070 11/19/20 06:54

LABORATORY CONTROL SAMPLE: 3070803

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Calcium mg/L 1.1 112 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3070804 3070805

MS MSD

92505541005 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec **RPD** RPD Qual Limits 9170 ug/L 20 M1 Calcium mg/L 1 173 169 16300 16000 75-125

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.



Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

Date: 11/30/2020 04:07 PM

QC Batch: 580692 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92505478001

METHOD BLANK: 3071703 Matrix: Water

Associated Lab Samples: 92505478001

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Calcium mg/L ND 1.0 0.070 11/19/20 01:20

LABORATORY CONTROL SAMPLE: 3071704

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Calcium mg/L 1.0 102 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3071705 3071706

MS MSD

92505478001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Result 73.3 75.0 172 20 M1 Calcium mg/L 73.5 17 75-125

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.



Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

Date: 11/30/2020 04:07 PM

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: 92505478003

METHOD BLANK: 3074651 Matrix: Water

Associated Lab Samples: 92505478003

 Parameter
 Units
 Blank Reporting Result
 Limit
 MDL
 Analyzed
 Qualifiers

 Calcium
 mg/L
 ND
 1.0
 0.070
 11/19/20 02:12

Calcium 111g/L 14D 1.0 0.070 11/19/20 02.12

LABORATORY CONTROL SAMPLE: 3074652

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Calcium mg/L 1.0 103 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3074653 3074654

MS MSD

92505496006 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec **RPD** RPD Qual Limits 133 130 20 M1 Calcium mg/L 129 -299 -430 75-125

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.



Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

Date: 11/30/2020 04:07 PM

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: 92505478001, 92505478002, 92505478003

METHOD BLANK: 3075459 Matrix: Water

Associated Lab Samples: 92505478001, 92505478002, 92505478003

		Blank	Reporting				
Parameter	Units	Result	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					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% 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							
			MS	MSD								
		92505482033	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	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	

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.



Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

Date: 11/30/2020 04:07 PM

MATRIX SPIKE & MATRIX	SPIKE DUPLIC	CATE: 3075	. • .		3075462							
Parameter	g Units	2505482033 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	ND	0.1	0.1	0.11	0.11	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	

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.



Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

Date: 11/30/2020 04:07 PM

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: 92505478001, 92505478002, 92505478003

METHOD BLANK: 3071454 Matrix: Water

Associated Lab Samples: 92505478001, 92505478002, 92505478003

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Mercury mg/L ND 0.00050 0.000078 11/17/20 13:51

LABORATORY CONTROL SAMPLE: 3071455

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3071456 3071457

MS MSD

92505989001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Result Result % Rec % Rec **RPD** RPD Qual Conc. Limits 0.0025 0.0030 101 20 Mercury mg/L 0.45 ug/L 0.0025 0.0029 97 75-125 3

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.



Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

QC Batch: 580276 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: 92505478001

METHOD BLANK: 3069492 Matrix: Water

Associated Lab Samples: 92505478001

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 10.0 11/13/20 14:19

LABORATORY CONTROL SAMPLE: 3069493

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units **Total Dissolved Solids** mg/L 400 403 101 84-108

SAMPLE DUPLICATE: 3069494

92505565001 Dup Max
Parameter Units Result ReD RPD Qualifiers

Total Dissolved Solids mg/L 385 388 1 10

SAMPLE DUPLICATE: 3069495

Date: 11/30/2020 04:07 PM

92505474003 Dup Max RPD RPD Parameter Units Result Result Qualifiers Total Dissolved Solids 287 293 2 10 mg/L



Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

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: 92505478003

METHOD BLANK: 3072613 Matrix: Water

Associated Lab Samples: 92505478003

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 10.0 11/17/20 16:03

LABORATORY CONTROL SAMPLE: 3072614

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units **Total Dissolved Solids** 400 411 103 84-108 mg/L

SAMPLE DUPLICATE: 3072616

92506106002 Dup Max Parameter Units Result Result **RPD RPD** Qualifiers 62.0 **Total Dissolved Solids** mg/L 3 64.0 10

SAMPLE DUPLICATE: 3072820

Date: 11/30/2020 04:07 PM

92506187002 Dup Max RPD RPD Parameter Units Result Result Qualifiers Total Dissolved Solids 196 209 6 10 mg/L



Project:

HAMMOND AP-4 BKG 02

Pace Project No.:

92505478

QC Batch:

580949

QC Batch Method: SM 2450C-2011 Analysis Method:

SM 2450C-2011

Analysis Description:

2540C Total Dissolved Solids

Laboratory:

Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples:

Matrix: Water

Associated Lab Samples:

METHOD BLANK: 3072818

92505478002

92505478002

Blank Result Reporting Limit

403

Analyzed

Qualifiers

Total Dissolved Solids

Total Dissolved Solids

Date: 11/30/2020 04:07 PM

Units mg/L

ND

10.0

10.0 11/13/20 14:19

LABORATORY CONTROL SAMPLE:

Parameter

3072819

Spike Conc.

LCS Result

LCS % Rec % Rec Limits

Qualifiers

Parameter

Units mg/L

400

101

MDL

84-108



Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

Date: 11/30/2020 04:07 PM

QC Batch: 580375

QC Batch Method: EPA 300.0 Rev 2.1 1993

Analysis Method: EPA 300.0 Rev 2.1 1993

Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92505478001, 92505478002

METHOD BLANK: 3070250 Matrix: Water

Associated Lab Samples: 92505478001, 92505478002

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND 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					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% 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 SP	IKE DUPL	ICATE: 3070	252		3070253							
			MS	MSD								
		92505439001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD _	Qual
Chloride	mg/L	15.5	50	50	65.1	67.1	99	103	90-110	3	10	
Fluoride	mg/L	9.9	2.5	2.5	1.5	11.3	-333	58	90-110	152	10 N	/16,R1
Sulfate	mg/L	635	50	50	275	677	-721	83	90-110	85	10 N	/16,R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3070254 3070255													
			MS	MSD									
		92505478001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max		
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual	
Chloride	mg/L	2.7	50	50	53.8	54.8	102	104	90-110	2	10		
Fluoride	mg/L	0.065J	2.5	2.5	2.7	2.8	105	108	90-110	3	10		
Sulfate	mg/L	2.3	50	50	52.6	53.9	101	103	90-110	2	10		

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



Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

Date: 11/30/2020 04:07 PM

QC Batch: 580771

QC Batch Method: EPA 300.0 Rev 2.1 1993

Analysis Method: EPA 300.0 Rev 2.1 1993

Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92505478003

METHOD BLANK: 3071887 Matrix: Water

Associated Lab Samples: 92505478003

LADODATORY CONTROL SAMPLE: 2071000

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.	307 1000					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% 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 SP	IKE DUPLI	CATE: 3071	889		3071890							
			MS	MSD								
		92506020008	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	ND	50	50	52.0	52.2	104	104	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.4	2.6	97	103	90-110	7	10	
Sulfate	mg/L	ND	50	50	51.4	51.5	103	103	90-110	0	10	

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 3071	891		3071892							
			MS	MSD								
		92506244005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc. Conc.		Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	2.2	50	50	54.1	54.4	104	104	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.3	2.5	92	99	90-110	7	10	
Sulfate	mg/L	ND	50	50	51.3	51.5	102	102	90-110	0	10	

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



QUALIFIERS

Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

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

Date: 11/30/2020 04:07 PM

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.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 BKG 02

Pace Project No.: 92505478

Date: 11/30/2020 04:07 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92505478001 92505478003	HGWA-47 HGWA-48D				
92505478001	HGWA-47	EPA 3010A	580692	EPA 6010D	580943
92505478002	EB-01	EPA 3010A	580529	EPA 6010D	580567
92505478003	HGWA-48D	EPA 3010A	581313	EPA 6010D	581362
92505478001 92505478002 92505478003	HGWA-47 EB-01 HGWA-48D	EPA 3005A EPA 3005A EPA 3005A	581474 581474 581474	EPA 6020B EPA 6020B EPA 6020B	581563 581563 581563
92505478001 92505478002 92505478003	HGWA-47 EB-01 HGWA-48D	EPA 7470A EPA 7470A EPA 7470A	580637 580637 580637	EPA 7470A EPA 7470A EPA 7470A	580829 580829 580829
92505478001	HGWA-47	SM 2450C-2011	580276		
92505478002	EB-01	SM 2450C-2011	580949		
92505478003	HGWA-48D	SM 2450C-2011	580910		
92505478001 92505478002	HGWA-47 EB-01	EPA 300.0 Rev 2.1 1993 EPA 300.0 Rev 2.1 1993	580375 580375		
92505478003	HGWA-48D	EPA 300.0 Rev 2.1 1993	580771		

Face Analytical

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

The second secon			Ralei	gh 🗌 🏻 I	Mechanicsville Atlanta Kernersville	
Sample Condition Client Name: Upon Receipt	نم س≱			Project #	WO#:92505478	<u></u>
rier: Fed iv UPS Commercial UPS	/ @ / □USPS □ □Othe		С	llent		
ody Seal Present? Yes ANO Seals	Intact?	∐Yes	⊡No	•	92305478 Date/Initials Person Examining Contents ///////20	
ing Material: Bubble Wrap Bub	ble Bags	Non	e 🖂 (Other	Biological Tissue Frozen?	
mometer:			The state of the s	West Park	Yes No N/A	
GIRGUNIO: 420	Type of lo		т., ш			
er Temp: 3.46 Correction Factor Add/Subtract (°C			••••	Te	mp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling prot has begun	ess
er Temp Corrected (°C) A Regulated Soil (N/A, water sample)	· · · · · · · · · · · · · · · · · · ·					
amples originate in a quarantine zone within the Unito Ves No	ed States: CA	, NY, or S	C (check m	aps)? Did Ind	d samples originate from a foreign source (internationally, cluding Hawaii and Puerto Rico)? Yes Comments/Discrepancy:	<u> </u>
Chain of Custody Present?	" ZYes	□No	□n/a	1.		
**************************************	Yes	□No	□N/A	2,		
Samples Arrived within Hold Time? Short Hold Time Analysis (<72 hr.)?	Yes		□N/A	3.		
Rush Turn Around Time Requested?	Yes	€40°	□N/A	4.		
Sufficient Volume?	Yes	□No	□n/a	5.		
Correct Containers Used?	₽¶es	□No	□N/A	6.	· ·	
-Pace Containers Used?		□No	□N/A		And the second s	
.Containers Intact?	□ (Dres	Пио	N/A	7.		J. 75, 77 J.
Dissolved analysis: Samples Field Filtered?	□Yes	. □No		8.	2=03 1/11 1-11/01	
Sample Labels Match COC?		(IZK)	□N/A	9 4 1	501 Is Labeled LB-01	
-Includes Date/Time/ID/Analysis Matrix:	\mathcal{U}			111/	idro 61810	
		PT 44-	50/4	10.	· · · · · · · · · · · · · · · · · · ·	_
Headspace in VOA Vials (>5-6mm)? Trip Blank Present?	☐Yes ☐Yes	□No □No	DAVA	11.		
Trip Blank Custody Seals Present?	Yes	□No	ZIN/A			
OMMENTS/SAMPLE DISCREPANCY			e de la companya de l	Marie Carrier	Field Data Required? ☐Ye⊈ ☐N	Ď.
				Lot iD	of split containers:	
IENT NOTIFICATION/RESOLUTION		·············				
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erson contacted:	orania. Na tanàna mandra	i i	Date/T	**********		entropy to a
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Project Manager SCURF-Review:	maintenant of the second			***************************************	Date:	

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

						One sample s	E. H. A. A.	note whe	2	zi.	±	6			•	7	8	5 7	-	u	,			item#			- Andrew	i de	Cinal IO		Address	Соптрапу	Section
Important Note: By signing this form you are according Perce's NET 30 day payment torms and agreeing to leto charges of 1.5% per mouth for any involves not paid within 30 days						One sample set submitted for FB-01 but it will be reported for AP 1/2/3/4 SDGs	n un App. III à f∨ Metabb≈Sb, As, Be, Be, B, Co, Co, Co, Co, Co, Co, Hg, No, Se, Ti	reass and dry wells, sinke though any wells not sampled, and note when the last sample by the expit has been taken.	ADDITIONAL COMMENTS											FB-01	TIGWA-40D		HGWA-47	SAMPLE ID (A-Z 0-9 / -) Sample IDs MUST BE UNDUE TISSUE	Section D Valid Martx Codes Required Clear Information MATRIX Co		requestion the Cappy and		SCS Contacts		Atlanta, GA	Ľ	ξ. "
ng Paca's NET 30 day						or AP-		and citromera												WT	WT		WT	대 의 및 및 및 및 및 및 및 및 및 및 및 및 및 및 및 및 및 및			Project Number: GW6581	Project Name	Purchase Order No.		Copy To: Ger	Report To: SCS Contacts	Section B Required Project Information
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Ĭ,	May and	/ \{					7	4	3	╫	₩	╫	╫	₩	╫	+	╢	┥	Н	₽	2	╬		Unpreserved H₂SO₄		i	100 M	T BC	C 5		¥ 2	S	E DE
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-2007	s	ample (Y	s Int	act					TIONS		9.										-		741	8L755					20 E	DRINKING WATER			

Please rolls dry wells, strike though any wells not sampled, and rolls when the last sample for the event has been taken. Full App. III & Waletas-Sb. As, Ba, Be, B, Cd, Ca, Cr, Co. Pb. Li, Hg, Mo. Se, Tl he sample set submitted for FB-01 but it will be reported for AP Section Address: בּוֹ requested Due Date/TAT: one mail To: Required Client Information: Company: GA Power 12 ā ITEM# (A-Z, 0-97, -) Sample IDs MUST BE UNIQUE ection 0 ace Analytical "Important Mote: By signing this form you are ecompling Pace's NET 30 day payment i SCS Contacts Atlanta, GA **SAMPLE ID** ADDITIONAL COMMENTS HGWA-48D 10 Day HGWA-47 FB-01 DENICIA WATER WASTE NATER PRODUCT SOLLSOLID DIL WATER AR OTHER TISSUE Project Number: GW6581 Report To: SCS Contacts Project Name: Plant Hammond AP-4 BKQ Copy To: Geosyntec Contacts Required Project Information unchase Order No. Thems PANALY. RELINQUISHED BY / AFFILIATION ۲۷ ₹ MATRIX CODE (see valid codes to left) a G SAMPLE TYPE (G=GRAB C=COMP) ごこ lerns and agreeing to less cha 1 Mess, DATE: SAMPLER NAME AND SIGNATURE GRASSIA 10:10 COLLECT SIGNATURE OF SAMPLER: PRINT Name of SAMPLER: 140 CHAIN-OF-CUSTODY / Analytical Request Document 18 Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately xs of 1.5% per month for any involces not paid within 30 days. ន PATE SAMPLE TEMP AT COLLECTION Pace Quote Reference: Pace Project Manager: Pace Profile #: Attention: 8 tn # OF CONTAINERS ហ Address Company Name Section C Juny. **402** Unpreserved NOWN 2 H₂SO, Southern Co. HNO₃ **Preservatives** Kevin Herring 10839-4 Lyoma hespy HCI NaOH ACCEPTED BY / AFFILLATION Na₂S₂O₃ Methanol Other **Analysis Test** Y/N DATE Signed Chloride, Fluoride, Sulfate z Requested Analysis Filtered (Y/N) × TOS z × × Full App, III & IV Metals z G × RAD 228/228 z REGULATORY AGENCY Sita Location 돲 MATE NPOES STATE: ZZ 1400 8 麗 GROUND WATE þ ģ ---F-ALL-Q-020rev.07, 15-Feb-2007 Temp in °C z z Residual Chlorine (Y/N) PH= 7:40 Received on Ice (Y/N) Pace Project No./ Lab LD. SAMPLE CONDITIONS Custody 및 OTHER OF DRINKING WATER (Y/N) Samples Intact (Y/N)





December 10, 2020

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

RE: Project: HAMMOND AP-4 BKG 02 RADS

Pace Project No.: 92505469

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

Ken Den

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.





CERTIFICATIONS

Project: HAMMOND AP-4 BKG 02 RADS

Pace Project No.: 92505469

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 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

Missouri Certification #: 235

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



SAMPLE SUMMARY

Project: HAMMOND AP-4 BKG 02 RADS

Pace Project No.: 92505469

Lab ID	Sample ID	Matrix	Date Collected	Date Received	
92505469001	HGWA-47	Water	11/10/20 12:44	11/11/20 12:12	
92505469002	EB-01	Water	11/10/20 16:10	11/11/20 12:12	
92505469003	HGWA-48D	Water	11/11/20 10:10	11/12/20 16:47	



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 BKG 02 RADS

Pace Project No.: 92505469

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory		
92505469001	HGWA-47	EPA 9315	JJY	1	PASI-PA		
		EPA 9320	VAL	1	PASI-PA		
		Total Radium Calculation	CMC	1	PASI-PA		
92505469002	EB-01	EPA 9315	JJY	1	PASI-PA		
		EPA 9320	VAL	1	PASI-PA		
		Total Radium Calculation	CMC	1	PASI-PA		
92505469003	HGWA-48D	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



SUMMARY OF DETECTION

Project: HAMMOND AP-4 BKG 02 RADS

Pace Project No.: 92505469

Lab Sample ID	Client Sample ID				
Method	Parameters	Result	Units	Report Limit Analyzed Q	ualifiers
92505469001	HGWA-47				
EPA 9315	Radium-226	0.234 ± 0.339 (0.745) C:84% T:NA	pCi/L	12/01/20 07:20	
EPA 9320	Radium-228	-0.0179 ± 0.344 (0.805) C:76%	pCi/L	12/03/20 11:12	
Total Radium Calculation	Total Radium	T:86% 0.234 ± 0.683 (1.55)	pCi/L	12/07/20 12:47	
92505469002	EB-01				
EPA 9315	Radium-226	0.0159 ± 0.209 (0.560) C:78% T:NA	pCi/L	12/01/20 07:46	
EPA 9320	Radium-228	-0.184 ± 0.389 (0.935) C:74% T:80%	pCi/L	12/03/20 11:11	
Total Radium Calculation	Total Radium	0.0159 ± 0.598 (1.50)	pCi/L	12/07/20 12:47	
92505469003	HGWA-48D				
EPA 9315	Radium-226	0.0159 ± 0.209 (0.560) C:78% T:NA	pCi/L	12/01/20 07:46	
EPA 9320	Radium-228	0.760 ± 0.486 (0.932) C:69%	pCi/L	11/30/20 11:54	
Total Radium Calculation	Total Radium	T:86% 0.776 ± 0.695 (1.49)	pCi/L	12/07/20 11:09	



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 BKG 02 RADS

Pace Project No.: 92505469

Sample: HGWA-47 PWS:	Lab ID: 92509 Site ID:	5469001 Collected: 11/10/20 12:44 Sample Type:	Received:	11/11/20 12:12	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.234 ± 0.339 (0.745) C:84% T:NA	pCi/L	12/01/20 07:2	0 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	-0.0179 ± 0.344 (0.805) C:76% T:86%	pCi/L	12/03/20 11:12	2 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.234 ± 0.683 (1.55)	pCi/L	12/07/20 12:4	7 7440-14-4	



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 BKG 02 RADS

Pace Project No.: 92505469

Sample: EB-01 PWS:	Lab ID: 9250 Site ID:	5469002 Collected: 11/10/20 16:10 Sample Type:	Received:	11/11/20 12:12	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	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	6 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	-0.184 ± 0.389 (0.935) C:74% T:80%	pCi/L	12/03/20 11:11	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.0159 ± 0.598 (1.50)	pCi/L	12/07/20 12:47	7 7440-14-4	



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 BKG 02 RADS

Pace Project No.: 92505469

Sample: HGWA-48D PWS:	Lab ID: 925054 Site ID:	Collected: 11/11/20 10:10 Sample Type:	Received:	11/12/20 16:47	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	ervices - Greensburg				
Radium-226	EPA 9315	0.0159 ± 0.209 (0.560) C:78% T:NA	pCi/L	12/01/20 07:46	6 13982-63-3	
	Pace Analytical S	ervices - Greensburg				
Radium-228	EPA 9320	0.760 ± 0.486 (0.932) C:69% T:86%	pCi/L	11/30/20 11:54	15262-20-1	
	Pace Analytical S	ervices - Greensburg				
Total Radium	Total Radium Calculation	0.776 ± 0.695 (1.49)	pCi/L	12/07/20 11:09	7440-14-4	



Project: HAMMOND AP-4 BKG 02 RADS

EPA 9315

Pace Project No.: 92505469

QC Batch: 425257

QC Batch Method:

Analysis Method:

EPA 9315

Analysis Description:

9315 Total Radium

Laboratory:

Pace Analytical Services - Greensburg

Associated Lab Samples: 92505469003

METHOD BLANK: 2055115

Matrix: Water

Associated Lab Samples: 92

92505469003

Parameter

Act ± Unc (MDC) Carr Trac

Units

Analyzed

Qualifiers

Radium-226

-0.0581 ± 0.154 (0.491) C:97% T:NA

pCi/L

12/04/20 05:52



Project: HAMMOND AP-4 BKG 02 RADS

Pace Project No.: 92505469

QC Batch: 423681

Analysis Method: EPA 9315 QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

> Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92505469001, 92505469002

METHOD BLANK: 2048181 Matrix: Water

Associated Lab Samples: 92505469001, 92505469002

Act ± Unc (MDC) Carr Trac Units Analyzed Qualifiers Parameter Radium-226 0.309 ± 0.317 (0.625) C:74% T:NA pCi/L 12/01/20 07:24

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



EPA 9320

Project: HAMMOND AP-4 BKG 02 RADS

Pace Project No.: 92505469

QC Batch: 424420 Analysis Method:

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92505469003

METHOD BLANK: 2051473 Matrix: Water

Associated Lab Samples: 92505469003

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-228
 0.159 ± 0.366 (0.813) C:68% T:85%
 pCi/L
 11/30/20 11:53

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



EPA 9320

Project: HAMMOND AP-4 BKG 02 RADS

Pace Project No.: 92505469

QC Batch: 423745 Analysis Method:

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92505469001, 92505469002

METHOD BLANK: 2048526 Matrix: Water

Associated Lab Samples: 92505469001, 92505469002

 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.



QUALIFIERS

Project: HAMMOND AP-4 BKG 02 RADS

Pace Project No.: 92505469

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

Date: 12/10/2020 01:40 PM

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.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 BKG 02 RADS

Pace Project No.: 92505469

Date: 12/10/2020 01:40 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytica Batch
92505469001	HGWA-47	EPA 9315	423681		
92505469002	EB-01	EPA 9315	423681		
92505469003	HGWA-48D	EPA 9315	425257		
92505469001	HGWA-47	EPA 9320	423745		
92505469002	EB-01	EPA 9320	423745		
92505469003	HGWA-48D	EPA 9320	424420		
92505469001	HGWA-47	Total Radium Calculation	426029		
92505469002	EB-01	Total Radium Calculation	426029		
92505469003	HGWA-48D	Total Radium Calculation	426010		

Pace Analytical

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

ooratory receiving samples: sheville	luntersville 🔲 Rale	eigh Mechanicsville Atlanta Kernersville
Sample Condition Client Name:	2.5	Project #: WO#: 92505469
urier: Fed in OUPS Commercial Commercial		Client 92505469
ody Seal Present? Yes INO Seals Int	tact? Yes I	No Date/Initials Person Examining Contents 1/11/20
Ing Material: Bubble Wrap Bubble Thomas Bubble Wrap Bubble Thomas Bubble Wrap Bubble Thomas Bubble Wrap Bubble Correction Factor: Add/Subtract (°C) Add/Subtract (°C) A Regulated Soil (**DN/A, water sample)	-	Other Biological Tissue Frozen? Yes No N/A Blue None Temp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling proces has begun
Samples originate in a quarantine zone within the United Yes No	States: CA, NY, or SC (check	Including Hawaii and Puerto Rico)? Tyes
		Comments/Discrepancy:
Chain of Custody Present?	Tes No NA	1.
Samples Arrived within Hold Time?	Yes No NA	2.
Short Hold Time Analysis (<72 hr.)?	□Yes 🖽 🗖 N/A	3.
Rush Turn Around Time Requested?	□Yes ⊕No □N/A	4.
Sufficient Volume?	Yes ONO ON/A	5.
Correct Containers Used? -Pace Containers Used?	Pes No N/A	
Containers Intact?	Thes No NA	7.
Dissolved analysis: Samples Field Filtered?	□Yes □No 1 □M/A	8.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix:	W DNO DN/A	11/10/20 PB10
	□Yes □No □NA	10.
Headspace in VOA Vials (>5-6mm)? Trip Blank Present?	Yes No N/A	
Trip Blank Custody Seals Present?	□Yes □No □N/A	
COMMENTS/SAMPLE DISCREPANCY		Field Data Required? ☐Yes ☐No
		Lot ID of split containers:
LIENT NOTIFICATION/RESOLUTION		
Person contacted:	Date	e/Time:
e version of	**	Date
Project Manager-SCURF Review:		Date:



Document Name:

Sample Condition Upon Receipt(SCUR)

Document No.: F-CAR-CS-033-Rev.07

Project #

Document Revised: October 28, 2020 Page 2 of 2

Issuing Authority:

are 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

PM: KLH1

CLIENT: GA-GA Power

ltem#	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)	BP45-125 mL Plastic H25O4 (pH < 2) (CI-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C- 125 mL Plastic NaOH (pH > 12) (G-)	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) (CI-)	AG15-1 liter Amber H2SO4 (pH < 2)	AG35-250 mL Amber H2504 (pH < 2)	AG3A[DG3A]-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCI (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL SterilgPlastic (N/A - lab)	BPIN	BP3A-250 mL Plastic (NH2)25O4 (9.3-9.7)	AGOU-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1	1	t	1		1/2		1	1			1		/	1										1				
2	1	1	1		N	1	1	1					1	1	1	T								V	1			
3	1	T	1	M	X	1	1	/			1		1	1	1									X	1			
4	1	1	-		N	1	/	/		H	1		/	1	1									1				
5	1	1	1		X	/	1				1		1	1	1									X				
6	7				-	/	/	1			1			1	7									1				
7	1				1	1	/	1			7		1	1	1									1	1			
8	1				/		1	1			1		1	1	1									1	1			
9	1			3	/		/				1		1	1	1			1						1	1			
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		pH Ac	ljustment Log for Pres	erved 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.

				One sample s	Full App. III & IV) Li, Hg, Mo, Se, TI	note when t		12	=	10	8	0	7	8	5	-	u	2	-	. 1	TEM#	20 (10	1		Requeste	Phone: 10.	100	Scanor	Aupdum	Required
				One sample set submitted for FB-01 but it will be reported for AP-1/2/3/4 SDGs	Full App. III & IV Metals=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Ti	Please note dry wells, strike thorugh any wells not sampled, note when the last sample for the event has been taken.	ADDITIONAL COMMENTS										FB-01	HGWA-48D	HGWA-47		SAMPLE ID SAMPLE ID WASTE WATER PRODUCT PROD	Section D Volid Mat Required Client Information MATRIX		1	Bennested Due Deterrat.	SUS Contacts		Atlanta, GA	GA Power	Required Client Information:
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Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Ra-226 JJY 12/3/2020 57639 DW	2055115 -0.058 0.154 0.491 -0.74 N/A Pass
Test. Analyst. Date: Worklist	MB Sample ID MB concentration: MR Counting Uncertainty: MB MDC: erical Performance Indicator: tatus vs Numerical Indicator: MB Status vs. MDC:

Method Blank Assessment

ample Collection Date: Sample MS I.D. Sample MS I.D. Sample MS I.D. Sample MS I.D. Spike I.D.: Concentration (pCl/mL): ume Used in MS (mL): me Used in MS (mL): me Used in MS (mL): me Used in MS (mL): me Used in MS (mL): me Used in MS (mL): me Used in MS (mL): me Used in MS (mL): me Used in MS (mL): me Used in MS (mL): me Used in MS (mL): me Used in MS (mL): me Used in MS (mL): Spike Usesult: neertainty (pCl/L, g, F): performance Indicator: MS Percent Recovery: sor Numerical Indicator: MS Percent Recovery: Sor Status vs Recovery: Sor Status vs Recovery: Sor MS Recovery: Sor MS Recovery: Sor MS Recovery: Sor MS Recovery: Sor MS Recovery: Sor MS Recovery: Sor MS Recovery: Sor MS Recovery: Sor MS Recovery: Sor MS Recovery: Sor MS Recovery: Sor MS Recovery: Sor MS Recovery: Sor MS MS Recovery: Sor MS MS Recovery: Sor MS MS Recovery: Sor MS MS MS Recovery: Sor MS MS MS Recovery: Sor MS MS MS MS MS MS MS MS MS MS MS MS MS	D 1 MS/MSD 2																													
Sample Matrix Spike Control Assessment Sample MSID. Sample MSID. Sample MSID. Sample MSID. Sample MSID. Sample MSID. Spike Volume Used in MSIMID. MSISTALS VS. MSID. MSI	MS/MSD 1																													
	Sample Matrix Spike Control Assessment	Sample Collection Date:	Sample I.D.	Sample MS1.0.	Spike I.D.:	MS/MSD Decay Corrected Spike Concentration (pCi/mL);	Spike Volume Used in MS (mL):	Spike Volume Used in MSD (mL):	MS Aliquot (L, g, F):	MS Target Conc.(pCi/L, g, F):	MSD Aliquot (L, g, F):	MSD Target Conc. (pCi/L, g, F):	MS Spike Uncertainty (calculated):	MSD Spike Uncertainty (calculated):	Sample Result:	Sample Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Result:	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	MS Numerical Performance Indicator:	MSD Numerical Performance Indicator:	MS Percent Recovery:	MSD Percent Recovery:	MS Status vs Numerical Indicator;	MSD Status vs Numerical Indicator:	MS Status vs Recovery:	MSD Status vs Recovery:	MS/MSD Upper % Recovery Limits:	CONTROL OF THE PROPERTY OF THE

19-033 24.042

Count Date: Spike 1.D.:

Laboratory Control Sample Assessment

Decay Corrected Spike Concentration (pCi/mL):

MB Numerical Performance Indicator: MB Status vs Numerical Indicator; MB Status vs. MDC: 0.10 0.506 4.751 0.057

Volume Used (mL): Aliquot Volume (L, g, F): Target Conc. (pC/L, g, F):

Uncertainty (Calculated):

Result (pC/I/L, g, F):
LCS/LCSD Counting Uncertainty (pC/I/L, g, F):
Numerical Performance Indicator:

Percent Recovery: Status vs Numerical Indicator:

Status vs Recovery: Upper % Recovery Limits: Lower % Recovery Limits:

Duplicate Sample Assessment

uplicate Sample Assessment			Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.:	LCS57639	Enter Duplicate	Запр
Duplicate Sample I.D.	LCSD57639	sample IDs if	Sample MS
Sample Result (pCi/L, g, F):	5.488	other than	Sample MSE
Sample Result Counting Uncertainty (pCi/L, g, F):	0.884	LCS/LCSD in	Sample Matrix Spike Re
Sample Duplicate Result (pCi/L, g, F):	4.865	the space below.	Matrix Spike Result Counting Uncertainty (pCi/L, g
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F).	0.813		Sample Matrix Spike Duplicate Re
Are sample and/or duplicate results below RL?	9		Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g
Duplicate Numerical Performance Indicator:	1.016		Duplicate Numerical Performance Indic
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	11.88%		(Based on the Percent Recoveries) MS/ MSD Duplicate F
Duplicate Status vs Numerical Indicator:	N/A		MS/ MSD Duplicate Status vs Numerical Indio
Duplicate Status vs RPD:	Pass		MS/ MSD Duplicate Status vs F
% RPD Limit:	25%		RPD I

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

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

Face Analytical

Quality Control Sample Performance Assessment

Ra-226

Analyst Must Manually Enter All Fields Highlighted in Yellow.

MS/MSD 2

MS/MSD 1

Sample Collection Date:

Sample Matrix Spike Control Assessment ₹ Test Analyst

	Date:	11/30/2020
	Worklist:	57449
	Matrix;	MΩ
Method Blank Assessment		
	MB Sample ID	2048181
	MB concentration:	0.309
	M/B Counting Uncartainty:	0.314
	MB MDC:	0.625
MB	MB Numerical Performance Indicator:	1.93
	MB Status vs Numerical Indicator:	Α'N
	MB Status vs. MDC:	Pass

	****		***************************************							
Sample I.D. Sample MS.I.D. Sample MS.D.I.D. Sample MS.D.I.D. Spike Spike Concentration (pCifml.): Spike Volume Used in MS (mL): Spike Volume Used in MS (mL): Spike Volume Used in MS (mL): MS Target Conc. (pCif.L. g. F): MSD Aliquot (L. g. F): MSD Aliquot (L. g. F): MSD Target Conc. (pCif.L. g. F): MS Spike Uncertainty (calculated):	MSD Spike Uncertainty (calculated): Sample Result:	Sample Result Counting Uncertainty (pCl/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 (p.C./l., g, F): MS Numerical Performance Indicator;	MSD Numarical Performance Indicator: MS Percent Recovery:	MS Status vs Munacipal Indicator	MSD Status vs Numerical Indicator;	MS Status vs Recovery:	MS/MSD Upper % Recovery:	MS/MSD Lower % Recovery Limits:
	√ LCSD57449	12/1/2020 19-033	24.042	0.515 4.672	0.056	0.759	92.35%	V.V.	125%	75%

Laboratory Control Sample Assessment

			(Appropriate Control of the Control
	LCS57449	LCSD57449	Sample Result:
Count Date:	12/1/2020	12/1/2020	Sample Result Counting Uncertainty (pCl/L, g, F):
Spike I.D.:	19-033	19-033	Sample Matrix Spike Result:
Decay Corrected Spike Concentration (pCi/mL):	24.042	24.042	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Volume Used (mL):	0,10	0.10	Sample Matrix Spike Duplicate Result:
Aliquot Volume (L, g, F):	0.516	0.515	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Target Conc. (pCl/L, g, F):	4,655	4.672	MS Numerical Performance Indicator:
Uncertainty (Calculated):	0.056	0.056	MSD Numarical Performance Indicator:
Result (pCl/L, g, F):	5.057	4.315	MS Percent Recovery:
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.815	0.759	MSD Percent Recovery:
Numerical Performance Indicator:	96.0	-0.92	MS Status vs Numerical Indicator:
Percent Recovery:	108,63%	92.35%	MSD Status vs Numerical Indicator;
Status vs Numerical Indicator:	A/A	Α'N	MS Status vs Recovery:
Status vs Recovery:	Pass	Pass	MSD Status vs Recovery:
Upper % Recovery Limits:	125%	125%	MS/MSD Upper % Recovery Limits:
Lower % Recovery Limits:	75%	75%	MS/MSD Lower % Recovery Limits:
Duplicate Sample Assessment			Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.:	LCS57449	Enter Duplicate	Sample I.D.
Duplicate Sample 1.D.	LCSD57449	sample IDs if	Sample MS I.D.
Sample Result (pCi/L, g, F):	5.057	other than	Sample MSD I.D.
Sample Result Counting Uncertainty (pCi/L, g, F):	0.815	LCS/LCSD in	Sample Matrix Spike Result:
Sample Duplicate Result (pCi/l., g, F):	4.315	the space below.	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.759		Sample Matrix Spike Duplicate Result:
Are sample and/or duplicate results below RL?	2		Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Duplicate Numerical Performance Indicator:	1,306		Duplicate Numerical Performance Indicator:
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	16.19%		(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:
Duplicate Status vs Numerical Indicator:	A/A		MS/ MSD Duplicate Status vs Numerical Indicator:
Duplicate Status vs RPD:	Pass		MS/ MSD Duplicate Status vs RPD:
% RPD Limit:	25%		% RPD Limit:

	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:	
Ī						

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

Comments:

Face Analytical"

Quality Control Sample Performance Assessment

Ra-226 JJY 11/30/2020 57449 DW Test Analyst: Date: Worklist: Matrix:

0.309 0.314 0.625 1.93 N/A Pass

MB Numerical Performance Indicator: MB Status vs Numerical Indicator. MB Status vs. MDC:

MB Sample ID
MB concentration:
M/B Counting Uncertainty:
M/B MDC:

Method Blank Assessment

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 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):		
Г	MSD Spike Uncertainty (calculated):		
6	Sample Result:		
	Sample Result Counting Uncertainty (pCi/L, g, F):		
	Sample Matrix Spike Result:		
	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
	Sample Matrix Spike Duplicate Result:		
	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		-
	MS Numerical Performance Indicator:		
	MSD Numerical Performance Indicator:		
	MS Percent Recovery:		
	MSD Percent Recovery:		
	MS Status vs Numerical Indicator:		
	MSD Status vs Numerical Indicator:		
	MS Status vs Recovery:		
	MSD Status vs Recovery:		
	MS/MSD Upper % Recovery Limits:		
_	MS/MSD Lower % Recovery Limits-		

	_					≥										
z	LCSD57449															
LCSD (Y or N)?	LCS57449	12/1/2020	19-033	24.042	0.10	0.516		0,056	5.057	0.815	96.0	108.63%	NA	Pass	125%	75%
Laboratory Control Sample Assessment		Count Date:	Spike I.D.:	Decay Corrected Spike Concentration (pCi/mL):	Volume Used (mL):	Aliquot Volume (L, g, F):	Target Conc. (pCi/L, g, F):	Uncertainty (Calculated):	Result (pCi/L, g, F):	LCS/LCSD Counting Uncertainty (pCi/L, g, F):	Numerical Performance Indicator:	Percent Recovery:	Status vs Numerical Indicator:	Status vs Recovery:	Upper % Recovery Limits:	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:	(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	MS/ MSD Duplicate Status vs Numerical Indicator:	MS/ MSD Duplicate Status vs RPD:	##### CCO %

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

92505462001DUP

Sample I.D.: Duplicate Sample I.D.

Duplicate Sample Assessment

92505462001

0.150 0.246 0.399 0.299 0.298 See Below ##

Sample Result (pCi/L, g, F):
Sample Result (DCi/L, g, F):
Sample Duplicate Result (pCi/L, g, F):
Sample Duplicate Result (Counting Uncertainty (pCi/L, g, F):
Are sample and/or duplicate results below RL?
Duplicate Numerical Performance Indicator:

N/A Fail

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.

Соттепts:

Section must be re-prepped the feature.

Face Analytical

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Ra-228 Test:
Analyst:
Date:
Worklist:
Matrix:

.a.c. VAL 11/25/2020 57572 WT

2051473	0,159	0.366	0.813	0.85	Pass	Pass
Method Blank Assessment MB Sample ID	MB concentration;	M/B 2 Sigma CSU:	MB MDC:	MB Numerical Performance Indicator:	MB Stetus vs Numerical Indicator:	MB Status vs. MDC:

Laboratory Control Sample Assessment	LCSD (Y or N)?	λ
	LCS57572	LCSD57572
Count Date:	11/30/2020	11/30/2020
Spike I.D.:	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL):	37,445	37,445
Volume Used (mL):	0.10	0.10
Alfquot Volume (L, g, F):	0.806	0.812
Target Conc. (pCi/L, g, F):	4.646	4.614
Uncertainty (Calculated):	0.228	0.226
Result (pCi/L, g, F):	5.467	4.634
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.245	1.118
Numerical Performance indicator:	1.27	0.03
Percent Recovery:	117.68%	100.43%
Status vs Numerical Indicator:	ďΧ	ďΧ
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	%09	%09

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

LCS57572 LCSD57572 5,467 1,245 4,634 1,118 NO 0,976 15,81% Pass Pass

Sample I.D.:

Sample Result Signa CSU (pCi/L, g, F):

Sample Result Signa CSU (pCi/L, g, F):

Sample Duplicate Result (pCi/L, g, F):

Sample Duplicate Result (pCi/L, g, F):

Are sample and/or duplicate results below RL?

Duplicate Sample Assessment

Duplicata Numerical Performance Indicator: (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:

Duplicate Status vs Numerical Indicator:
Duplicate Status vs RPD:
% RPD Limit.

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Comments:

Page 21 of 22

Pace Analytical

Quality Control Sample Performance Assessment

MS/MSD 2

MS/MSD

Sample I.D. Sample MS I.D. Sample MSD I.D.

Spike I.D.

MS/MSD Decay Corrected Spike Concentration (pCi/mL):

MS Target Conc.(pCi/L, g, F):

Spike Volume Used in MSD (mL)

Spike Volume Used in MS (mL)

Sample Collection Date:

Sample Matrix Spike Control Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Ra-228	VAL 11/25/2020	57465 WT
Test	Analyst: Date:	

Matrix	WT
Method Blank Assessment	
MB Sample ID	2048526
MB concentration:	0.623
M/B 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

-) CE -04 CENTRO CE	223	_
Laboratory Control Sample Assessment	CSD (Y or N)?	Y
	LCS57465	LCSD57465
Count Date:	12/3/2020	12/3/2020
Spike I.D.:	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL):	37.408	37.408
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.805	0.826
Target Conc. (pCi/L, g, F):	4.546	4.527

יייט ושומליטוטיט ושומר כיייי	MSD Aliquat (L, g, F):	MSD Target Conc. (pCVL, g, F):	MS Spike Uncertainty (calculated):	MSD Spike Uncertainty (calculated):	Sample Result	Sample Result 2 Sigma CSU (pCi/L, g, F):	Sample Matrix Spike Result:	Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:	Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	MS Numerical Performance Indicator:	MSD Numerical Performance Indicator:	MS Percent Recovery:	MSD Percent Recovery:	MS Status vs Numerical Indicator;	MSD Status vs Numerical Indicator;	MS Status vs Recovery:	MSD Status vs Recovery:	MS/MSD Upper % Recovery Limits:	MS/MSD Lower % Recovery Limits:
				\	LCSD57465	12/3/2020	20-030	37.408	0.10	0.826	4.527	0.222	4.606	1.105	0.14	101.73%	A/N	Pass	135%	%09
1	Warning	Pass		(Y or N)?	CS57465	2/3/2020	20-030	37.408	0.10	0.805	4.546	0.228	3.570	0.962	-2.37	76.94%	A/A	Pass	135%	%09

Uncertainty (Calculated):

Resuit (pCi/L, g, F): LCS/LCSD 2 Sigma CSU (pCi/L, g, F): Numerical Performance Indicator:

Percent Recovery:

Upper % Recovery Limits: Lower % Recovery Limits:

Duplicate Sample Assessment

Status vs Recovery: Status vs Numerical Indicator:

LCS57465 LCSD57465 3.570 0.862 4.606 1.105

Sample I.D.:

Duplicate Sample I.D.:
Sample Result (DOIL, g, F):
Sample Result 2 Sigma CSU (POIL, g, F):
Sample Duplicate Result (DOIL, g, F):
Sample Duplicate Result (DOIL, g, F):

Are sample and/or duplicate results below RL?

Duplicate Numerical Performance Indicator: (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:

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NO -1.448 27.88% Pass Pass 36%

Duplicate Status vs Numerical Indicator, Duplicate Status vs RPD: RPD Limit:

Comments:

December 2020





January 04, 2021

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

RE: Project: HAMMOND AP-4 BKG 03

Pace Project No.: 92512587

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

Ken Lung

1(704)875-9092

HORIZON Database Administrator

Enclosures

cc: Christine Hug, Geosyntec Consultants, Inc. Kristen Jurinko Thomas Kessler, Geosyntec Whitney Law, Geosyntec Consultants

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.





CERTIFICATIONS

Project: HAMMOND AP-4 BKG 03

Pace Project No.: 92512587

Pace Analytical Services Charlotte

9800 Kincey Ave. Ste 100, Huntersville, NC 28078 Louisiana/NELAP Certification # LA170028 North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342 North Carolina Wastewater Certification #: 12

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804 Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

Pace Analytical Services Peachtree Corners

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

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

Virginia/VELAP Certification #: 460221

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

North Carolina Certification #: 381

South Carolina Certification #: 98011001



SAMPLE SUMMARY

Project: HAMMOND AP-4 BKG 03

Pace Project No.: 92512587

Lab ID	Sample ID	Matrix	Date Collected	Date Received	
92512587001	HGWA-47	Water	12/15/20 10:10	12/17/20 08:48	
92512587002	HGWA-48D	Water	12/15/20 14:00	12/17/20 08:48	
92512587003	EB-01	Water	12/15/20 18:02	12/17/20 08:48	



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 BKG 03

Pace Project No.: 92512587

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92512587001	HGWA-47	EPA 6010D	— <u>———</u> КН	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92512587002	HGWA-48D	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
92512587003	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

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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



SUMMARY OF DETECTION

Project: HAMMOND AP-4 BKG 03

Pace Project No.: 92512587

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
			Office	- Troport Limit	Anaryzed	Qualificis
92512587001	HGWA-47					
	Performed by	CUSTOME R			01/04/21 15:37	
	рН	7.27	Std. Units		01/04/21 15:37	
EPA 6010D	Calcium	72.5	mg/L	1.0	12/25/20 01:10	
EPA 6020B	Barium	0.027	mg/L	0.010	12/29/20 10:49	
EPA 6020B	Lithium	0.0026J	mg/L	0.030	12/29/20 10:49	
SM 2450C-2011	Total Dissolved Solids	233	mg/L	10.0	12/19/20 12:22	
EPA 300.0 Rev 2.1 1993	Chloride	2.9	mg/L	1.0	12/23/20 21:44	
EPA 300.0 Rev 2.1 1993	Fluoride	0.064J	mg/L	0.10	12/23/20 21:44	
EPA 300.0 Rev 2.1 1993	Sulfate	2.4	mg/L	1.0	12/23/20 21:44	
92512587002	HGWA-48D					
	Performed by	CUSTOME R			01/04/21 15:37	
	рН	7.39	Std. Units		01/04/21 15:37	
EPA 6010D	Calcium	61.3	mg/L	1.0	12/25/20 01:15	
EPA 6020B	Barium	0.091	mg/L	0.010	12/29/20 10:55	
EPA 6020B	Boron	0.0083J	mg/L	0.10	12/29/20 10:55	
EPA 6020B	Chromium	0.0013J	mg/L	0.010	12/29/20 10:55	
EPA 6020B	Cobalt	0.00039J	mg/L	0.0050	12/29/20 10:55	
EPA 6020B	Lead	0.00015J	mg/L	0.0050	12/29/20 10:55	
EPA 6020B	Lithium	0.0045J	mg/L	0.030	12/29/20 10:55	
EPA 6020B	Molybdenum	0.00097J	mg/L	0.010	12/29/20 10:55	
SM 2450C-2011	Total Dissolved Solids	239	mg/L	10.0	12/19/20 12:23	
EPA 300.0 Rev 2.1 1993	Chloride	2.7	mg/L	1.0	12/23/20 22:29	
EPA 300.0 Rev 2.1 1993	Fluoride	0.081J	mg/L	0.10	12/23/20 22:29	
EPA 300.0 Rev 2.1 1993	Sulfate	4.2	mg/L	1.0	12/23/20 22:29	
92512587003	EB-01					
EPA 6010D	Calcium	0.12J	mg/L	1.0	12/25/20 00:28	



ANALYTICAL RESULTS

Project: HAMMOND AP-4 BKG 03

Pace Project No.: 92512587

Date: 01/04/2021 03:37 PM

Sample: HGWA-47	Lab ID:	92512587001	Collecte	d: 12/15/20	0 10:10	Received: 12/	17/20 08:48 M	latrix: Water	
			Report						
Parameters	Results -	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte						
Performed by	CUSTOME				1		01/04/21 15:37	•	
рН	R 7.27	Std. Units			1		01/04/21 15:37		
6010D ATL ICP	Analytical	Method: EPA 6	6010D Prep	aration Me	thod: EF	A 3010A			
	-	lytical Services	-						
Calcium	72.5	mg/L	1.0	0.070	1	12/24/20 13:26	12/25/20 01:10	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	6020B Prep	aration Met	hod: EF	A 3005A			
m=1 101 m0	•	lytical Services							
Antimony	ND	mg/L	0.0030	0.00028	1	12/24/20 10:19	12/29/20 10:49	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	12/24/20 10:19	12/29/20 10:49		
Barium	0.027	mg/L	0.010	0.00071	1	12/24/20 10:19	12/29/20 10:49		
Beryllium	ND	mg/L		0.000046	1		12/29/20 10:49		
Boron	ND	mg/L	0.10	0.0052	1	12/24/20 10:19			
Cadmium	ND	mg/L	0.0025	0.00012	1		12/29/20 10:49		
Chromium	ND ND	mg/L	0.0023	0.00012	1	12/24/20 10:19			
		-							
Cobalt	ND	mg/L	0.0050	0.00038	1		12/29/20 10:49		
Lead	ND	mg/L		0.000036	1	12/24/20 10:19			
Lithium	0.0026J	mg/L	0.030	0.00081	1	12/24/20 10:19			
Molybdenum	ND	mg/L	0.010	0.00069	1	12/24/20 10:19			
Selenium	ND	mg/L	0.010	0.0016	1		12/29/20 10:49		
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/20 10:19	12/29/20 10:49	7440-28-0	
7470 Mercury	Analytical	Method: EPA	7470A Prep	aration Met	hod: EP	A 7470A			
	Pace Ana	lytical Services	- Peachtree	Corners, C	3A				
Mercury	ND	mg/L	0.00050	0.000078	1	12/22/20 07:10	12/22/20 13:26	7439-97-6	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Ana	lytical Services	- Peachtree	Corners, 0	βA				
Total Dissolved Solids	233	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 Ana	lytical Services	- Asheville						
Chloride	2.9	mg/L	1.0	0.60	1		12/23/20 21:44	16887-00-6	
Fluoride	0.064J	mg/L	0.10	0.050	1		12/23/20 21:44		
Sulfate	2.4	mg/L	1.0	0.50	1		12/23/20 21:44		



ANALYTICAL RESULTS

Project: HAMMOND AP-4 BKG 03

Pace Project No.: 92512587

Date: 01/04/2021 03:37 PM

Sample: HGWA-48D	Lab ID:	92512587002	Collecte	d: 12/15/20	14:00	Received: 12/	17/20 08:48 N	latrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte						
Performed by	CUSTOME				1		01/04/21 15:37		
рН	R 7.39	Std. Units			1		01/04/21 15:37	•	
6010D ATL ICP	Analytical	Method: EPA 6	S010D Pren	aration Me	hod: FF	PA 3010A			
30.027.12.0.	•	lytical Services				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Calcium	61.3	mg/L	1.0	0.070	1	12/24/20 13:26	12/25/20 01:15	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	SOOD Pron	aration Mot	hod: EE	ν 2005Λ			
0020 MET ICFM3	•	lytical Services				A 3003A			
Antimony	ND	mg/L	0.0030	0.00028	1	12/24/20 10:19	12/29/20 10:55	7//0-36-0	
Arsenic	ND ND	mg/L	0.0050	0.00028	1	12/24/20 10:19	12/29/20 10:55		
Barium	0.091	mg/L	0.000	0.00070	1	12/24/20 10:19	12/29/20 10:55		
Beryllium	ND	mg/L	0.0030	0.000046	1		12/29/20 10:55		
Boron	0.0083J	-	0.0030	0.000040	1	12/24/20 10:19			
Cadmium	0.00833 ND	mg/L mg/L	0.10	0.0032	1	12/24/20 10:19			
	0.0013J	•	0.0025	0.00012	1	12/24/20 10:19			
Chromium		mg/L							
Cobalt	0.00039J	mg/L	0.0050	0.00038	1	12/24/20 10:19			
Lead	0.00015J	mg/L	0.0050	0.000036	1	12/24/20 10:19			
_ithium	0.0045J	mg/L	0.030	0.00081	1	12/24/20 10:19			
Molybdenum	0.00097J	mg/L	0.010	0.00069	1	12/24/20 10:19			
Selenium	ND	mg/L	0.010	0.0016	1		12/29/20 10:55		
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/20 10:19	12/29/20 10:55	7440-28-0	
7470 Mercury	Analytical	Method: EPA 7	470A Prep	aration Met	hod: EP	A 7470A			
	Pace Ana	lytical Services	- Peachtree	e Corners, (βA				
Mercury	ND	mg/L	0.00050	0.000078	1	12/22/20 07:10	12/22/20 13:28	7439-97-6	
2540C Total Dissolved Solids	Analytical	Method: SM 24	450C-2011						
	•	lytical Services		e Corners, 0	3A				
Total Dissolved Solids	239	mg/L	10.0	10.0	1		12/19/20 12:23	;	
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0 Rev 2	.1 1993					
	•	lytical Services							
Chloride	2.7	mg/L	1.0	0.60	1		12/23/20 22:29	16887-00-6	
Fluoride	0.081J	mg/L	0.10	0.050	1		12/23/20 22:29		
Sulfate	4.2	mg/L	1.0	0.50	1		12/23/20 22:29		



ANALYTICAL RESULTS

Project: HAMMOND AP-4 BKG 03

Pace Project No.: 92512587

Date: 01/04/2021 03:37 PM

Sample: EB-01	Lab ID:	92512587003	3 Collecte	ed: 12/15/20	0 18:02	Received: 12/	17/20 08:48 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Falameters	<u> </u>						- Analyzeu	CAS NO.	- Qua
6010D ATL ICP	Analytical	Method: EPA	6010D Pre	paration Me	thod: EF	PA 3010A			
	Pace Anal	ytical Services	s - Peachtre	e Corners, 0	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 Pre	paration Me	thod: EF	PA 3005A			
	Pace Analy	ytical Services	s - Peachtre	e Corners, 0	GΑ				
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 Prej	paration Met	thod: EF	PA 7470A			
·	Pace Analy	ytical Services	s - Peachtre	e Corners, 0	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 2	2450C-2011						
	•	ytical Services		e Corners, 0	GA				
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		12/19/20 12:23		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
-	Pace Anal	ytical Services	s - 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	



Project: HAMMOND AP-4 BKG 03

Pace Project No.: 92512587

Date: 01/04/2021 03:37 PM

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: 92512587001, 92512587002, 92512587003

METHOD BLANK: 3113409 Matrix: Water

Associated Lab Samples: 92512587001, 92512587002, 92512587003

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Calcium mg/L ND 1.0 0.070 12/24/20 23:39

LABORATORY CONTROL SAMPLE: 3113410

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3113411 3113412

MS MSD

92512572002 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Conc. Result Result % Rec % Rec **RPD** RPD Qual Result Limits 30.4 20 M1 Calcium mg/L 28.7 29.3 173 61 75-125

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.



Project: HAMMOND AP-4 BKG 03

Pace Project No.: 92512587

Date: 01/04/2021 03:37 PM

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: 92512587001, 92512587002, 92512587003

METHOD BLANK: 3113101 Matrix: Water

Associated Lab Samples: 92512587001, 92512587002, 92512587003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
				IVIDE	Allalyzeu	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					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% 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 SP	IKE DUPLI	ICATE: 3113		3113104								
	,	92512103004	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Antimony	mg/L	ND	0.1	0.1	0.099	0.099	99	99	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.1	0.092	0.092	92	92	75-125	0	20	

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.



Project: HAMMOND AP-4 BKG 03

Pace Project No.: 92512587

Date: 01/04/2021 03:37 PM

MATRIX SPIKE & MATRIX	SPIKE DUPLIC	CATE: 3113			3113104							
Parameter	9 Units	2512103004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	ND	0.1	0.1	0.094	0.094	94	94	75-125	0	20	
Beryllium	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	1	20	
Boron	mg/L	ND	1	1	0.92	0.95	91	95	75-125	3	20	
Cadmium	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	1	20	
Chromium	mg/L	ND	0.1	0.1	0.093	0.096	93	96	75-125	3	20	
Cobalt	mg/L	ND	0.1	0.1	0.094	0.093	94	93	75-125	1	20	
Lead	mg/L	ND	0.1	0.1	0.092	0.095	92	95	75-125	3	20	
Lithium	mg/L	ND	0.1	0.1	0.094	0.099	94	99	75-125	4	20	
Molybdenum	mg/L	ND	0.1	0.1	0.097	0.096	97	96	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.089	0.091	89	91	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.091	0.094	91	94	75-125	3	20	

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.



Project: HAMMOND AP-4 BKG 03

Pace Project No.: 92512587

Date: 01/04/2021 03:37 PM

QC Batch: 588542 Analysis Method: EPA 7470A QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury

> Laboratory: Pace Analytical Services - Peachtree Corners, GA

92512587001, 92512587002, 92512587003 Associated Lab Samples:

METHOD BLANK: Matrix: Water

Associated Lab Samples: 92512587001, 92512587002, 92512587003

> Blank Reporting MDL Qualifiers Parameter Units Result Limit Analyzed

Mercury ND 0.00050 0.000078 12/22/20 12:50 mg/L

LABORATORY CONTROL SAMPLE: 3109730

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3109731 3109732

> MSD MS

92512574004 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Conc. Conc. Result Result % Rec % Rec **RPD** RPD Qual Result Limits ND 0.0025 0.0022 20 Mercury mg/L 0.0025 0.0023 89 90 75-125

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.



Project: HAMMOND AP-4 BKG 03

Pace Project No.: 92512587

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: 92512587001, 92512587002, 92512587003

METHOD BLANK: 3109057 Matrix: Water

Associated Lab Samples: 92512587001, 92512587002, 92512587003

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 10.0 12/19/20 12:17

LABORATORY CONTROL SAMPLE: 3109058

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

SAMPLE DUPLICATE: 3109059

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

SAMPLE DUPLICATE: 3109063

Date: 01/04/2021 03:37 PM

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

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.



Project: HAMMOND AP-4 BKG 03

LABORATORY CONTROL SAMPLE: 2112052

Date: 01/04/2021 03:37 PM

Pace Project No.: 92512587

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: 92512587001, 92512587002, 92512587003

METHOD BLANK: 3112052 Matrix: Water

Associated Lab Samples: 92512587001, 92512587002, 92512587003

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND 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.	3112033					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% 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 SP	IKE DUPL	ICATE: 3112	3112055									
			MS	MSD								
		92513456002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	409	50	50	471	456	125	94	90-110	3	10	M6
Fluoride	mg/L	0.14	2.5	2.5	2.1	2.1	77	79	90-110	2	10	M1
Sulfate	mg/L	403	50	50	466	450	126	93	90-110	4	10	M6

MATRIX SPIKE & MATRIX SF	PIKE DUPL	LICATE: 3112	056		3112057							
			MS	MSD								
		92512580004	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	3.4	50	50	57.4	57.5	108	108	90-110	0	10	
Fluoride	mg/L	0.18	2.5	2.5	2.7	2.7	102	102	90-110	0	10	
Sulfate	mg/L	11.3	50	50	65.5	65.6	108	109	90-110	0	10	

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.



QUALIFIERS

Project: HAMMOND AP-4 BKG 03

Pace Project No.: 92512587

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

Date: 01/04/2021 03:37 PM

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.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 BKG 03

Pace Project No.: 92512587

Date: 01/04/2021 03:37 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92512587001	HGWA-47				
92512587002	HGWA-48D				
92512587001	HGWA-47	EPA 3010A	589396	EPA 6010D	589429
92512587002	HGWA-48D	EPA 3010A	589396	EPA 6010D	589429
92512587003	EB-01	EPA 3010A	589396	EPA 6010D	589429
92512587001	HGWA-47	EPA 3005A	589337	EPA 6020B	589405
92512587002	HGWA-48D	EPA 3005A	589337	EPA 6020B	589405
92512587003	EB-01	EPA 3005A	589337	EPA 6020B	589405
92512587001	HGWA-47	EPA 7470A	588542	EPA 7470A	588758
92512587002	HGWA-48D	EPA 7470A	588542	EPA 7470A	588758
92512587003	EB-01	EPA 7470A	588542	EPA 7470A	588758
92512587001	HGWA-47	SM 2450C-2011	588373		
92512587002	HGWA-48D	SM 2450C-2011	588373		
92512587003	EB-01	SM 2450C-2011	588373		
92512587001	HGWA-47	EPA 300.0 Rev 2.1 1993	589104		
92512587002	HGWA-48D	EPA 300.0 Rev 2.1 1993	589104		
92512587003	EB-01	EPA 300.0 Rev 2.1 1993	589104		

Pace Analytical*

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

Sample Condition Upon Receipt Upon Receipt Upon Receipt Upon Receipt Upon Receipt Upon Receipt Upon Receipt	USPS			Projec lient	WO#: 92512587
tody Seal Present? Yes Seals	Intact?	□Yes	□N	0	Date/Initials Person Examining Contents: (2/17/16
rmometer:	ble Bags	None		Other Blue	Biological Tissue Frozen? Yes None
Add/Subtract (°C): AR Regulated Soll (A/A, water sample) samples originate in a quarantine zone within the Unite	3	e:			Temp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling process has begun Did samples originate from a foreign source (internationally,
☐Yes ☐No		200			Including Hawaii and Puerto Rico)? Yes No
	10.5			-	Comments/Discrepancy:
Chain of Custody Present?	ores €	□No	□N/A	1.	
Samples Arrived within Hold Time?	Yes	□No	□N/A	2.	00 00 00 00 00 00 00 00 00 00 00 00 00
Short Hold Time Analysis (<72 hr.)?	□Yes	DINO	□N/A	3.	
Rush Turn Around Time Requested?	□Yes	LINO	□N/A	4.	
Sufficient Volume?	⊟ res	□No	□N/A	5.	
Correct Containers Used? -Pace Containers Used?	☐Yes ☐ Yes	□No □No	□N/A □N/A	6.	
Containers Intact?	□¥99	□No	□N/A	7.	
Dissolved analysis: Samples Field Filtered?	□Yes	□No	E N/A	8.	
Sample Labels Match COC?	Yes	□No	□N/A	9.	
-Includes Date/Time/ID/Analysis Matrix:	V	V			
Headspace in VOA Vials (>5-6mm)?	□Yes	□No	□ MTA	10.	
Trip Blank Present?	Yes	□No	□N/A	11.	, this letter
Trip Blank Custody Seals Present?	□Yes	-	DAIA		
COMMENTS/SAMPLE DISCREPANCY					Fleid Data Required? ☐Yes ☐No
IENT NOTIFICATION/RESOLUTION				Lot	t ID of split containers:
IENT NOTIFICATION/NESOCOTION					
Person contacted:	N. C. (1979) 1. A.		Date/	Time:	



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#: 92512587

PM: KLH1

Due Date: 01/04/21

CLIENT: GA-GA Power

tem#	BP4U-125 mL Plastic Unpreserved (N/A) (CI-)	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) (CI-)	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-)	AG15-1 liter Amber H2SO4 (pH < 2)	AG35-250 mL Amber H2SO4 (pH < 2)	AG3A[DG3A]-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCI (N/A)	VG9T-40 mL VOA Na25203 (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 Plaştic (N/A – lab)	BOIN	BP3A-250 mL Plastic (NH2)25O4 (9.3-9.7)	AGOU-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
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		pH Ac	Justment Log for Pres	erved Samples		
Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #
-		100				

-						

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.

		1/2/3/4 SDGs	One sam	note who	Please	12	11	6	6	0	7	on	O1	4	u	2	-	ITEM#		7		2000		Email To	Vocass		Company
		DGs	Li, Hg. Mo. Se, Ti One sample set submitted for EB-01 but it will be reported for AP-	rease has my wens, same unough any wells not sampled, and noile when the last sample for the event has been taken. Full App. III & W Metats=5b, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb	ADDITIONAL COMMENTS		\								EB-01	HGWA-48D	HGWA-47	SAMPLE ID WAS OURSOLD ON WAS SAMPLE ID WAS OURSOLD ON WAS OURSE OF SAMPLE ID WAS OURSE OTHER SAMPLE DISSUE	ent Information	Section D	ı	Reguested Date Date/TAT: 10 Date	aca contacts		Atlanta, GA		1
		C)E	1	SHOWN					1									437858 A	3005		r ojed Number GW6581	Project Name	Purchase Order No.		Серу То:	Report to SCS Contacts	Required Project Information
		1	Ho	N	RELINQUISHED BY / AFFILIATION	_			-	H	-		-		_		WTG	MATRIX CODE (See valid code) SAMPLE TYPE (G=GRAB C=C	_	-	G. G.	ne PI	1 3		Geosyntec Contacts	SCSC	in mafor
		F	MES	E	TSHED				1	H			1	1			12/5/20	DATE	T	1	V6581	ant Har			ntec Co	ontacts	- Contraction
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PRINT Name of SAMPLER:	SAMPLER NAME AND SIGNATURE	300	500	CHANNAN	2					1				3				DATE	CTED	ı		Plant Hammond AP-4 BKG 03					
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(Y/N)															1	1	5	4					1	덮			





January 11, 2021

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

RE: Project: HAMMOND AP-4 BKG 03 RADS

Pace Project No.: 92512557

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

Ken Leny

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.





CERTIFICATIONS

Project: HAMMOND AP-4 BKG 03 RADS

Pace Project No.: 92512557

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 Montana Certification #: Cert0082 Nebraska Certification #: NE-OS-29-14 Nevada Certification #: PA014572018-1 New Hampshire/TNI Certification #: 297617 New Jersey/TNI Certification #: PA051

New Jersey: NN Certification #: PA05 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190 Ohio EPA Rad Approval: #41249

Missouri Certification #: 235

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





SAMPLE SUMMARY

Project: HAMMOND AP-4 BKG 03 RADS

Pace Project No.: 92512557

Lab ID	Sample ID	Matrix	Date Collected	Date Received	
92512557001	HGWA-47	Water	12/15/20 10:10	12/17/20 08:48	
92512557002	HGWA-48D	Water	12/15/20 14:00	12/17/20 08:48	
92512557003	EB-01	Water	12/15/20 18:02	12/17/20 08:48	



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 BKG 03 RADS

Pace Project No.: 92512557

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92512557001	HGWA-47	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92512557002	HGWA-48D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92512557003	EB-01	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



SUMMARY OF DETECTION

Project: HAMMOND AP-4 BKG 03 RADS

Pace Project No.: 92512557

Lab Sample ID	Client Sample ID			
Method	Parameters	Result	Units	Report Limit Analyzed Qualifiers
92512557001	HGWA-47			
EPA 9315	Radium-226	0.259 ± 0.251 (0.469)	pCi/L	01/06/21 06:58
EPA 9320	Radium-228	C:88% T:NA 0.270 ± 0.353 (0.753)	pCi/L	01/04/21 11:29
Total Radium Calculation	Total Radium	C:73% T:86% 0.529 ± 0.604 (1.22)	pCi/L	01/06/21 14:32
92512557002	HGWA-48D			
EPA 9315	Radium-226	0.255 ± 0.273 (0.548)	pCi/L	01/06/21 06:58
EPA 9320	Radium-228	C:91% T:NA 0.974 ± 0.466 (0.795) C:70%	pCi/L	01/04/21 11:29
Total Radium Calculation	Total Radium	T:81% 1.23 ± 0.739 (1.34)	pCi/L	01/06/21 14:32
92512557003	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%	pCi/L	01/05/21 13:26
Total Radium Calculation	Total Radium	7:88% 0.254 ± 0.693 (1.62)	pCi/L	01/06/21 14:32



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 BKG 03 RADS

Pace Project No.: 92512557

Sample: HGWA-47 PWS:	Lab ID: 92512 Site ID:	2557001 Collected: 12/15/20 10:10 Sample Type:	Received:	12/17/20 08:48	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.259 ± 0.251 (0.469) C:88% T:NA	pCi/L	01/06/21 06:58	3 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.270 ± 0.353 (0.753) C:73% T:86%	pCi/L	01/04/21 11:29	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.529 ± 0.604 (1.22)	pCi/L	01/06/21 14:32	2 7440-14-4	



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 BKG 03 RADS

Pace Project No.: 92512557

Sample: HGWA-48D PWS:	Lab ID: 9251 Site ID:	2557002 Collected: 12/15/20 14:00 Sample Type:	Received:	12/17/20 08:48	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.255 ± 0.273 (0.548) C:91% T:NA	pCi/L	01/06/21 06:58	3 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.974 ± 0.466 (0.795) C:70% T:81%	pCi/L	01/04/21 11:29	9 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	1.23 ± 0.739 (1.34)	pCi/L	01/06/21 14:32	2 7440-14-4	



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 BKG 03 RADS

Pace Project No.: 92512557

Sample: EB-01 PWS:	Lab ID: 9251 Site ID:	2557003 Collected: 12/15/20 18:02 Sample Type:	Received:	12/17/20 08:48	Matrix: Water	
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	6 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.254 ± 0.693 (1.62)	pCi/L	01/06/21 14:32	2 7440-14-4	



QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 BKG 03 RADS

Pace Project No.: 92512557

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: 92512557001, 92512557002, 92512557003

METHOD BLANK: 2071921 Matrix: Water

Associated Lab Samples: 92512557001, 92512557002, 92512557003

 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.



QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 BKG 03 RADS

EPA 9315

Pace Project No.: 92512557

QC Batch Method:

QC Batch: 429175 Analysis Method: EPA 9315 Analysis Description:

9315 Total Radium Laboratory:

Pace Analytical Services - Greensburg

Associated Lab Samples: 92512557001, 92512557002, 92512557003

Matrix: Water METHOD BLANK: 2073293

Associated Lab Samples: 92512557001, 92512557002, 92512557003

Act ± Unc (MDC) Carr Trac Units Analyzed Qualifiers Parameter 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.



QUALIFIERS

Project: HAMMOND AP-4 BKG 03 RADS

Pace Project No.: 92512557

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

Date: 01/11/2021 12:59 PM

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.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 BKG 03 RADS

Pace Project No.: 92512557

Date: 01/11/2021 12:59 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92512557001	HGWA-47	EPA 9315	429175		
92512557002	HGWA-48D	EPA 9315	429175		
92512557003	EB-01	EPA 9315	429175		
92512557001	HGWA-47	EPA 9320	428749		
92512557002	HGWA-48D	EPA 9320	428749		
92512557003	EB-01	EPA 9320	428749		
92512557001	HGWA-47	Total Radium Calculation	429860		
92512557002	HGWA-48D	Total Radium Calculation	429860		
92512557003	EB-01	Total Radium Calculation	429860		

Pace Analytical*

Document Name: Sample Condition Upon Receipt(SCUR)

Document No.: F-CAR-CS-033-Rev.07 Document Revised: October 28, 2020 Page 1 of 2

Page 1 of 2 Issuing Authority: Pace Carolinas Quality Office

USPS Other States: CA	∏Yes ☑None e:		92512557
Type of Ico	☑None e:		Date/Initials Person Examining Contents: Content
Type of Ico	e:		Blological Tissue Frozen? Yes No NA Blue None Temp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling proces
3		-	Samples out of temp criteria. Samples on ice, cooling proces
		C (check ma	aps)? Did samples originate from a foreign source (internationally,
	CVIVE	234497G	Including Hawaii and Puerto Rico)? Yes No
			Comments/Discrepancy:
@Yes	□No	□N/A	1.
TYes	□No	□N/A	2.
	DINO	□N/A	3.
□Yes	1No	□N/A	4.
			5.
			6.
☐\res	□No	□N/A	*
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			8.
			9.
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V	V		
Plus	Chia	There	10.
Yes			11.
		/	
			Field Data Required? ☐Yes ☐No
			Lot ID of split containers:

		Date/1	Time:
			Date:
	Yes Yes	Yes No Yes Yes	Yes No N/A N/A Yes No N/A N/A Yes No N/A



Document Name: Sample Condition Upon Receipt(SCUR)

Document No.: F-CAR-CS-033-Rev.07

Project #

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

WO#:92

PM: KLH1

Due Date: 01/11/21

CLIENT: GA-GA Power

ltem#	BP4U-125 mL Plastic Unpreserved (N/A) (CI-)	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) (CI-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-1.25 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (CI-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (CI-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (CI-)	AG15-1 liter Amber H2504 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A){Cl-}	DG9H-40 mL VOA HCI (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)	SPZT-250 mL Sterile Plaştic (N/A – lab)	BPIN	BP3A-250 mL Plastic (NH2)25O4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 ml. Amber Unpreserved vials (N/A)
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		pH Ac	ljustment Log for Pres	erved Samples		
Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #
17-						

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.

		TO A SUCI	One sample set s	Full App. I	Please no		12	=	i	40	00	7	6	61		u	2	-	ITEM#	3 (0	wednesday	TI KAN	Email To:		Address	Company	Required C
		S	le set submitted for El	II & IV Metats=Sb, As, Se, TI	te dry wells, strike the the last sample for the	ADDITIONA	-	1											SAMPLE ID (A-Z 0-9/) Sample Ds MUST BE UNIQUE	Required Come Information	Section D	seducine one office (VII)		SCS Contacts		Atlanta, GA	GA Power	ğ
			One sample set submitted for EB-01 but it will be reported for AP-	Full App. III & IV Metals=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Ho, Mo, Se, Tl	Please note dry wells, strike thorugh any wells not sampled, and note when the last sample for the event has been taken.	ADDITIONAL COMMENTS										EB-01	HGWA-48D	HGWA-47	WATER WATER WATER WATER WASER WASER PAGOUCT SOIUSOLID DIL WIPE AIR OTHER TISSUE	MAIRIX		To may						
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Quality Control Sample Performance Assessment

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

Pace Analytical

2073293 0.176 0.135 0.246 2.55

MB MDC:

MB Numerical Performance Indicator: MB Status vs Numerical Indicator. MB Status vs. MDC:

MB Sample ID MB concentration: M/B Counting Uncertainty:

Method Blank Assessment

N/A Pass

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits: LCSD58138

CS58138 1/6/2021 19-033 24.041 0.10 0.515 4.669 0.056 4.726 0.782 0.14

Count Date:

Laboratory Control Sample Assessme

Spike I.D.:

Decay Corrected Spike Concentration (pCi/mL):

Volume Used (mL): Aliquot Volume (L, g, F): Target Conc. (pCi/L, g, F): Uncertainty (Calculated): Result (pCi/L, g, F): ۷

Status vs Recovery:

Duplicate Sample Assessment

LCS/LCSD Counting Uncertainty (pCi/L, g, F):

Numerical Performance Indicator:

Percent Recovery: Status vs Numerical Indicator. Upper % Recovery Limits: Lower % Recovery Limits

cate Sample Assessment			Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.:	Sample I.D.: 92512557001 Enter Duplicate	Enter Duplicate	Sample
Duplicate Sample I.D. 925125570010UP sample IDs if	92512557001DUP	sample IDs if	Sample MS
Sample Result (pCi/L, g, F):	0.259	other than	Sample MSD
Sample Result Counting Uncertainty (pCi/L, g, F):	0.248	LCS/LCSD in	Sample Matrix Spike Re
Sample Duplicate Result (pCi/L, g, F):	0.181	the space below.	Matrix Spike Result Counting Uncertainty (pCi/L, g
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0,219		Sample Matrix Spike Duplicate Re
Are sampla and/or duplicate results below RL?	Sep-Below#		Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g
Duplicate Numerical Performance Indicator:	(0.45B/	92512557001	Duplicate Numerical Performance Indic
Duplicate RPD:	35,10%	92512557001DUP	(Based on the Percent Recoveries) MS/ MSD Duplicate F
Duplicate Status vs Numerical Indicator:	N/A		MS/ MSD Duplicate Status vs Numerical Indic
Duplicate Status vs RPD:	Fail***		MS/ MSD Duplicate Status vs F
% RPD Limit:	25%		L RPD L

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

***Baten-muerbere-prepped due to unacceptabl

Comments:

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

1202-9-1

ism 1/2/21

TAR_58138_W.xls Total Apha Radium (R104-3 11Feb2019).xls

1 of 1

Face Analytical

Quality Control Sample Performance Assessment

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

2073293 0.176 0.135 0.246 2.55 N/A Pass

MB Sample ID
MB concentration:
M/B Counting Uncertainty:
MB Numerical Performance Indicator:
MB Status vs Numerical Indicator:
MB Status vs. MDC:

Method Blank Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

	Cample Matrix Coits Control Accessment	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):		
58138	Sample Result:		
021	Sample Result Counting Uncertainty (pCi/L, g, F):		
33	Sample Matrix Spike Result:		
14	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
0	Sample Matrix Spike Duplicate Result:		
20	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
₽	MS Numerical Performance Indicator:		
21	MSD Numerical Performance Indicator:		
73	MS Percent Recovery:		
36	MSD Percent Recovery:		
21	MS Status vs Numerical Indicator:		
%8	MSD Status vs Numerical Indicator:		
.≪	MS Status vs Recovery:		
SS	MSD Status vs Recovery:		
%	MS/MSD Upper % Recovery Limits:		
%	MS/MSD Lower % Recovery Limits:		

Laboratory Control Sample Assessment	LCSD (Y or N)?	×	
	LCS58138	LCSD58138	
Count Date:	1/6/2021	1/6/2021	Samt
Spike I.D.:	19-033	19-033	
Decay Corrected Spike Concentration (pCl/mL):	24.041	24.041	Matrix Spi
Volume Used (mL):	0.10	0.10	
Aliquot Volume (L, g, F):	0.515	0.507	Matrix Spike Duplica
Target Conc. (pCi/L, g, F):	4.669	4.743	
Uncertainty (Calculated):	0.056	0.057	
Result (pCi/L, g, F):	4.726	4.173	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.782	0.736	
Numerical Performance Indicator:	0.14	-1,51	
Percent Recovery:	101.21%	84.98%	
Status vs Numerical Indicator;	N/A	Ϋ́Z	
Status vs Recovery:	Pass	Pass	
Upper % Recovery Limits:	125%	125%	
Lower % Recovery Limits:	75%	75%	

Dunitanto Comple Accompany			Matrix Spike/Matrix Spike Duplic
Sample I.D.:	LCS58138	Enter Duplicate	
Duplicate Sample I.D.	LCSD58138	sample IDs if	
Sample Result (pCV/L, g, F):	4.726	other than	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.782	LCS/LCSD in	
Sample Duplicate Result (pCi/L, g, F):	4.173	the space below.	Matrix Spike Result (
Sample Duplicate Result Counting Uncertainty (pCi/l, g, F):	0.736		Sami
Are sample and/or duplicate results below RL?	2		Matrix Spike Duplicate Result (
Duplicate Numerical Performance Indicator:	1.009	92512557001	Duplicate
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	13.99%	92512557001DUP	(Based on the Percent Reco
Duplicate Status vs Numerical Indicator:	A/N		MS/ MSD Duplica
Duplicate Status vs RPD:	Pass		- M
% RPD Limit:	25%		
## Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.	mple or duplicate	results are below th	e MDC.

Matrix Spike/Matrix Spike Duplicate Sample Assessment Sample I.D. Sample MS I.D. Sample MS I.D. Sample MS I.D. Sample MSD I.D. Sample MSD I.D. Sample MSD I.D. Sample MSD I.D. Sample Matrix Spike Result Matrix Spike Result Counting Uncertainty (pCiV., g, F): Sample Matrix Spike Duplicate Result Matrix Spike Duplicate Result Counting Uncertainty (pCiV., g, F): Duplicate Namerical 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:												
Matrix Spike/Matrix Spike Duplicate Sample Assessment Sample More Sample Marple Matrix Spike Result Counting Uncertainty (DCM. Sample Matrix Spike Duplicate Result Counting Uncertainty (DCM. Duplicate Result Counting Uncertainty (DCM. Duplicate Result Counting Uncertainty (DCM. Duplicate Result Counting Uncertainty (DCM. Duplicate Result Sample May MSD Duplicate Ind. MS/ MSD Duplicate Ind. MS/ MSD Duplicate Status vs Numerical Ind. MS/ MSD Duplicate Status vs Numerical Ind. MS/ MSD Duplicate Status vs Numerical Ind. MS/ MSD Duplicate Status vs Numerical Ind. MS/ MSD Duplicate Status vs Numerical Ind. MS/ MSD Duplicate Status vs Numerical Ind.		sle LD.	.O.1 O.	Sesult	, g, F):	Zesult:	;G. 6;	icator:	RPD:	icator:	RPD:	Limit
	Matrix Spike/Matrix Spike Duplicate Sample Assessment	Samp Sample M	Sample MS	Sample Matrix Spike F	Matrix Spike Result Counting Uncertainty (pCi/L,	Sample Matrix Spike Duplicate F	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L,	Duplicate Numerical Performance Indi	(Based on the Percent Recoveries) MS/ MSD Duplicate	MS/ MSD Duplicate Status vs Numerical Indi	MS/ MSD Duplicate Status vs	% RPD

Comments:

29m/my

TAR_58138_W.xls Total Alpha Radium (R104-3 11Feb2019).xls

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

VAL 12/30/2021 Ra-228 Test Analyst Date:

Pace Analytical"

	12/30/2021	
Worklist	58094	
Matrix:	MT	
Method Blank Assessment		
MB Sample iD	2071921	
MB concentration;	-0.161	
M/B 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	

MS/MSD 2																														
MS/MSD 1																														
Sample Matrix Spike Control Assessment	Sample Collection Date:	Sample I.D.	Sample MS I.D.	Sample MSD I.D.	Spike I.D.:	MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike Volume Used in MS (ml.):	Spike Volume Used in MSD (mL):	MS Aliquot (L. g. F):	MS Target Conc.(pCi/L, g, F):	MSD Aliquot (L, g, F):	MSD Target Conc. (pCi/L, g, F):	MS Spike Uncertainty (calculated):	MSD Spike Uncertainty (calculated):	Sample Result:	Semple 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 Dupiicate Result:	Matrix Spike Duplicate Result 2 Sigma CSU (pCif., 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:

Laboratory Control Sample Assessment	LCSD (Y or N)?	,	
	LCS58094	LCSD58094	
Count Date:	1/4/2021	1/4/2021	
Spike I.D.:	20-030	20-030	
Decay Corrected Spike Concentration (pCi/mL):	37.015	37.015	
Volume Used (mL):	0.10	0.10	
Aliquot Volume (L, g, F):	0.823	0.825	2
Target Conc. (pCi/L, g, F):	4.496	4.488	
Uncertainty (Calculated):	0.220	0.220	
Result (pCi/L, g, F):	5.637	5.675	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.278	1.293	
Numerical Performance Indicator:	1.73	1.77	
Percent Recovery;	125,39%	126.46%	
Status vs Numerical Indicator.	A/N	A/N	
Status vs Recovery:	Pass	Pass	
Upper % Recovery Limits:	135%	135%	
Lower % Recovery Limits:	60%	%09	
Duplicate Sample Assessment			Matrix Spik

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

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

Sample I.D.:
Duplicate Sample I.D.:
Sample Result 2 Signa CSU (pCi/L, g, F):
Sample Result 2 Signa CSU (pCi/L, g, F):
Sample Duplicate Result (pCi/L, g, F):
Sample Duplicate Result 2 Signa CSU (pCi/L, g, F):
Are sample and/or duplicate results below RL?

Duplicate Numerical Performance Indicator: (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:

Duplicate Status vs Numerical Indicator: Duplicate Status vs RPD:

LCS58094 LCSD58094 5.637 1.278 5.675 1.293 NO 0.041 0.85% Pass 96%

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

Comments:

January 2021





February 04, 2021

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

RE: Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

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@n

kevin.herring@pacelabs.com 1(704)875-9092

Ken Lung

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.





CERTIFICATIONS

Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

Pace Analytical Services Charlotte

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

North Carolina Wastewater Certification #: 12

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804 Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

Pace Analytical Services Peachtree Corners

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

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

Virginia/VELAP Certification #: 460221

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

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



SAMPLE SUMMARY

Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

Lab ID	Sample ID	Matrix	Date Collected	Date Received	
92517911001	HGWA-47	Water	01/19/21 12:44	01/21/21 11:30	
92517911002	HGWA-48D	Water	01/19/21 12:55	01/21/21 11:30	
92517911003	EB-01	Water	01/20/21 14:00	01/21/21 11:30	



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92517911001	HGWA-47	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
92517911002	HGWA-48D	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
92517911003	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



SUMMARY OF DETECTION

Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
			Offics		- Analyzeu	- Qualifiers
92517911001	HGWA-47					
	Performed by	CUSTOME R			02/04/21 09:44	
	рН	7.32	Std. Units		02/04/21 09:44	
EPA 6010D	Calcium	72.5	mg/L	1.0	02/01/21 18:39	M1
EPA 6020B	Barium	0.029	mg/L	0.010	02/02/21 18:02	
EPA 6020B	Boron	0.015J	mg/L	0.10	02/02/21 18:02	
EPA 6020B	Lead	0.000038J	mg/L	0.0050	02/02/21 18:02	
EPA 6020B	Lithium	0.0030J	mg/L	0.030	02/02/21 18:02	
SM 2450C-2011	Total Dissolved Solids	199	mg/L	10.0	01/22/21 09:38	
EPA 300.0 Rev 2.1 1993	Chloride	2.8	mg/L	1.0	01/26/21 23:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.057J	mg/L	0.10	01/26/21 23:24	
EPA 300.0 Rev 2.1 1993	Sulfate	2.6	mg/L	1.0	01/26/21 23:24	
2517911002	HGWA-48D					
	Performed by	CUSTOME R			02/04/21 09:44	
	рН	7.40	Std. Units		02/04/21 09:44	
EPA 6010D	Calcium	58.9	mg/L	1.0	02/01/21 18:59	
EPA 6020B	Antimony	0.00042J	mg/L	0.0030	02/02/21 18:08	
EPA 6020B	Barium	0.095	mg/L	0.010	02/02/21 18:08	
EPA 6020B	Boron	0.015J	mg/L	0.10	02/02/21 18:08	
EPA 6020B	Chromium	0.0015J	mg/L	0.010	02/02/21 18:08	
EPA 6020B	Lead	0.000056J	mg/L	0.0050	02/02/21 18:08	
EPA 6020B	Lithium	0.0032J	mg/L	0.030	02/02/21 18:08	
EPA 6020B	Molybdenum	0.0018J	mg/L	0.010	02/02/21 18:08	
SM 2450C-2011	Total Dissolved Solids	224	mg/L	10.0	01/22/21 09:38	
EPA 300.0 Rev 2.1 1993	Chloride	2.7	mg/L	1.0	01/26/21 23:39	
EPA 300.0 Rev 2.1 1993	Fluoride	0.079J	mg/L	0.10	01/26/21 23:39	
EPA 300.0 Rev 2.1 1993	Sulfate	3.9	mg/L	1.0	01/26/21 23:39	



ANALYTICAL RESULTS

Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

Date: 02/04/2021 09:45 AM

Sample: HGWA-47	Lab ID:	92517911001	Collecte	d: 01/19/2	12:44	Received: 01/	21/21 11:30 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared 	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte						
Performed by	CUSTOME R				1		02/04/21 09:44		
pH	7.32	Std. Units			1		02/04/21 09:44		
6010D ATL ICP	· · · · · · · · · · · · · · · · · · ·	Method: EPA 6				PA 3010A			
Calcium	72.5	mg/L	1.0	0.070	1	02/01/21 11:55	02/01/21 18:39	7440-70-2	M1
6020 MET ICPMS	Analytical	Method: EPA 6	6020B Prep	paration Met	hod: EF	PA 3005A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	SA.				
Antimony	ND	mg/L	0.0030	0.00028	1	02/02/21 11:36	02/02/21 18:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/02/21 11:36	02/02/21 18:02		
Barium	0.029	mg/L	0.010	0.00071	1	02/02/21 11:36	02/02/21 18:02		
Beryllium	ND	mg/L	0.0030	0.000046	1	02/02/21 11:36	02/02/21 18:02		
Boron	0.015J	mg/L	0.10	0.0052	1	02/02/21 11:36	02/02/21 18:02		
Cadmium	ND	mg/L	0.0025	0.00012	1	02/02/21 11:36			
Chromium	ND ND	mg/L	0.0023	0.00012	1	02/02/21 11:36			
Cobalt	ND ND	mg/L	0.0050	0.00033	1	02/02/21 11:36	02/02/21 18:02		
Lead	0.000038J	mg/L	0.0050	0.00036	1	02/02/21 11:36	02/02/21 18:02		
Leau Lithium	0.0030J	-		0.000030	1	02/02/21 11:36			
		mg/L	0.030		1				
Molybdenum	ND	mg/L	0.010	0.00069		02/02/21 11:36			
Selenium	ND	mg/L	0.010	0.0016	1	02/02/21 11:36			
Thallium	ND	mg/L	0.0010	0.00014	1	02/02/21 11:36	02/02/21 18:02	7440-28-0	
7470 Mercury	Analytical	Method: EPA	7470A Prep	aration Met	hod: EF	A 7470A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	SA.				
Mercury	ND	mg/L	0.00050	0.000078	1	01/26/21 07:45	01/26/21 11:01	7439-97-6	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Ana	lytical Services	- Peachtre	e Corners, C	SA.				
Total Dissolved Solids	199	mg/L	10.0	10.0	1		01/22/21 09:38		
300.0 IC Anions 28 Days	•	Method: EPA 3		.1 1993					
Chloride	2.8	mg/L	1.0	0.60	1		01/26/21 23:24	16887-00-6	
Fluoride	0.057J	mg/L	0.10	0.050	1		01/26/21 23:24		
Sulfate	2.6	mg/L	1.0	0.50	1		01/26/21 23:24		



ANALYTICAL RESULTS

Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

Date: 02/04/2021 09:45 AM

Sample: HGWA-48D	Lab ID:	92517911002	Collecte	ed: 01/19/2	12:55	Received: 01/	/21/21 11:30 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte)					
Performed by	CUSTOME R				1		02/04/21 09:44		
рН	7.40	Std. Units			1		02/04/21 09:44		
6010D ATL ICP	•	Method: EPA 6 lytical Services		•		PA 3010A			
Calcium	58.9	mg/L	1.0	0.070	1	02/01/21 11:55	02/01/21 18:59	7440-70-2	
6020 MET ICPMS	•	Method: EPA 6 lytical Services		•		PA 3005A			
Antimony	0.00042J	mg/L	0.0030	0.00028	1	02/02/21 11:36	02/02/21 18:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/02/21 11:36	02/02/21 18:08	7440-38-2	
Barium	0.095	mg/L	0.010	0.00071	1	02/02/21 11:36	02/02/21 18:08	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/02/21 11:36	02/02/21 18:08		
Boron	0.015J	mg/L	0.10	0.0052	1	02/02/21 11:36			
Cadmium	ND	mg/L	0.0025	0.00012	1	02/02/21 11:36			
Chromium	0.0015J	mg/L	0.010	0.00055	1	02/02/21 11:36			
Cobalt	ND	mg/L	0.0050	0.00038	1	02/02/21 11:36	02/02/21 18:08		
Lead	0.000056J	mg/L	0.0050	0.000036	1	02/02/21 11:36	02/02/21 18:08	7439-92-1	
Lithium	0.0032J	mg/L	0.030	0.00081	1	02/02/21 11:36	02/02/21 18:08	7439-93-2	
Molybdenum	0.0018J	mg/L	0.010	0.00069	1	02/02/21 11:36			
Selenium	ND	mg/L	0.010	0.0016	1	02/02/21 11:36	02/02/21 18:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/02/21 11:36	02/02/21 18:08	7440-28-0	
7470 Mercury	Analytical	Method: EPA 7	470A Pre	paration Met	hod: EF	PA 7470A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	SA.				
Mercury	ND	mg/L	0.00050	0.000078	1	01/26/21 07:45	01/26/21 11:04	7439-97-6	
2540C Total Dissolved Solids	•	Method: SM 24		e Corners (2Δ				
Total Dissolved Solids	224	mg/L	10.0	10.0	1		01/22/21 09:38		
		J			•		5 1,22,21 00.00		
300.0 IC Anions 28 Days	•	Method: EPA 3 lytical Services							
Chloride	2.7	mg/L	1.0	0.60	1		01/26/21 23:39	16887-00-6	
Fluoride	0.079J	mg/L	0.10	0.050	1		01/26/21 23:39		
Sulfate	3.9	mg/L	1.0	0.50	1		01/26/21 23:39		



ANALYTICAL RESULTS

Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

Date: 02/04/2021 09:45 AM

Sample: EB-01	Lab ID:	92517911003	3 Collecte	ed: 01/20/2	1 14:00	Received: 01/	21/21 11:30 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
6010D ATL ICP	Analytical	Method: EPA	6010D Pre	paration Me	thod: E	PA 3010A			
	Pace Anal	ytical Service	s - Peachtre	e Corners, 0	GΑ				
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 Pre	paration Met	thod: El	PA 3005A			
	Pace Anal	ytical Service	s - Peachtre	e Corners, 0	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 Pre	paration Met	thod: El	PA 7470A			
•	-	ytical Service							
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 2	2450C-2011						
	•	ytical Service		e Corners, 0	GΑ				
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	2.1 1993					
	Pace Anal	ytical Service	s - 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	



Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

Date: 02/04/2021 09:45 AM

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: 92517911003

METHOD BLANK: 3146677 Matrix: Water

Associated Lab Samples: 92517911003

ParameterUnitsBlank Reporting ResultReporting LimitMDLAnalyzedQualifiersCalciummg/LND1.00.07002/01/21 20:01

LABORATORY CONTROL SAMPLE: 3146678

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3146679 3146681

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3146682 3146683

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

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.



Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

Calcium

Date: 02/04/2021 09:45 AM

QC Batch: 596683 QC Batch Method: **EPA 3010A** Analysis Method: **EPA 6010D** Analysis Description: 6010D ATL

Laboratory:

Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92517911001, 92517911002

METHOD BLANK: 3146865 Matrix: Water

Associated Lab Samples: 92517911001, 92517911002

> Blank Reporting MDL Qualifiers Parameter Units Result Limit Analyzed ND 1.0 0.070 02/01/21 18:30 mg/L

LABORATORY CONTROL SAMPLE: 3146866

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units Calcium mg/L 1.0 102 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3146867 3146868

MSD MS

92517911001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec **RPD** RPD Qual Limits 70.9 -153 20 M1 Calcium mg/L 72.5 72.6 11 75-125

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.



Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

QC Batch: 596887 QC Batch Method: EPA 3005A Analysis Method: EPA 6020B

Analysis Description: 6020 MET

Laboratory:

Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92517911003

METHOD BLANK: 3147679

Date: 02/04/2021 09:45 AM

Matrix: Water

Associated Lab Samples: 92517911003

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	

		0 "				
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% 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 SP	IKE DUPL	LICATE: 3147	681		3147682							
			MS	MSD								
		92517740002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Antimony	mg/L	0.00068J	0.1	0.1	0.11	0.11	107	111	75-125	3	20	
Arsenic	mg/L	ND	0.1	0.1	0.098	0.10	98	101	75-125	4	20	

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.



Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

Date: 02/04/2021 09:45 AM

MATRIX SPIKE & MATRIX	SPIKE DUPLIC	CATE: 3147		MCD	3147682							
Parameter	g Units	92517740002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.058	0.1	0.1	0.15	0.16	96	102	75-125	4	20	
Beryllium	mg/L	ND	0.1	0.1	0.099	0.10	99	102	75-125	3	20	
Boron	mg/L	0.022J	1	1	1.0	1.0	99	100	75-125	1	20	
Cadmium	mg/L	ND	0.1	0.1	0.094	0.096	94	96	75-125	2	20	
Chromium	mg/L	0.00061J	0.1	0.1	0.10	0.10	102	103	75-125	2	20	
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	100	101	75-125	1	20	
Lead	mg/L	0.000072J	0.1	0.1	0.094	0.097	94	97	75-125	3	20	
Lithium	mg/L	ND	0.1	0.1	0.098	0.10	98	101	75-125	4	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	101	101	75-125	0	20	
Selenium	mg/L	ND	0.1	0.1	0.093	0.094	92	93	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	2	20	

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.



Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

QC Batch: 596939 QC Batch Method: EPA 3005A Analysis Method: EPA 6020B

Analysis Description: 6020 MET

Laboratory:

Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92517911001, 92517911002

METHOD BLANK: 3147882

Date: 02/04/2021 09:45 AM

Matrix: Water

Associated Lab Samples: 92517911001, 92517911002

ricecolated East Campion. 32017	311001, 32317311002	Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	02/02/21 17:51	
Arsenic	mg/L	ND	0.0050	0.00078	02/02/21 17:51	
Barium	mg/L	ND	0.010	0.00071	02/02/21 17:51	
Beryllium	mg/L	ND	0.0030	0.000046	02/02/21 17:51	
Boron	mg/L	ND	0.10	0.0052	02/02/21 17:51	
Cadmium	mg/L	ND	0.0025	0.00012	02/02/21 17:51	
Chromium	mg/L	ND	0.010	0.00055	02/02/21 17:51	
Cobalt	mg/L	ND	0.0050	0.00038	02/02/21 17:51	
₋ead	mg/L	ND	0.0050	0.000036	02/02/21 17:51	
Lithium	mg/L	ND	0.030	0.00081	02/02/21 17:51	
Molybdenum	mg/L	ND	0.010	0.00069	02/02/21 17:51	
Selenium	mg/L	ND	0.010	0.0016	02/02/21 17:51	
Γhallium	mg/L	ND	0.0010	0.00014	02/02/21 17:51	

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Antimony	mg/L	0.1	0.11	111	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	1.0	104	80-120	
Cadmium	mg/L	0.1	0.10	101	80-120	
Chromium	mg/L	0.1	0.10	101	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
_ead	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.10	103	80-120	
Molybdenum	mg/L	0.1	0.10	104	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Thallium	mg/L	0.1	0.094	94	80-120	

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 3147	884		3147885							
		92517911002	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Antimony	mg/L	0.00042J	0.1	0.1	0.11	0.11	112	109	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.099	0.099	99	98	75-125	0	20	

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



Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

Date: 02/04/2021 09:45 AM

MATRIX SPIKE & MATRIX	SPIKE DUPLI	CATE: 3147		MOD	3147885							
Parameter	Units	92517911002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.095	0.1	0.1	0.19	0.19	99	95	75-125	2	20	
Beryllium	mg/L	ND	0.1	0.1	0.10	0.097	100	97	75-125	3	20	
Boron	mg/L	0.015J	1	1	1.0	0.99	100	97	75-125	3	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	100	103	75-125	3	20	
Chromium	mg/L	0.0015J	0.1	0.1	0.10	0.10	102	99	75-125	3	20	
Cobalt	mg/L	ND	0.1	0.1	0.10	0.095	99	95	75-125	4	20	
Lead	mg/L	0.000056J	0.1	0.1	0.096	0.095	95	95	75-125	0	20	
Lithium	mg/L	0.0032J	0.1	0.1	0.10	0.10	99	97	75-125	2	20	
Molybdenum	mg/L	0.0018J	0.1	0.1	0.11	0.10	106	101	75-125	5	20	
Selenium	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	3	20	
Thallium	mg/L	ND	0.1	0.1	0.094	0.094	94	94	75-125	0	20	

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



Project:

HAMMOND AP-4 BKG 04

Pace Project No.:

92517911

QC Batch: QC Batch Method: 594784

EPA 7470A

Analysis Method:

EPA 7470A

Analysis Description:

7470 Mercury

Laboratory:

Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples:

92517911001, 92517911002, 92517911003

METHOD BLANK:

Matrix: Water

Associated Lab Samples:

92517911001, 92517911002, 92517911003

Blank Result

Reporting Limit

MDL

Analyzed

Qualifiers

Mercury

Mercury

Units mg/L

Units mg/L ND

0.00050

0.000078 01/26/21 10:28

LABORATORY CONTROL SAMPLE:

Parameter

Parameter

3138046

Spike Conc.

0.0025

LCS Result

LCS % Rec % Rec Limits

Qualifiers

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

3138047

MSD

MS

0.0025

MS % Rec

101

MSD

80-120

% Rec

Max

92517891001 Parameter Units Result

MS

ND

Spike

Result 0.0024

3138048

Result 0.0027 % Rec

Limits

RPD RPD

Mercury

Date: 02/04/2021 09:45 AM

mg/L

Spike Conc.

0.0025

Conc. 0.0025

MSD

94

106 75-125

Qual 20 12

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.



Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

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: 92517911001, 92517911002

METHOD BLANK: 3137200 Matrix: Water

Associated Lab Samples: 92517911001, 92517911002

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 10.0 01/22/21 09:32

LABORATORY CONTROL SAMPLE: 3137201

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

SAMPLE DUPLICATE: 3137203

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

SAMPLE DUPLICATE: 3137350

Date: 02/04/2021 09:45 AM

92517894002 Dup Max RPD RPD Parameter Units Result Result Qualifiers Total Dissolved Solids 64.0 67.0 5 10 mg/L

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.



Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

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: 92517911003

METHOD BLANK: 3137995 Matrix: Water

Associated Lab Samples: 92517911003

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 10.0 01/22/21 16:40

LABORATORY CONTROL SAMPLE: 3137996

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units **Total Dissolved Solids** mg/L 400 394 98 84-108

SAMPLE DUPLICATE: 3137997

Parameter Units Parameter Units Parameter Units Parameter Units Parameter Units Parameter Parameter Units Parameter Result Parameter Result Result Result RPD RPD Qualifiers ND ND ND 10

SAMPLE DUPLICATE: 3138171

Date: 02/04/2021 09:45 AM

92517909004 Dup Max RPD RPD Parameter Units Result Result Qualifiers Total Dissolved Solids 289 270 7 10 mg/L

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.

Qualifiers



QUALITY CONTROL DATA

Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

QC Batch Method:

Chloride

Fluoride

Date: 02/04/2021 09:45 AM

Sulfate

QC Batch: 594878

EPA 300.0 Rev 2.1 1993

Analysis Method:

EPA 300.0 Rev 2.1 1993

Analysis Description:

300.0 IC Anions

MDL

Laboratory:

Pace Analytical Services - Asheville

Analyzed

Associated Lab Samples: 92517911003

METHOD BLANK: 3138480

Matrix: Water

Associated Lab Samples: 92517911003

Blank Reporting
Parameter Units Result Limit

Chloride mg/L ND 1.0 0.60 01/24/21 21:50 Fluoride ND 0.10 0.050 01/24/21 21:50 mg/L Sulfate mg/L ND 0.50 01/24/21 21:50 1.0

LABORATORY CONTROL SAMPLE: 3138481

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers mg/L 106 50 52.9 90-110 2.5 2.4 90-110 mg/L 95 54.7 109 mg/L 50 90-110

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3138482 3138483

MS MSD 92517740005 MSD MS MSD Spike Spike MS % Rec Max Qual Parameter Units Conc. Result Result % Rec % Rec Limits **RPD** RPD Result Conc. Chloride ND 50 53.9 53.4 108 10 mg/L 50 107 90-110 1 Fluoride mg/L ND 2.5 2.5 2.6 2.5 103 98 90-110 5 10 Sulfate mg/L ND 50 50 55.4 54.9 111 110 90-110 1 10 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3138484 3138485

Parameter	Units	92517704001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	377	50	50	439	424	124	93	90-110	3	10	M6
Fluoride	mg/L	0.23	2.5	2.5	ND	ND	-9	-9	90-110		10	M1
Sulfate	mg/L	597	50	50	676	646	158	99	90-110	4	10	M6

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



Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

Date: 02/04/2021 09:45 AM

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: 92517911001, 92517911002

METHOD BLANK: 3139608 Matrix: Water

Associated Lab Samples: 92517911001, 92517911002

		Blank	Reporting			
Parameter	Units	Result	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					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L		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 SP	IKE DUPL	ICATE: 3139	610		3139611							
			MS	MSD								
		92517999001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	6.1	50	50	58.6	58.9	105	106	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	102	102	90-110	0	10	
Sulfate	mg/L	5.0	50	50	59.1	59.4	108	109	90-110	1	10	

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 3139	612		3139613							
			MS	MSD								
		92517909004	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	3.5	50	50	56.5	56.6	106	106	90-110	0	10	
Fluoride	mg/L	0.22	2.5	2.5	2.5	2.5	92	93	90-110	0	10	
Sulfate	mg/L	14.2	50	50	67.4	67.7	106	107	90-110	1	10	

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



QUALIFIERS

Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

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

Date: 02/04/2021 09:45 AM

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.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 BKG 04

Pace Project No.: 92517911

Date: 02/04/2021 09:45 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92517911001 92517911002	HGWA-47 HGWA-48D			_	
92517911001 92517911002	HGWA-47 HGWA-48D	EPA 3010A EPA 3010A	596683 596683	EPA 6010D EPA 6010D	596770 596770
92517911003	EB-01	EPA 3010A	596653	EPA 6010D	596772
92517911001 92517911002	HGWA-47 HGWA-48D	EPA 3005A EPA 3005A	596939 596939	EPA 6020B EPA 6020B	597029 597029
92517911003	EB-01	EPA 3005A	596887	EPA 6020B	597015
92517911001 92517911002 92517911003	HGWA-47 HGWA-48D EB-01	EPA 7470A EPA 7470A EPA 7470A	594784 594784 594784	EPA 7470A EPA 7470A EPA 7470A	595259 595259 595259
92517911001 92517911002	HGWA-47 HGWA-48D	SM 2450C-2011 SM 2450C-2011	594633 594633		
92517911003	EB-01	SM 2450C-2011	594779		
92517911001 92517911002	HGWA-47 HGWA-48D	EPA 300.0 Rev 2.1 1993 EPA 300.0 Rev 2.1 1993	595172 595172		
92517911003	EB-01	EPA 300.0 Rev 2.1 1993	594878		

ample Condition Client Name:	1		- 5			
Upon Receipt	outer	,		Projec	WO#: 92517911	
rier: Fed Ex UPS Commercial Page	USPS	s er:		lent	92517911	
ody Seal Present? Yes No Sea	ls Intact?	Yes	□No		Date/Initials Person Examining Contents:	1
ng Material: Bubble Wrap B nometer: 2373 LE Correction Fact	ubble Bags Type of le			Other Blue	Biological Tissue Frozen? ☐ Yes ☐ NO ☐ N/A	
er Temp: (1 Add/Subtract (er Temp Corrected (°C): 319 A Regulated Soil (1 N/A, water sample)	°C) <u>-0</u>	.)	= 1		Temp should be above freezing to 6°C ☐Samples out of temp criteria. Samples on ice, cooling pro has begun	cess
imples originate in a quarantine zone within the Un Yes \sumboxed No	nited States: CA	, NY, or	SC (check m	aps)?	Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No	
				F 7	Comments/Discrepancy;	
Chain of Custody Present?	-El Yes	□No	□N/A	1.	The first contract to the first of the	
Samples Arrived within Hold Time?	Øyes	□No	□N/A	2.		
Short Hold Time Analysis (<72 hr.)?	□Yes	ENO,	□N/A	3.		
Rush Turn Around Time Requested?	□Yes	INO	□N/A	4.		T ,
Sufficient Volume?	Dyes	□No	□N/A	5.		Г
Correct Containers Used? -Pace Containers Used?	☐Yes ☐Yes	□No □No	□N/A □N/A	6.		
Containers Intact?	Ves	□No	□N/A	7.		
Dissolved analysis: Samples Field Filtered?	□Yes	□No	EN/A	8.		
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix:	W W	□No	□N/A	9,		
Headspace in VOA Vials (>5-6mm)?	□Yes	ΠNo	PN/A	10.		
Trip Blank Present?	□Yes	□No	DN/A,	11.		1
Trip Blank Custody Seals Present?	□Yes	□No	DINIA			
MMENTS/SAMPLE DISCREPANCY	· · · · · · · · · · · · · · · · · · ·				Fleld Data Required? ☐Yes ☐N	0
IT NOTIFICATION/RESOLUTION	3			Lot	ID of split containers:	
				-		1.8
The same and the s				3		11.1 12.1

Document Name: Sample Condition Upon Receipt(SCUR) Document Revised: October 28, 2020 Page 1 of 2,



Document Name: Sample Condition Upon Receipt(SCUR) Document No.:

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 decklorination 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

WO#: 92517911

PM: KLH1

Project #

Due Date: 02/04/21

CLIENT: GA-GA Power

ltem#	BP4U-125 mL Plastic Unpreserved (N/A) (CI-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP45-125 mL Plastic H2SO4 (pH < 2) (CI-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (CI-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (CI-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (CI-)	AG15-1 liter Amber H2SQ4 (pH < 2)	AG35-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4CI (N/A)(CI-)	DG9H-40 mL VOA HCI (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile glastic (N/A - lab)	19.7/N	8P3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AGOU-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	OC91. 40 ml. Amber Llapseseaved in 06.11950
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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.

			172/3/4 SDGs	One sample sets	note when	Please not	12	=	10	9	00	7	6	Un	A	3	2	1	ITEM#		29		Γ	Requester	Phone:	Email To:	Notice Services	Adding	Required C
	The second secon		GS	U. Hg. Mo. Se. TI One sample set submitted for EB-01 big it will be recorded for AB	note when the last sample for the event has been taken. Full App. III & IV Metals=Sb As Ra Re R Cd Ca Cr Ca Ph	ADDITIONAL COMMENTS										F8-01	HGWA-48D	HGWA-47	SAMPLE ID SAMPLE ID (A-Z, 0-9) -) Sample IDs MUST BE UNIQUE TISSUE		Required Clent Information MATRIX COLES				Fax	SCS Contacts	Allania, GA		GA Prover
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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.

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in the second se				Cos com miles reputed to Ar	Li, Hg, Mo, Se, Ti One sample set submitted for EB.01 but it will be recorded for EB.01	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.	ADDITIONAL COMMENTS Please note dry wells, strike though any wells not sampled and	The state of the s									E8-01	HGWA-48D	HGWA47			WASTE WATER PRODUCT		Section D Valid Matrix Codes		Requested Due Date/TAT: 10 Day	так	SCS Contacts	- round, GA		Required Client Information:
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CHAIN-OF-CUSTODY I Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

				1/2/3/4 SDGs	One sam	Full App.	Please n	12	#	10	9	8	7	60	5	4	3	2			ITEM#	-WA			Reques	Phone:	Email To:		Andross	Required
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February 16, 2021

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

RE: Project: HAMMOND AP-4 BKG 04 RADS

Pace Project No.: 92517879

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

Revision 1 - This report replaces the February 15, 2021 report. This project was revised on February 16, 2021 to reflect the results for Sample 92517879003. (Greensburg, PA)

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

Sincerely,

Kevin Herring@nacel

kevin.herring@pacelabs.com 1(704)875-9092

Ken Slery

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.





CERTIFICATIONS

Project: HAMMOND AP-4 BKG 04 RADS

Pace Project No.: 92517879

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 Montana Certification #: Cert0082 Nebraska Certification #: NE-OS-29-14 Nevada Certification #: PA014572018-1 New Hampshire/TNI Certification #: 297617

Missouri Certification #: 235

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



SAMPLE SUMMARY

Project: HAMMOND AP-4 BKG 04 RADS

Pace Project No.: 92517879

Lab ID	Sample ID	Matrix	Date Collected	Date Received	
92517879001	HGWA-47	Water	01/19/21 12:44	01/21/21 11:30	
92517879002	HGWA-48D	Water	01/19/21 12:55	01/21/21 11:30	
92517879003	EB-01	Water	01/20/21 14:00	01/21/21 11:30	



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 BKG 04 RADS

Pace Project No.: 92517879

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92517879001	HGWA-47	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92517879002	HGWA-48D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92517879003	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



SUMMARY OF DETECTION

Project: HAMMOND AP-4 BKG 04 RADS

Pace Project No.: 92517879

Lab Sample ID	Client Sample ID				
Method	Parameters	Result	Units	Report Limit Analyzed	Qualifiers
92517879001	HGWA-47				
EPA 9315	Radium-226	-0.108 ± 0.0990 (0.427) C:88% T:NA	pCi/L	02/09/21 08:4	14
EPA 9320	Radium-228	0.176 ± 0.476 (1.07) C:79%	pCi/L	02/04/21 18:2	26
Total Radium Calculation	Total Radium	T:84% 0.176 ± 0.575 (1.50)	pCi/L	02/10/21 10::	29
92517879002	HGWA-48D				
EPA 9315	Radium-226	0.324 ± 0.284 (0.525) C:81% T:NA	pCi/L	02/09/21 09:	35
EPA 9320	Radium-228	1.03 ± 0.620 (1.15) C:79% T:81%	pCi/L	02/04/21 18::	26
Total Radium Calculation	Total Radium	1.35 ± 0.904 (1.68)	pCi/L	02/10/21 10:2	29
92517879003	EB-01				
EPA 9315	Radium-226	0.0391 ± 0.180 (0.466) C:86% T:NA	pCi/L	02/09/21 07:4	43
EPA 9320	Radium-228	0.365 ± 0.434 (0.916) C:78%	pCi/L	02/04/21 14:	59
Total Radium Calculation	Total Radium	T:72% 0.404 ± 0.614 (1.38)	pCi/L	02/16/21 11:0)7



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 BKG 04 RADS

Pace Project No.: 92517879

Sample: HGWA-47 PWS:	Lab ID: 9251 Site ID:	7879001 Collected: 01/19/21 12:44 Sample Type:	Received:	01/21/21 11:30	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	-0.108 ± 0.0990 (0.427) C:88% T:NA	pCi/L	02/09/21 08:44	4 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.176 ± 0.476 (1.07) C:79% T:84%	pCi/L	02/04/21 18:26	6 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.176 ± 0.575 (1.50)	pCi/L	02/10/21 10:29	9 7440-14-4	



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 BKG 04 RADS

Pace Project No.: 92517879

Sample: HGWA-48D PWS:	Lab ID: 9251 Site ID:	7879002 Collected: 01/19/21 12:55 Sample Type:	Received:	01/21/21 11:30 I	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.324 ± 0.284 (0.525) C:81% T:NA	pCi/L	02/09/21 09:35	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	1.03 ± 0.620 (1.15) C:79% T:81%	pCi/L	02/04/21 18:26	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	1.35 ± 0.904 (1.68)	pCi/L	02/10/21 10:29	7440-14-4	



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-4 BKG 04 RADS

Pace Project No.: 92517879

Sample: EB-01 PWS:	Lab ID: 9251 Site ID:	7879003 Collected: 01/20/21 14:00 Sample Type:	Received:	01/21/21 11:30 I	Matrix: Water	
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	02/16/21 11:07	7440-14-4	



QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 BKG 04 RADS

Pace Project No.: 92517879

QC Batch: 432561 Analysis Method: EPA 9320

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

Associated Lab Samples: 92517879001, 92517879002, 92517879003

Matrix: Water METHOD BLANK: 2088957

Associated Lab Samples: 92517879001, 92517879002, 92517879003

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

Laboratory:

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.



QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 BKG 04 RADS

Pace Project No.: 92517879

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: 92517879001, 92517879003

METHOD BLANK: 2092294 Matrix: Water

92517879001, 92517879003 Associated Lab Samples:

Act ± Unc (MDC) Carr Trac Parameter 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.



QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-4 BKG 04 RADS

Pace Project No.: 92517879

QC Batch: 433327

433327 EPA 9315 Analysis Method: Analysis Description: EPA 9315

9315 Total Radium

Laboratory:

Pace Analytical Services - Greensburg

Associated Lab Samples: 92517879002

METHOD BLANK: 2092295

Matrix: Water

Associated Lab Samples:

QC Batch Method:

92517879002

Parameter

Act ± Unc (MDC) Carr Trac

Units

Analyzed

Qualifiers

Radium-226 0.0319 ± 0.214 (0.551) C:89% T:NA pCi/L 02/09/21 08:26

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.



QUALIFIERS

Project: HAMMOND AP-4 BKG 04 RADS

Pace Project No.: 92517879

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

Date: 02/16/2021 01:59 PM

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.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 BKG 04 RADS

Pace Project No.: 92517879

Date: 02/16/2021 01:59 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92517879001	HGWA-47	EPA 9315	433326		
92517879002	HGWA-48D	EPA 9315	433327		
92517879003	EB-01	EPA 9315	433326		
92517879001	HGWA-47	EPA 9320	432561		
92517879002	HGWA-48D	EPA 9320	432561		
92517879003	EB-01	EPA 9320	432561		
92517879001	HGWA-47	Total Radium Calculation	434359		
92517879002	HGWA-48D	Total Radium Calculation	434359		
92517879003	EB-01	Total Radium Calculation	435135		

		R-CS-03	t No.: 3-Rev.07			olinas Quality Office	
boratory receiving samples: Asheville	☐ Huntersv	ille 🗌	Raleig	gh 🗌	Mechanicsville[Atlanta	Kernersville[]
Sample Condition Upon Receipt Client Name:	Power	,	ì	Proje	et#: WO# :	925178	379
ourier: Fed Ex U	PS USPS Other		Cli	ent	02817879		
tody Seal Present? Yes No S	Seals Intact?	Yes	□No		Date/Initials Pers	son Examining Content	5:4/21/21
rmometer: 233	Bubble Bags Type of Ice	□None □	e □ o	ther		ological Tissue Froze es ☑No □N/A	n?
oler Temp: Correction F Add/Subtra oler Temp Corrected (°C): OA Regulated Soil (□ N/A, water sample)		}	-		Temp should be abov Samples out of te	e freezing to 6°C cmp criteria. Samples or	ice, cooling process
samples originate in a quarantine zone within the Yes No	United States: CA,	NY, or S	C (check ma	ips)?	Did samples originate fr including Hawaii and Pu	erto Rico)? Yes	ternationally,
VIV. 11 (10 (10 (10 (10 (10 (10 (10 (10 (10			- manyon c	-	Comn	nents/Discrepancy:	
Chain of Custody Present?	₽Yes	□No	□N/A	1.	tyre W W ton		
Samples Arrived within Hold Time?	✓Yes	□No	□N/A	2.	*		
Short Hold Time Analysis (<72 hr.)?	□Yes	DNo,	□N/A	3.			
Rush Turn Around Time Requested?	□Yes	No	□N/A	4.			
Sufficient Volume?	□Yes	No	□N/A	5.			
Correct Containers Used? -Pace Containers Used?	☑Yes □Yes	□No □No	□N/A □N/A	6.			
Containers Intact?	Ves	□No	□N/A	7.			
Dissolved analysis: Samples Field Filtered?	□Yes	□No	EN/A	8.		W-11	
Sample Labels Match COC?	Ø√es	□No	□N/A	9.		W. 100 C.	
-Includes Date/Time/ID/Analysis Matrix:	W						
Headspace in VOA Vials (>5-6mm)?	□Yes	□No	WN/A	10.			
Trip Blank Present?	□Yes	□No	DN/A	11.			
Trip Blank Custody Seals Present?	□Yes	□No	DNIA				
COMMENTS/SAMPLE DISCREPANCY	of the state of th					Field Data Require	d? Yes No
JENT NOTIFICATION/RESOLUTION				Lo	t ID of split containers		
					(0-	,	
Person contacted:			_ Date/Ti	me:			
Project Manager SCURF Review:				dilina	Date:		

Project Manager SRF Review:

Document Name: Sample Condition Upon Receipt(SCUR) Document Revised: October 28, 2020

Page 1 of 2



Document Name: Sample Condition Upon Receipt(SCUR) Document No.:

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#: 92517879

M: KLH1

Due Date: 02/11/21

CLIENT: GA-GA Power

	1	1			14						AG3U-250 mL Amber Unpreserved (N/A) (CI-)	AG15-1 liter Amber H2SO4 (pH < 2)	AG35-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4CI (N/A)(CI-)	DG9H-40 mL VOA HCI (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	73	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AGOU-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U.40 ml. Amher Lippreserved vials (N/A)
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Sample	ID	Туре	e of Pr	reserv	ative	pl	H upor	-	l Adj			t Log			***	ime p	Sam reserv ljusted	ation		Amo		f Pres dded	ervati	ve		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.

		1/2/3/4 SDGs	Li, Hg	note wit		12	=	10	9	00	7	D	u	4	w	N	-	ITEM#					Energy 10		Address	Company	Required C
		1/2/2/4 SDGs	J. Hg. Mo. Se. Ti	Please note dry wells, strike though any wells not sampled, and note when the last sample for the event has been laken.	ADDITIONAL COMMENTS									/	#B-01	HGWA-48D	HGWA-47	SAMPLE ID (A-Z, 0-91-) Sample IDs MUST BE UNIQUE Hissue	Required Client Information MATRIX	Section D Valid Mai		Donat Day Day Day Day Day Day Day Day Day Day	SUS Contacts		s Allanta, GA	ny GA Power	ien
	1000	Or AF	1	d, and														Z S A N D S P W	3000	Valid Matrix Codes	Project Number, GW6581	Tioles Name	Purchase Order No.		Copy To (Report To: SCS Contacts	Required Project Information
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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.

			1/2/3/4 SDGs	U. Hg. Mo. Se. TI	note wher	Please no	21	3 =	10	9	8	7	6	Un	4	ω	2	-		ITEM#				Requeste	Phone:	Email To	Address	- Company	Company
	на при при при при при при при при при при		12/2/4 SDGs	Se, TI	note when the last sample for the event has been taken. Full App. III & IV Metats=Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb,	Please note dry wells, strike thorugh any wells not sampled and	ADDITIONAL COMMENTS									EB-01	HGWA-48D	HGWA-47	1101111	SAMPLE ID (A-Z, 0-91,-) Sample IDs MUST BE UNIQUE TISSLE	Required Clent Information MAYRIX	Section D Valid Matrix Codes	1	Requested Due Date/TAT: 10 Day	Fax	SCS Contacts	Atlanta, GA	П	1
	Perference in contract manual contract desired		X AP.	10	3		-			1						144	TW	130		# 유 유 유 유 무 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등	SODE		Pocontainer GAAGOS	Decine Number	Principles Order No.		Copy To: Ga	Report to SCS Contacts	Required Project Information
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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.

		1/2/3/4 SDGs	Li, Hg M	note whe		12	1	10	9	82	7	on	S	4	3	2	1	ITEM#				Request	Email 10		Address	Company	Required
		1/2/3/4 SDGs	o, Se, II	riesse note ory wells, stake thorugh any wells not sampled, and note when the last sample for the event has been taken.	ADDITIONAL COMMENTS										EB-01	HGWA-48D	HGVVA-47	SAMPLE ID (A-2.0-9)-) Sample IDs MUST BE UNIQUE 188846	Required Clerk Information MATRIX	Section D Valid N	Т	Requested Due Date/TAT-	SCS Contacts		Atlanta, GA	GA Power	Clien
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Important Note, By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to bite charges of 1.5% per month for any invoices not paid within 30 days.

Quality Control Sample Performance Assessment

Ra-226

Test

Method Blank Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

MS/MSD 2

MS/MSD 1

MS Status vs Numerical Indicator. MSD Status vs Numerical Indicator. MS Status vs Recovery.	1.44 113.37% N/A	0.02 100.16% N/A	Numerical Performance Indicator: Percent Recovery: Status vs Numerical Indicator:
MS Percent Recovery: MSD Percent Recovery:	5.375 0.863	40 0	4.773 5 0.808 0
MSD Numerical Performance Indicator:	0.057	_	
MS Numerical Performance Indicator:	4.742	4	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.507	0	
Sample Matrix Spike Duplicate Result:	0.10	_	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	24.040	24.	
Sample Matrix Spike Result:	33	19-033	
Sample Result Counting Uncertainty (pCi/L, g, F):	12.1	2/9/2021	2/9/2021 2/9/20
Sample Result:	8638	LCSD58638	LCS58638 LCSD5
MSD Spike Uncertainty (catculated):	Γ		LCSD (Y or N)?
MSD Target Conc. (pCvL, g, F); MS Snike Hocetainty (calculated):			Pass
MSD Aliquot (L, g, F):			A/A
MS Target Conc.(pCi/L, g, F):			1.53
MS Aliquot (L, g, F):			0.397
Spike Volume Used in MSD (mL):			0.192
Spike Volume Used in MS (mL):			0.150
MS/MSD Decay Corrected Spike Concentration (pCi/mt.):			2092294
Spike I.D.:			
Sample MSD I.D.			
Sample MS I.D.			MΩ
Sample I.D.			58638
Sample Collection Date:			2/8/2021
Sample Matrix Spike Control Assessment			Υſſ

Laboratory Control Sample Assessment	LCSD (Y or N)?	>	
	LCS58638	LCSD58638	
Count Date:	2/9/2021	2/9/2021	Sample Re
Spike I.D.:	19-033	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.040	24.040	Matrix Spike Re
Volume Used (mL):	0.10	0.10	
Aliquot Volume (L, g, F):	0.505	0.507	Matrix Spike Duplicate Re
Target Conc. (pCi/L, g, F):	4.765	4.742	
Uncertainty (Calculated):	0.057	0.057	_
Result (pCi/L, g, F):	4.773	5.375	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.808	0.863	
Numerical Performance indicator:	0.02	1.44	
Percent Recovery:	100.16%	113.37%	
Status vs Numerical Indicator:	∀/N	A/N	
Status vs Recovery:	Pass	Pass	
Upper % Recovery Limits:	125%	125%	
Lower % Recovery Limits:	75%	75%	
Duplicate Sample Assessment			Matrix Spike/Matrix Spike D

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Matrix Spike/Matrix Spike Duplicate Sample Assessment	Sample I.D.	Sample MS I.D.	Sample MSD I.D.	Sample Matrix Spike Result:	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Duplicate Numerical Performance Indicator:	(Based on the Percent Recoveries) MS/ MSD Duplicate RPD;	MS/ MSD Duplicate Status vs Numerical Indicator:	MS/ MSD Duplicate Status vs RPD:	% BDD I imit
	Enter Duplicate	sample IDs if	other than	LCS/LCSD in	the space below.							

LCS58638 4.773 4.773 0.808 5.375 0.863 NO -0.399 12.37% N/A Pass 25%

Sample I.D.:

Duplicate Sample I.D.:

Sample Result (pCifl., g. F):

Sample Result Counting Uncertainty (pCifl., g. F):

Sample Duplicate Result (pCifl., g. F):

Sample and/or duplicate results below RL?

Duplicate Numerical Performance Indicator (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:

MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:

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Duplicate Status vs RPD: % RPD Limit:

Duplicate Status vs Numerical Indicator:

Comments:

TAR DW QC Printed: 2/9/2021 11:38 AM Page 19 of 24

TAR_58638_W.xls Total Alpha Radium (R104-3 11Feb2019).xls

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Ra-226	

Test

Pace Analytical

MS/MSD 2

MS/MSD 1																															
Sample Matrix Spike Control Assessment	Sample Collection Date:	Sample 1.D.	Sample MS LD		Sample MSD 3.D.	Spike I.D.:	MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike Volume Used in MS (mL):	Spike Volume Used in MSD (mL):	MS Aliquot (L, g, F):	MS Target Conc.(pCi/L, g, F):	MSD Aliquot (L, g, F):	MSD Target Conc. (pCi/L, g, F):	MS Spike Uncertainty (calculated):	MSD Spike Uncertainty (calculated):	Sample Result:	Sample Result Counting Uncertainty (pCi/l., g, F):	Sample Matrix Spike Result:	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	MS Numerical Performance Indicator:	MSD Numerical Performance Indicator:	MS Percent Recovery:	MSD Percent Recovery:	MS Status vs Numerical Indicator:	MSD Status vs Numerical Indicator:	MS Status vs Recovery:	MSD Status vs Recovery;	MS/MSD Upper % Recovery Limits:	MS/MSD Lower % Recovery Limits:
															z	LCSD58638															
Ϋ́С	2/8/2021	58638	š	;			2092294	0.150	0.192	0.397	1.53	A/A	Pass		LCSD (Y or N)?	LCS58638	2/9/2021	19-033	24.040	0.10	0.505	4,765	0.057	4.773	0.808	0.02	100.16%	V/A	Pass	125%	75%
Analyst	Date:	Worklist	Matrix			Method Blank Assessment	MB Sample ID	MB concentration:	M/B Counting Uncertainty:	MB MDC;	MB Numerical Performance Indicator:	MB Status vs Numerical Indicator;	MB Status vs. MDC;		Laboratory Control Sample Assessment		Count Date:	Spike I.D.:	Decay Corrected Spike Concentration (pCi/mL):	Volume Used (ml.):	Aliquot Volume (L, g, F):	Target Conc. (pCl/L, g, F):	Uncertainty (Calculated):	Result (pCi/L, g, F):	LCS/LCSD Counting Uncertainty (pCi/L, g, F):	Numerical Performance Indicator:	Percent Recovery:	Status vs Numerical Indicator:	Status vs Recovery:	Upper % Recovery Limits:	Lower % Recovery Limits:

Matrix Spike/Matrix Spike Duplicate Sample Assessment	Sample I.D.: 92517856001 Enter Duplicate	Duplicate Sample I.D. 92517856001DUP sample IDs if	0.203 other than	0.222 LCS/LCSD in	0.681 the space below. Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	0.370 Sample Matrix Spike Duplicate Result:	See Below ## Matrix Spike Duplicate Result Counting Uncertainty (pCl/L, g, F):	-2,171 92517856001 Duplicate Numerical Performance Indicator.	108.17% \$2517856001DUP (Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	N/A MS/ MSD Duplicate Status vs Numerical Indicator:	Fali*** MSD Duplicate Status vs RPD:	7502 Commence of the Commence
Duplicate Sample Assessment	Sample I.D.: 9	Duplicate Sample I.D. 925	Sample Result (pCi/L, g, F):	Sample Result Counting Uncertainty (pCi/l., g, F):	Sample Duplicate Result (pCi/L, g, F):	Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	Are sample and/or duplicate results below RL? S	Duplicate Numerical Performance Indicator:	Duplicate RPD:	Duplicate Status vs Numerical Indicator:	Duplicate Status vs RPD:	1 E COO 30

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

A Control

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5 of 12

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Face Analytical

Method Blank Assessment

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

MS/MSD 2

MS/MSD · Sample I.D. Sample MS I.D. Sample MSD I.D. MS/MSD Decay Corrected Spike Concentration (pCirnL):
Spike Volume Used in MS (mL):
Spike Volume Used in MSD (mL): Spike I.D.: 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): 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 (pCifL, g. F); MS Numerical Performance Indicator; Sample Collection Date MSD Spike Uncertainty (calculated) Sample Result MS Percent Recovery. MSD Percent Recovery MS Status vs Numerical Indicator MSD Status vs Numerical Indicator MSD Numerical Performance Indicator MS Status vs Recovery Sample Matrix Spike Control Assessment 2/8/2021 58639 DW Ra-226 2092295 0.032 0.214 0.551 0.29 N/A Pass ₹ Test: Analyst: Date: Worklist: Matrix: MB Sample ID MB concentration: M/B Counting Uncertainty: MB MDC: MB Numerical Performance Indicator. MB Status vs Numerical Indicator; MB Status vs. MDC

						Σ										
2	LCSD58639									•		·				
CCSD (Y or N)?	6298S37	1202/5/2	19-033	24.040	0.10	0.515	4.669	0.056	4.791	0.824	0.29	102.60%	Α'N	Pass	125%	75%
ratory Control Sample Assessment		Count Date:	Spike I.D.:	Decay Corrected Spike Concentration (pCi/mL):	Volume Used (mL):	Aliquot Volume (L, g, F):	Target Conc. (pC//L, g, F):	Uncertainty (Calculated):	Result (pCi/L, g, F):	LCS/LCSD Counting Uncertainty (pCi/L, g, F):	Numerical Performance Indicator:	Percent Recovery:	Status vs Numerical Indicator:	Status vs Recovery:	Upper % Recovery Limits:	Lower % Recovery Limits:

	Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Enter Duplicate	Sample I.D.	
sample IDs if	Sample MS I.D.	
other than	Sample MSD I.D.	
LCS/LCSD in	Sample Matrix Spike Result:	
the space below.	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
	Sample Matrix Spike Duplicate Result:	
	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
92518305003	Duplicate Numerical Performance Indicator:	
92518305003DUP	(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	
	MS/ MSD Duplicate Status vs Numerical Indicator:	
	MS/ MSD Duplicate Status vs RPD:	
•	itimi COO %	

92518305003DUP

Sample I.D.; Duplicate Sample I.D.

Duplicate Sample Assessmen

92518305003

0.155 0.253 -0.029 0.286 See Below ##

Sample Result (pClrl., g, F):
Sample Result Counting Uncertainty (pClrl. g, F):
Sample Duplicate Result (pClrl., g, F):
Sample Duplicate Result Counting Uncertainty (pClrl., g, F):
Are sample and/or duplicate results below RL?

294.66% ¥)E

Duplicate RPD:

Duplicate Status vs RPD: % RPD Limit

Duplicate Status vs Numerical Indicator

Duplicate Numerical Performance Indicator:

MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:

MSD Status vs Recovery

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*** Batch must be re-prepped due to unacceptable precision

Comments:

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

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Pace Analytical

Quality Control Sample Performance Assessment

Ra-226	JJY 2/8/2021	58639 DW
Test	Analyst. Date:	Worklist: Matrix:

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	Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
	Sample Collection Date:		
	Sample I.D.		
	Sample MS I.D.		
	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):		
<u> </u>	MSD Spike Uncertainty (calculated):		
CSD58639	Sample Result:		
2/9/2021	Sample Result Counting Uncertainty (pCi/L, g, F):		
19-033	Sample Matrix Spike Result:		
24.040	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
0.10	Sample Matrix Spike Duplicate Result:		
0.512	Matrix Spike Duplicate Result Counting Uncertainty (pCi/l., g. F);		
4.699	MS Numerical Performance Indicator.		
0.056	MSD Numerical Performance Indicator:		
4.423	MS Percent Recovery:		
0.798	MSD Percent Recovery:		
99.0	MS Status vs Numerical Indicator:		
94.11%	MSD Status vs Numerical Indicator;		
√X	MS Status vs Recovery:		
Pass	MSD Status vs Recovery:		
125%	MS/MSD Upper % Recovery Limits:		
75%	MS/MSD Lower % Recovery Limits:		

(Y or N)?

Laboratory Control Sample Assessmen

0.214 0.551 0.29 N/A Pass

MB Sample ID
MB concentration:
M/B Counting Uncertainty:
MB MDC:

Method Blank Assessment

MB Numerical Performance indicator:
MB Status vs Numerical indicator:
MB Status vs. MDC:

2.99/2021 19-033 24.040 0.10 0.515 4.669 0.056 4.791 0.29 102.60% N/A Pass 1125% 75%

Result (pCl/L, g, F): LCS/LCSD Counting Uncertainty (pCl/L, g, F):

Numerical Performance Indicator:

Aliquot Volume (L, g, F): Target Conc. (pCi/L, g, F): Uncertainty (Calculated):

Volume Used (mL):

Count Date: Spike I.D.: Decay Corrected Spike Concentration (pCl/ml.): Percent Recovery: Status vs Numerical Indicator: Status vs Recovery: Upper % Recovery Limits: 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:	(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	MS/ MSD Duplicate Status vs Numerical Indicator:	MS/ MSD Duplicate Status vs RPD:	% RPD Limit:
	Enter Duplicate	sample IDs if	other than	LCS/LCSD in	the space below.							

LCS56839 4.791 0.824 4.423 0.796 NO 0.628 8.63% NA NA Pass 25%

Sample Result (DC/JL, g, F):
Sample Result Counting Uncertainty (DC/JL, g, F):
Sample Duplicate Result (DC/JL, g, F):
Sample Duplicate Result (DC/JL, g, F):

Are sample and/or duplicate results below RL?

Duplicate Numerical Performance Indicator: (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: Duplicate Status vs Numerical Indicator:

Sample I.D.: Duplicate Sample I.D.

Duplicate Sample Assessment

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

Duplicate Status vs RPD; % RPD Limit:

77/

Quality Control Sample Performance Assessment

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

MS/MSD 2

MS/MSD 1

Sample I.D. Sample MS I.D. Sample MSD I.D.

Spike I.D.

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment Sample Collection Date:

2088957	0.423	0.354	0.708	2.34	Warning	Pass
Assessment MB Sample ID	MB concentration:	M/B 2 Sigma CSU:	MB MDC:	MB Numerical Performance Indicator:	MB Status vs Numerical Indicator.	MB Status vs. MDC:

Method Blank

Spike Volume Used in MSD (mL);
MS Aliquot (L, g, F);
MS Target Conc, (pCbL, g, F);
MSD Target Conc, (pC, f, g, F);
MSD Target Conc, (pC, f, g, F);

MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL):

	>	LCSD58538	2/4/2021	20-030	
000	LCSD (Y or N)?	LCS58538	2/4/2021	20-030	
INID Status vs. INID.		-	Count Date:	Spike I.D.:	
	nent				

Sample Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Result:

Matrix Spike Result 2 Sigma CSU (pCiA. 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

Sample Result:

MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):

>	LCSD58538	2/4/2021	20-030	36,635	0.10	908'0	4.543	0.223	3.105	0.887	-3.08	%96'89	Ϋ́Z	Pass	135%	%09
LCSD (Y or N)?	LCS58538	2/4/2021	20-030	36.635	0.10	0.803	4.563	0.224	2.734	0.942	-3.70	59.92%	Fail≢	Fail Low**	135%	60%
Laboratory Control Sample Assessment		Count Date:	Spike I.D.:	Decay Corrected Spike Concantration (pCi/mL):	Volume Used (ml.);	Aliquot Volume (L, g, F):	Target Conc. (pCi/l., g, F):	Uncertainty (Calculated):	Result (pCVL, g, F):	LCS/LCSD 2 Sigma CSU (pCi/L, g, F);	Numerical Performance Indicator:	Percent Recovery:	Status vs Numerical Indicator:	Status vs Recovery:	Upper % Recovery Limits:	Lower % Recovery Limits:

uplicate Sample Assessment			Matrix Spike/Matrix Spike Duplicate Sample Assessmer
Sample I.D.:	LCS58538	Enter Duplicate	BS
Duplicate Sample 1.D.	LCSD58538	sample IDs if	Sample
Sample Result (pCi/L, g, F):	2.734	other than	Sample 1
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.942	LCS/LCSD in	Sample Matrix Spik
Sample Duplicate Result (pCi/L, g, F):	3.105	the space below.	Matrix Spike Result 2 Sigma CSU (pC)
Sample Duplicate Result 2 Sigma CSU (pCi/l, g, F):	0.887		Sample Matrix Spike Duplicat
Are sample and/or duplicate results below RL?	9		Matrix Spike Duplicate Result 2 Sigma CSU (pCi
Duplicate Numerical Performance Indicator:	-0.563		Duplicate Numerical Performance
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	13.15%		(Based on the Percent Recoveries) MS/ MSD Duplica
Duplicate Status vs Numerical Indicator.	Pass		MS/ MSD Duplicate Status vs Numerical I
Duplicate Status vs RPD:	Pass		MS/ MSD Duplicate Status
% RPD Limit:	36%		2%

Duplicate Sample Assessment

	Matrix Spike/Matrix Spike Duplicate Sample Assessment	
plicate	Sample I.D.	
IDs if	Sample MS I.D.	
than	Sample MSD I.D.	
SDin	Sample Matrix Spike Result:	
below.	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	

MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:

MS Status vs Numerical Indicator. MSD Status vs Numerical Indicator.

MS Status vs Recovery MSD Status vs Recovery

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.



6 of 10

Face Analytical www.peeclast.com

Quality Control Sample Performance Assessment

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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

	Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2	
	Sample Collection Date:			
	Sample I.D.			
	Sample MS I.D.			
	Sample MSD I.D.			
	Spike I.D.:			
	MS/MSD Decay Corrected Spike Concentration (pCl/mL):			
	Spike Volume Used in MS (mL):			
	Spike Volume Used in MSD (mL):			
	MS Aliquot (L, g, F):			
	MS Target Conc.(pCVL, g, F):		•	
	MSD Aliquot (L, g, F):			
	MSD Target Conc. (pCi/L, g, F):			
	MS Spike Uncertainty (calculated):			
Γ	MSD Spike Uncertainty (calculated):			
<u>_</u>	Sample Result:			
	Sample Maury 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:			
_	MCMACA Lynnia 1, December 1, Imiter	_		

CS58538

Laboratory Control Sample Assessment

Count Date: Spike I.D.:

Decay Corrected Spike Concentration (pCi/mL):

Volume Used (mL):

MB Numerical Performance Indicator: MB Status vs Numerical Indicator: MB Status vs. MDC:

MB Sample ID MB concentration; MB MDC:

Method Blank Assessment

Sample Result:	Sample Matrix Spike Result:	Sample Matrix Spike Duplicate Result.	MSD Numerical Performance Indicator: MSD Numerical Performance Indicator: MSD Percent Recovery: MSD Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MSD Status vs Recovery: MSD Status vs Recovery: MSD Status vs Recovery: MSD Status vs Recovery: MSMSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:

2,812021 20-030 36,590 0.10 0.22 4,409 11,024 -0.24 97,18% N/A Pass 135% 60%

28/2021 20-030 36.590 0.10 0.283 4.557 0.223 1.024 -0.53 93.80% N/A Pass 135% 60%

Aliquot Volume (L, g, F): Target Conc. (PCi/L, g, F): Uncertainty (Calculated): Result (PCi/L, g, F):

Percent Recovery: Status vs Numerical Indicator: Status vs Recovery: Upper % Recovery Limits: Lower % Recovery Limits:

Numerical Performance Indicator:

Matrix Spike/Matrix Spike Duplicate Sample Assessment	Sample I.D. Sample MS.I.D. Sample MSD.I.D. Sample MSD I.D.	Sample Matrix Spike Duplicate Result:	Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/ MSD Duplicate RPD: MS/ MSD Duplicate Status vs Numerical Indicator: MS/ MSD Duplicate Status vs Numerical Indicator:

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

LCS58538 LCSD58538 4.275

Sample I.D.: Duplicate Sample I.D.: Sample Result (pCiVL, g. F):

Duplicate Sample Assessment

1.024 4.409 1.024

Sample Duplicate Result (pCi/L, g, F): Are sample and/or duplicate results below RL?

rical Performance Indicator: s) MS/ MSD Duplicate RPD: atus vs Numerical Indicator: Duplicate Status vs RPD: % RPD: % RPD:	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: MS/ MSD Duplicate Status vs RPD: %, RPD:
	Duplicate Num Percent Recoverie / MSD Duplicate S MS/ MS

0.182 3.53% Pass Pass 36%

Duplicate Numerical Performance Indicator:
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:
Duplicate Shaus vs Numerical Indicator:
Duplicate Status vs RPD:
96. RPD:

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

Comments:

77 J

6 of 10

March 2021





April 12, 2021

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

RE: Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 12, 2021 and March 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,

Kevin Herring

kevin.herring@pacelabs.com

Ken Hung

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.





CERTIFICATIONS

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Pace Analytical Services Charlotte

9800 Kincey Ave. Ste 100, Huntersville, NC 28078 Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706 North Carolina Field Services Certification #: 5342 North Carolina Wastewater Certification #: 12

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804 Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

Pace Analytical Services Peachtree Corners

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

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

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

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



SAMPLE SUMMARY

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92527612001	HGWA-111	Water	03/11/21 16:25	03/12/21 13:43
92527612002	HGWA-111 FILTERED	Water	03/11/21 16:25	03/12/21 13:43
92527612003	HGWA-47	Water	03/12/21 15:02	03/15/21 12:00
92527612004	HGWA-48D	Water	03/12/21 12:42	03/15/21 12:00
92527612005	HGWA-112	Water	03/12/21 13:30	03/15/21 12:00
92527612006	HGWA-113	Water	03/16/21 12:50	03/17/21 13:10
92527612007	HGWA-113 FILTERED	Water	03/16/21 12:50	03/17/21 13:10
92527612008	HGWC-101	Water	03/17/21 11:48	03/18/21 13:17
92527612009	HGWC-102	Water	03/17/21 14:25	03/18/21 13:17
92527612010	HGWC-109	Water	03/17/21 12:52	03/18/21 13:17
92527612011	DUP-4	Water	03/17/21 00:00	03/18/21 13:17
92527612012	HGWC-103	Water	03/18/21 11:53	03/19/21 13:40
92527612013	HGWC-105	Water	03/18/21 12:46	03/19/21 13:40
92527612014	HGWC-107	Water	03/18/21 18:01	03/19/21 13:40
92527612015	HGWC-118	Water	03/18/21 17:18	03/19/21 13:40
92527612016	HGWC-118 FILTERED	Water	03/18/21 17:18	03/19/21 13:40
92527612017	HGWC-117	Water	03/19/21 11:45	03/22/21 15:41
92527612018	FB-4	Water	03/19/21 00:00	03/22/21 15:41



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92527612001	HGWA-111	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527612002	HGWA-111 FILTERED	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527612003	HGWA-47	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527612004	HGWA-48D	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527612005	HGWA-112	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527612006	HGWA-113	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527612007	HGWA-113 FILTERED	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527612008	HGWC-101	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527612009	HGWC-102	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527612010	HGWC-109	EPA 6010D	DRB	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 6020B	— <u>— к</u> н	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527612011	DUP-4	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
2527612012	HGWC-103	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
2527612013	HGWC-105	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
2527612014	HGWC-107	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
2527612015	HGWC-118	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
2527612016	HGWC-118 FILTERED	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
2527612017	HGWC-117	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
2527612018	FB-4	EPA 6010D	DRB	1
		EPA 6020B	KH	9
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville PASI-C = Pace Analytical Services - Charlotte





SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Lab ID Sample ID Analysts Reported

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



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2527612001	HGWA-111					
	Performed by	CUSTOME R			03/22/21 11:59	
	pН	7.20	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	53.2	mg/L	1.0	04/01/21 18:56	M1
EPA 6020B	Barium	0.037	mg/L	0.0050	04/05/21 19:27	
EPA 6020B	Beryllium	0.00014J	mg/L	0.00050	04/05/21 19:27	
EPA 6020B	Boron	0.010J	mg/L	0.040	04/05/21 19:27	
PA 6020B	Chromium	0.0020J	mg/L	0.0050	04/05/21 19:27	
PA 6020B	Lead	0.0011	mg/L	0.0010	04/05/21 19:27	
PA 6020B	Lithium	0.0047J	mg/L	0.030	04/05/21 19:27	
M 2450C-2011	Total Dissolved Solids	207	mg/L	10.0	03/17/21 17:40	
PA 300.0 Rev 2.1 1993	Chloride	3.4	mg/L	1.0	03/20/21 04:44	
PA 300.0 Rev 2.1 1993	Fluoride	0.057J	mg/L	0.10	03/20/21 04:44	
PA 300.0 Rev 2.1 1993	Sulfate	1.5	mg/L	1.0	03/20/21 04:44	
2527612002	HGWA-111 FILTERED					
	Performed by	CUSTOME			03/22/21 11:59	
	nLI	R 7.20	Std. Units		03/22/21 11:59	
PA 6010D	pH Calcium	54.3		1.0	04/01/21 19:25	
			mg/L			
PA 6020B	Barium	0.031	mg/L	0.0050	04/05/21 19:50	
PA 6020B	Boron	0.011J	mg/L	0.040	04/05/21 19:50	
PA 6020B	Chromium	0.0011J	mg/L	0.0050	04/05/21 19:50	
PA 6020B	Lead	0.00025J	mg/L	0.0010	04/05/21 19:50	
EPA 6020B	Lithium	0.0029J	mg/L	0.030	04/05/21 19:50	
SM 2450C-2011	Total Dissolved Solids	188	mg/L	10.0	03/17/21 17:40 03/20/21 04:58	
EPA 300.0 Rev 2.1 1993	Chloride	3.5 0.053J	mg/L	1.0	03/20/21 04:58	
EPA 300.0 Rev 2.1 1993 EPA 300.0 Rev 2.1 1993	Fluoride Sulfate	1.6	mg/L mg/L	0.10 1.0	03/20/21 04:58	
		1.0	mg/L	1.0	03/20/21 04.38	
2527612003	HGWA-47	CUSTOME			02/22/24 44:52	
	Performed by	R			03/22/21 11:59	
	рН	7.52	Std. Units		03/22/21 11:59	
PA 6010D	Calcium	69.2	mg/L	1.0	04/01/21 19:30	
PA 6020B	Barium	0.030	mg/L	0.0050	04/05/21 19:56	
PA 6020B	Boron	0.0067J	mg/L	0.040	04/05/21 19:56	
PA 6020B	Lithium	0.0031J	mg/L	0.030	04/05/21 19:56	
M 2450C-2011	Total Dissolved Solids	217	mg/L	10.0	03/19/21 18:45	
PA 300.0 Rev 2.1 1993	Chloride	2.7	mg/L	1.0	03/21/21 01:40	
PA 300.0 Rev 2.1 1993	Fluoride	0.062J	mg/L	0.10	03/21/21 01:40	
PA 300.0 Rev 2.1 1993	Sulfate	1.9	mg/L	1.0	03/21/21 01:40	
2527612004	HGWA-48D					
	Performed by	CUSTOME R			03/22/21 11:59	
	pН	7.51	Std. Units		03/22/21 11:59	
PA 6010D	Calcium	57.5	mg/L	1.0		
EPA 6020B	Arsenic	0.0018J	mg/L	0.0050	04/05/21 20:02	
EPA 6020B	Barium	0.10	mg/L	0.0050		

REPORT OF LABORATORY ANALYSIS

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Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Lab Sample ID	Client Sample ID					
Method	Parameters	Result _	Units	Report Limit	Analyzed	Qualifiers
2527612004	HGWA-48D					
EPA 6020B	Boron	0.012J	mg/L	0.040	04/05/21 20:02	
EPA 6020B	Chromium	0.00062J	mg/L	0.0050	04/05/21 20:02	
EPA 6020B	Lead	0.000048J	mg/L	0.0010	04/05/21 20:02	
EPA 6020B	Lithium	0.0031J	mg/L	0.030	04/05/21 20:02	
SM 2450C-2011	Total Dissolved Solids	204	mg/L	10.0	03/19/21 18:45	
EPA 300.0 Rev 2.1 1993	Chloride	2.6	mg/L	1.0	03/21/21 01:55	
EPA 300.0 Rev 2.1 1993	Fluoride	0.085J	mg/L		03/21/21 01:55	
EPA 300.0 Rev 2.1 1993	Sulfate	4.7	mg/L	1.0	03/21/21 01:55	
2527612005	HGWA-112		-			
	Performed by	CUSTOME R			03/22/21 11:59	
	pН	5.60	Std. Units		03/22/21 11:59	
PA 6010D	Calcium	6.9	mg/L	1.0	04/01/21 19:40	
EPA 6020B	Barium	0.030	mg/L	0.0050	04/05/21 20:08	
EPA 6020B	Beryllium	0.000054J	mg/L	0.00050	04/05/21 20:08	
EPA 6020B	Boron	0.0061J	mg/L	0.040	04/05/21 20:08	
EPA 6020B	Chromium	0.0045J	mg/L	0.0050	04/05/21 20:08	
PA 6020B	Lead	0.00017J	mg/L	0.0010	04/05/21 20:08	
SM 2450C-2011	Total Dissolved Solids	56.0	mg/L	10.0	03/19/21 18:45	
EPA 300.0 Rev 2.1 1993	Chloride	5.3	mg/L	1.0	03/23/21 11:22	
EPA 300.0 Rev 2.1 1993	Sulfate	0.52J	mg/L	1.0	03/23/21 11:22	
2527612006	HGWA-113					
	Performed by	CUSTOME R			03/22/21 11:59	
	pН	6.14	Std. Units		03/22/21 11:59	
PA 6010D	Calcium	8.6	mg/L	1.0	04/01/21 19:44	
PA 6020B	Arsenic	0.0011J	mg/L	0.0050	04/05/21 20:25	
PA 6020B	Barium	0.054	mg/L	0.0050	04/05/21 20:25	
PA 6020B	Beryllium	0.00018J	mg/L	0.00050	04/05/21 20:25	
PA 6020B	Boron	0.011J	mg/L	0.040	04/05/21 20:25	
PA 6020B	Chromium	0.0061	mg/L	0.0050	04/05/21 20:25	
PA 6020B	Cobalt	0.0013J	mg/L	0.0050	04/05/21 20:25	
EPA 6020B	Lead	0.0016	mg/L	0.0010	04/05/21 20:25	
EPA 6020B	Lithium	0.0026J	mg/L	0.030	04/05/21 20:25	
SM 2450C-2011	Total Dissolved Solids	99.0	mg/L	10.0	03/23/21 07:59	
EPA 300.0 Rev 2.1 1993	Chloride	1.6	mg/L		03/21/21 23:03	
EPA 300.0 Rev 2.1 1993	Fluoride	0.18	mg/L		03/21/21 23:03	
EPA 300.0 Rev 2.1 1993	Sulfate	7.7	mg/L		03/21/21 23:03	
2527612007	HGWA-113 FILTERED		J .			
	Performed by	CUSTOME R			03/22/21 11:59	
	pН	6.14	Std. Units		03/22/21 11:59	
	Calcium	8.4	mg/L	1.0		
PA 6010D		U. 1	··· <i>a</i> , =	0		
	Barium	0.034	ma/l	0 0050	04/05/21 20:30	
EPA 6010D EPA 6020B EPA 6020B	Barium Boron	0.034 0.010J	mg/L mg/L	0.0050 0.040	04/05/21 20:30 04/05/21 20:30	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Lab Sample ID	Client Sample ID					
Method	Parameters —	Result _	Units	Report Limit	Analyzed	Qualifiers
2527612007	HGWA-113 FILTERED					
EPA 6020B	Lead	0.00022J	mg/L	0.0010	04/05/21 20:30	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	04/05/21 20:30	
SM 2450C-2011	Total Dissolved Solids	88.0	mg/L	10.0	03/23/21 07:59	
PA 300.0 Rev 2.1 1993	Chloride	1.6	mg/L	1.0	03/21/21 23:44	
EPA 300.0 Rev 2.1 1993	Fluoride	0.17	mg/L	0.10	03/21/21 23:44	
EPA 300.0 Rev 2.1 1993	Sulfate	7.3	mg/L	1.0	03/21/21 23:44	
2527612008	HGWC-101					
	Performed by	CUSTOME R			03/22/21 11:59	
	рН	5.41	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	21.8	mg/L	1 0	04/01/21 20:04	
EPA 6020B	Barium	0.040	mg/L	0.0050		
EPA 6020B	Beryllium	0.000059J	mg/L	0.0050		
EPA 6020B	Boron	0.0000393	mg/L	0.040		
EPA 6020B	Chromium	0.00075J	mg/L	0.0050	04/05/21 20:36	
EPA 6020B	Cobalt	0.0023J	mg/L	0.0050		
SM 2450C-2011	Total Dissolved Solids	213	mg/L		03/23/21 08:41	
EPA 300.0 Rev 2.1 1993	Chloride	5.5	mg/L	1.0	03/23/21 07:11	
EPA 300.0 Rev 2.1 1993	Sulfate	107	mg/L	2.0	03/23/21 07:11	
2527612009	HGWC-102		3			
2027 012000	Performed by	CUSTOME			03/22/21 11:59	
	•	R				
	pН	5.78	Std. Units		03/22/21 11:59	
PA 6010D	Calcium	111	mg/L	1.0		
EPA 6020B	Barium	0.031	mg/L	0.0050	04/05/21 20:42	
PA 6020B	Boron	2.7	mg/L	0.040	04/05/21 20:42	
PA 6020B	Cadmium	0.00094	mg/L	0.00050	04/05/21 20:42	
PA 6020B	Cobalt	0.0012J	mg/L	0.0050	04/05/21 20:42	
PA 6020B	Lithium	0.0012J	mg/L	0.030	04/05/21 20:42	
SM 2450C-2011	Total Dissolved Solids	626	mg/L	20.0	03/23/21 08:41	
PA 300.0 Rev 2.1 1993	Chloride	6.9	mg/L	1.0	03/23/21 07:25	
EPA 300.0 Rev 2.1 1993	Sulfate	332	mg/L	7.0	03/23/21 15:47	
2527612010	HGWC-109					
	Performed by	CUSTOME R			03/22/21 11:59	
	рН	6.55	Std. Units		03/22/21 11:59	
EPA 6010D	Calcium	37.3	mg/L	1.0		
PA 6020B	Arsenic	0.0019J	mg/L	0.0050	04/05/21 20:48	
PA 6020B	Barium	0.077	mg/L	0.0050		
PA 6020B	Boron	0.26	mg/L	0.040	04/05/21 20:48	
PA 6020B	Cobalt	0.0030J	mg/L	0.0050		
SM 2450C-2011	Total Dissolved Solids	171	mg/L	10.0	03/23/21 08:41	
EPA 300.0 Rev 2.1 1993	Chloride	4.7	mg/L		03/23/21 07:38	
EPA 300.0 Rev 2.1 1993	Fluoride	0.089J	mg/L		03/23/21 07:38	
EPA 300.0 Rev 2.1 1993	Sulfate	28.3	mg/L	1.0	03/23/21 07:38	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Lab Sample ID	Client Sample ID					
Method	Parameters —	Result	Units	Report Limit	Analyzed	Qualifiers
2527612011	DUP-4					
EPA 6010D	Calcium	109	mg/L	1.0	04/01/21 20:18	
EPA 6020B	Barium	0.030	mg/L	0.0050	04/05/21 20:53	
EPA 6020B	Boron	2.7	mg/L	0.040	04/05/21 20:53	
EPA 6020B	Cadmium	0.00092	mg/L	0.00050	04/05/21 20:53	
EPA 6020B	Chromium	0.10	mg/L	0.0050	04/05/21 20:53	
EPA 6020B	Cobalt	0.0014J	mg/L	0.0050	04/05/21 20:53	
EPA 6020B	Lithium	0.0013J	mg/L	0.030	04/05/21 20:53	
SM 2450C-2011	Total Dissolved Solids	612	mg/L	20.0	03/23/21 08:41	
EPA 300.0 Rev 2.1 1993	Chloride	7.2	mg/L	1.0	03/23/21 08:19	
PA 300.0 Rev 2.1 1993	Sulfate	336	mg/L	7.0	03/23/21 16:01	
2527612012	HGWC-103					
	Performed by	CUSTOME R			03/22/21 11:59	
	рН	5.51	Std. Units		03/22/21 11:59	
PA 6010D	Calcium	83.7	mg/L	1.0	04/01/21 20:23	
PA 6020B	Barium	0.042	mg/L	0.0050	04/05/21 20:59	
PA 6020B	Beryllium	0.000061J	mg/L	0.00050	04/05/21 20:59	
PA 6020B	Boron	2.4	mg/L	0.040	04/05/21 20:59	
PA 6020B	Cadmium	0.00068	mg/L	0.00050	04/05/21 20:59	
PA 6020B	Chromium	0.0030J	mg/L	0.0050	04/05/21 20:59	
PA 6020B	Cobalt	0.0021J	mg/L	0.0050	04/05/21 20:59	
EPA 6020B	Lead	0.00024J	mg/L	0.0010	04/05/21 20:59	
PA 6020B	Lithium	0.0018J	mg/L	0.030	04/05/21 20:59	
SM 2450C-2011	Total Dissolved Solids	465	mg/L	10.0	03/25/21 11:10	
PA 300.0 Rev 2.1 1993	Chloride	6.2	mg/L	1.0	03/26/21 00:16	
PA 300.0 Rev 2.1 1993	Sulfate	286	mg/L	6.0	03/26/21 18:23	
2527612013	HGWC-105					
	Performed by	CUSTOME			03/22/21 11:59	
	рН	R 6.57	Std. Units		03/22/21 11:59	
PA 6010D	•			1.0		
	Calcium	97.7	mg/L	1.0 0.0050		
PA 6020B	Barium	0.082	mg/L		04/05/21 21:05	
PA 6020B	Boron	1.5	mg/L	0.040	04/05/21 21:05	
PA 6020B	Chromium	0.00058J	mg/L	0.0050	04/05/21 21:05	
PA 6020B	Cobalt	0.00045J	mg/L	0.0050		
PA 6020B	Lead	0.000058J	mg/L		04/05/21 21:05	
PA 6020B	Lithium	0.0042J	mg/L		04/05/21 21:05	
M 2450C-2011	Total Dissolved Solids	410	mg/L		03/25/21 11:10	
PA 300.0 Rev 2.1 1993	Chloride	4.3	mg/L		03/26/21 00:30	
PA 300.0 Rev 2.1 1993	Sulfate	196	mg/L	4.0	03/26/21 18:38	
2527612014	HGWC-107	0				
	Performed by	CUSTOME R			03/22/21 11:59	
	рH	6.20	Std. Units		03/22/21 11:59	
PA 6010D	Calcium	56.0	mg/L	1.0	04/01/21 20:32	
EPA 6020B	Barium	0.041	mg/L	0.0050		

REPORT OF LABORATORY ANALYSIS

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Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
2527612014	HGWC-107					
EPA 6020B	Boron	0.92	mg/L	0.040	04/05/21 21:11	
EPA 6020B	Lead	0.000091J	mg/L	0.0010	04/05/21 21:11	
PA 6020B	Lithium	0.0011J	mg/L	0.030	04/05/21 21:11	
SM 2450C-2011	Total Dissolved Solids	255	mg/L	10.0	03/25/21 11:10	D6
PA 300.0 Rev 2.1 1993	Chloride	3.2	mg/L	1.0	03/26/21 01:10	
PA 300.0 Rev 2.1 1993	Sulfate	128	mg/L	3.0	03/26/21 18:54	
2527612015	HGWC-118					
	Performed by	CUSTOME			03/22/21 11:59	
	5H	R 7.11	Std. Units		03/22/21 11:59	
PA 6010D	pH Calcium	85.4		1.0	04/01/21 20:37	
			mg/L			
PA 6020B	Arsenic	0.0010J	mg/L	0.0050		
PA 6020B	Barium	0.067	mg/L	0.0050	04/05/21 21:16	
PA 6020B	Beryllium -	0.000093J	mg/L	0.00050	04/05/21 21:16	
PA 6020B	Boron	0.81	mg/L	0.040	04/05/21 21:16	
PA 6020B	Chromium	0.0021J	mg/L	0.0050		
PA 6020B	Cobalt	0.0012J	mg/L	0.0050	04/05/21 21:16	
PA 6020B	Lead	0.00088J	mg/L	0.0010	04/05/21 21:16	
PA 6020B	Lithium	0.0029J	mg/L	0.030	04/05/21 21:16	
M 2450C-2011	Total Dissolved Solids	328	mg/L	10.0	03/25/21 11:10	
PA 300.0 Rev 2.1 1993	Chloride	4.3	mg/L	1.0	03/26/21 01:24	
PA 300.0 Rev 2.1 1993	Fluoride	0.079J	mg/L	0.10	03/26/21 01:24	
PA 300.0 Rev 2.1 1993	Sulfate	87.8	mg/L	1.0	03/26/21 01:24	M1
2527612016	HGWC-118 FILTERED					
	Performed by	CUSTOME R			03/22/21 11:59	
	рН	7.11	Std. Units		03/22/21 11:59	
PA 6010D	Calcium	86.2	mg/L	1.0		
PA 6020B	Barium	0.062	mg/L	0.0050		
PA 6020B	Boron	0.78	mg/L	0.040	04/05/21 21:33	
PA 6020B	Lithium	0.0020J	mg/L	0.030	04/05/21 21:33	
M 2450C-2011	Total Dissolved Solids	321	mg/L	10.0	03/25/21 11:10	
PA 300.0 Rev 2.1 1993	Chloride	4.0	mg/L	1.0	03/25/21 17:02	
PA 300.0 Rev 2.1 1993 PA 300.0 Rev 2.1 1993	Fluoride	0.073J	mg/L	0.10	03/25/21 17:02	
PA 300.0 Rev 2.1 1993 PA 300.0 Rev 2.1 1993	Sulfate	0.0733 81.7	•	1.0	03/25/21 17:02	
		01.7	mg/L	1.0	03/23/21 17.02	
2527612017	HGWC-117 Performed by	CUSTOME			03/33/34 47:00	
	renomied by	R			03/22/21 17:08	
	рН	6.14	Std. Units		03/22/21 17:08	
PA 6010D	Calcium	87.3	mg/L	1.0	04/01/21 20:46	
PA 6020B	Barium	0.058	mg/L	0.0050	04/05/21 21:39	
PA 6020B	Beryllium	0.000081J	mg/L	0.00050	04/05/21 21:39	
PA 6020B	Boron	1.5	mg/L	0.040	04/05/21 21:39	
PA 6020B	Cadmium	0.0010	mg/L	0.00050	04/05/21 21:39	
PA 6020B	Chromium	0.0010J	mg/L	0.0050		
PA 6020B	Cobalt	0.011	mg/L	0.0050	04/05/21 21:39	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527612017	HGWC-117					
EPA 6020B	Lead	0.00038J	mg/L	0.0010	04/05/21 21:39	
EPA 6020B	Lithium	0.0035J	mg/L	0.030	04/05/21 21:39	
SM 2450C-2011	Total Dissolved Solids	371	mg/L	10.0	03/26/21 09:32	
EPA 300.0 Rev 2.1 1993	Chloride	24.9	mg/L	1.0	03/25/21 17:31	
EPA 300.0 Rev 2.1 1993	Sulfate	162	mg/L	3.0	03/26/21 14:10	
92527612018	FB-4					
EPA 6020B	Chromium	0.00077J	mg/L	0.0050	04/05/21 21:51	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: HGWA-111	Lab ID:	92527612001	Collecte	ed: 03/11/21	16:25	Received: 03/	/12/21 13:43 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte)					
Performed by	CUSTOME R				1		03/22/21 11:59		
рН	7.20	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	hod: EF	PA 3010A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	SA.				
Calcium	53.2	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 18:56	7440-70-2	M1
6020 MET ICPMS	Analytical	Method: EPA 6	6020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	βA				
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 19:27	7440-38-2	
Barium	0.037	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 19:27	7440-39-3	
Beryllium	0.00014J	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 19:27	7440-41-7	
Boron	0.010J	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 19:27	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 19:27	7440-43-9	
Chromium	0.0020J	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 19:27	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 19:27	7440-48-4	
Lead	0.0011	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 19:27	7439-92-1	
Lithium	0.0047J	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 19:27	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Ana	lytical Services	- Peachtre	e Corners, C	SA.				
Total Dissolved Solids	207	mg/L	10.0	10.0	1		03/17/21 17:40		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0 Rev 2	2.1 1993					
·	Pace Ana	lytical Services	- Asheville						
Chloride	3.4	mg/L	1.0	0.60	1		03/20/21 04:44	16887-00-6	
Fluoride	0.057J	mg/L	0.10	0.050	1		03/20/21 04:44	16984-48-8	
Sulfate	1.5	mg/L	1.0	0.50	1		03/20/21 04:44	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: HGWA-111 FILTERED	Lab ID:	92527612002	Collecte	ed: 03/11/21	16:25	Received: 03/	/12/21 13:43 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL .	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	- Charlotte	;					
Performed by	CUSTOME R				1		03/22/21 11:59		
рН	7.20	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	hod: EF	PA 3010A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	βA				
Calcium	54.3	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 19:25	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, G	SA.				
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 19:50	7440-38-2	
Barium	0.031	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 19:50	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 19:50	7440-41-7	
Boron	0.011J	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 19:50	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 19:50	7440-43-9	
Chromium	0.0011J	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 19:50	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 19:50	7440-48-4	
Lead	0.00025J	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 19:50	7439-92-1	
Lithium	0.0029J	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 19:50	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 24	150C-2011						
	Pace Anal	ytical Services	- Peachtre	e Corners, G	βA				
Total Dissolved Solids	188	mg/L	10.0	10.0	1		03/17/21 17:40		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0 Rev 2	2.1 1993					
	Pace Anal	ytical Services	- Asheville						
Chloride	3.5	mg/L	1.0	0.60	1		03/20/21 04:58	16887-00-6	
Fluoride	0.053J	mg/L	0.10	0.050	1		03/20/21 04:58	16984-48-8	
Sulfate	1.6	mg/L	1.0	0.50	1		03/20/21 04:58	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: HGWA-47	Lab ID:	92527612003	Collecte	ed: 03/12/2	1 15:02	Received: 03/	15/21 12:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL_	DF_	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	s - Charlotte	•					
Performed by	CUSTOME R				1		03/22/21 11:59		
рН	7.52	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical	Method: EPA	6010D Pre	paration Met	thod: El	PA 3010A			
	Pace Anal	ytical Services	s - Peachtre	e Corners, C	βA				
Calcium	69.2	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 19:30	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA	6020B Pre	paration Met	hod: El	PA 3005A			
	Pace Anal	ytical Services	s - Peachtre	e Corners, C	3A				
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 19:56	7440-38-2	
Barium	0.030	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 19:56	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 19:56	7440-41-7	
Boron	0.0067J	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 19:56	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 19:56	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 19:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 19:56	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 19:56	7439-92-1	
Lithium	0.0031J	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 19:56	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Anal	ytical Services	s - Peachtre	e Corners, C	SΑ				
Total Dissolved Solids	217	mg/L	10.0	10.0	1		03/19/21 18:45		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
-	Pace Anal	ytical Services	s - Asheville						
Chloride	2.7	mg/L	1.0	0.60	1		03/21/21 01:40	16887-00-6	
Fluoride	0.062J	mg/L	0.10	0.050	1		03/21/21 01:40	16984-48-8	
Sulfate	1.9	mg/L	1.0	0.50	1		03/21/21 01:40	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: HGWA-48D	Lab ID:	92527612004	Collecte	ed: 03/12/2	1 12:42	Received: 03/	/15/21 12:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	s - Charlotte)					
Performed by	CUSTOME R				1		03/22/21 11:59		
рН	7.51	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical	Method: EPA	6010D Pre	paration Met	thod: El	PA 3010A			
	Pace Anal	ytical Services	s - Peachtre	e Corners, C	βA				
Calcium	57.5	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 19:35	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA	6020B Pre	paration Met	hod: El	PA 3005A			
	Pace Anal	ytical Services	s - Peachtre	e Corners, C	SΑ				
Arsenic	0.0018J	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 20:02	7440-38-2	
Barium	0.10	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 20:02	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 20:02	7440-41-7	
Boron	0.012J	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 20:02	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 20:02	7440-43-9	
Chromium	0.00062J	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 20:02	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 20:02	7440-48-4	
Lead	0.000048J	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 20:02	7439-92-1	
Lithium	0.0031J	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 20:02	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Anal	ytical Services	s - Peachtre	e Corners, C	ЭΑ				
Total Dissolved Solids	204	mg/L	10.0	10.0	1		03/19/21 18:45		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
•	Pace Anal	ytical Services	s - Asheville						
Chloride	2.6	mg/L	1.0	0.60	1		03/21/21 01:55	16887-00-6	
Fluoride	0.085J	mg/L	0.10	0.050	1		03/21/21 01:55		
Sulfate	4.7	mg/L	1.0	0.50	1		03/21/21 01:55		



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: HGWA-112	Lab ID:	92527612005	Collecte	ed: 03/12/2	13:30	Received: 03/	15/21 12:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Anal	lytical Services	- Charlotte)					
Performed by	CUSTOME R				1		03/22/21 11:59		
рН	5.60	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	hod: EF	PA 3010A			
	Pace Anal	lytical Services	- Peachtre	e Corners, C	SA.				
Calcium	6.9	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 19:40	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Anal	lytical Services	- Peachtre	e Corners, C	§A				
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 20:08	7440-38-2	
Barium	0.030	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 20:08	7440-39-3	
Beryllium	0.000054J	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 20:08	7440-41-7	
Boron	0.0061J	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 20:08	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 20:08	7440-43-9	
Chromium	0.0045J	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 20:08	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 20:08	7440-48-4	
Lead	0.00017J	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 20:08	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 20:08	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 24	450C-2011						
	Pace Anal	lytical Services	- Peachtre	e Corners, C	SA.				
Total Dissolved Solids	56.0	mg/L	10.0	10.0	1		03/19/21 18:45		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0 Rev 2	2.1 1993					
	Pace Anal	lytical Services	- Asheville						
Chloride	5.3	mg/L	1.0	0.60	1		03/23/21 11:22	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/23/21 11:22	16984-48-8	
Sulfate	0.52J	mg/L	1.0	0.50	1		03/23/21 11:22	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: HGWA-113	Lab ID:	92527612006	Collecte	ed: 03/16/21	1 12:50	Received: 03/	17/21 13:10 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	- Charlotte	;					
Performed by	CUSTOME R				1		03/22/21 11:59		
рН	6.14	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	hod: El	PA 3010A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Calcium	8.6	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 19:44	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: Ef	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	βA				
Arsenic	0.0011J	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 20:25	7440-38-2	
Barium	0.054	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 20:25	7440-39-3	
Beryllium	0.00018J	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 20:25	7440-41-7	
Boron	0.011J	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 20:25	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 20:25	7440-43-9	
Chromium	0.0061	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 20:25	7440-47-3	
Cobalt	0.0013J	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 20:25	7440-48-4	
Lead	0.0016	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 20:25	7439-92-1	
Lithium	0.0026J	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 20:25	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 24	450C-2011						
	Pace Anal	ytical Services	- Peachtre	e Corners, C	βA				
Total Dissolved Solids	99.0	mg/L	10.0	10.0	1		03/23/21 07:59		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0 Rev 2	2.1 1993					
	Pace Anal	ytical Services	- Asheville						
Chloride	1.6	mg/L	1.0	0.60	1		03/21/21 23:03	16887-00-6	
Fluoride	0.18	mg/L	0.10	0.050	1		03/21/21 23:03	16984-48-8	
Sulfate	7.7	mg/L	1.0	0.50	1		03/21/21 23:03	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: HGWA-113 FILTERED	Lab ID:	92527612007	Collecte	ed: 03/16/21	12:50	Received: 03/	17/21 13:10 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte)					
Performed by	CUSTOME R				1		03/22/21 11:59		
рН	6.14	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical	Method: EPA	6010D Pre	paration Met	hod: EF	PA 3010A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	SA.				
Calcium	8.4	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 19:49	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA	6020B Pre	paration Met	hod: EF	PA 3005A			
	-	lytical Services							
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 20:30	7440-38-2	
Barium	0.034	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 20:30	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 20:30	7440-41-7	
Boron	0.010J	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 20:30	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 20:30	7440-43-9	
Chromium	0.0025J	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 20:30	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 20:30	7440-48-4	
Lead	0.00022J	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 20:30	7439-92-1	
Lithium	0.0012J	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 20:30	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Ana	lytical Services	- Peachtre	e Corners, C	SA.				
Total Dissolved Solids	88.0	mg/L	10.0	10.0	1		03/23/21 07:59		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
· · ·	•	lytical Services							
Chloride	1.6	mg/L	1.0	0.60	1		03/21/21 23:44	16887-00-6	
Fluoride	0.17	mg/L	0.10	0.050	1		03/21/21 23:44	16984-48-8	
Sulfate	7.3	mg/L	1.0	0.50	1		03/21/21 23:44	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: HGWC-101	Lab ID:	92527612008	Collecte	ed: 03/17/21	1 11:48	Received: 03/	18/21 13:17 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical								
	Pace Anal	ytical Services	- Charlotte	;					
Performed by	CUSTOME R				1		03/22/21 11:59		
pH	5.41	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	•	Method: EPA 6				PA 3010A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	§A				
Calcium	21.8	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 20:04	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: Ef	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 20:36	7440-38-2	
Barium	0.040	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 20:36	7440-39-3	
Beryllium	0.000059J	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 20:36	7440-41-7	
Boron	0.13	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 20:36	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 20:36	7440-43-9	
Chromium	0.00075J	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 20:36	7440-47-3	
Cobalt	0.0023J	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 20:36	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 20:36	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 20:36	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Total Dissolved Solids	213	mg/L	10.0	10.0	1		03/23/21 08:41		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0 Rev 2	2.1 1993					
	Pace Anal	ytical Services	- Asheville						
Chloride	5.5	mg/L	1.0	0.60	1		03/23/21 07:11	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/23/21 07:11	16984-48-8	
Sulfate	107	mg/L	2.0	1.0	2		03/23/21 15:32	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: HGWC-102	Lab ID:	92527612009	Collecte	ed: 03/17/2	1 14:25	Received: 03/	18/21 13:17 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte	•					
Performed by	CUSTOME R				1		03/22/21 11:59		
рН	5.78	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical	Method: EPA	6010D Pre	paration Met	hod: El	PA 3010A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	βA				
Calcium	111	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 20:08	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA	6020B Pre	paration Met	hod: El	PA 3005A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	SA.				
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 20:42	7440-38-2	
Barium	0.031	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 20:42	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 20:42	7440-41-7	
Boron	2.7	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 20:42	7440-42-8	
Cadmium	0.00094	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 20:42	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 20:42	7440-47-3	
Cobalt	0.0012J	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 20:42	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 20:42	7439-92-1	
Lithium	0.0012J	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 20:42	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Ana	lytical Services	- Peachtre	e Corners, C	βA				
Total Dissolved Solids	626	mg/L	20.0	20.0	1		03/23/21 08:41		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
-	Pace Ana	lytical Services	s - Asheville						
Chloride	6.9	mg/L	1.0	0.60	1		03/23/21 07:25	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/23/21 07:25		
Sulfate	332	mg/L	7.0	3.5	7		03/23/21 15:47		



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: HGWC-109	Lab ID:	92527612010	Collecte	ed: 03/17/2	12:52	Received: 03/	18/21 13:17 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte)					
Performed by	CUSTOME R				1		03/22/21 11:59		
рН	6.55	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical	Method: EPA	6010D Pre	paration Met	hod: Ef	PA 3010A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	βA				
Calcium	37.3	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 20:13	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA	6020B Pre	paration Met	hod: EF	PA 3005A			
	-	lytical Services							
Arsenic	0.0019J	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 20:48	7440-38-2	
Barium	0.077	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 20:48	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 20:48	7440-41-7	
Boron	0.26	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 20:48	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 20:48	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 20:48	7440-47-3	
Cobalt	0.0030J	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 20:48	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 20:48	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 20:48	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Ana	lytical Services	s - Peachtre	ee Corners, C	SA.				
Total Dissolved Solids	171	mg/L	10.0	10.0	1		03/23/21 08:41		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
- -	Pace Ana	lytical Services	- Asheville	:					
Chloride	4.7	mg/L	1.0	0.60	1		03/23/21 07:38	16887-00-6	
Fluoride	0.089J	mg/L	0.10	0.050	1		03/23/21 07:38	16984-48-8	
Sulfate	28.3	mg/L	1.0	0.50	1		03/23/21 07:38	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: DUP-4	Lab ID:	92527612011	I Collecte	ed: 03/17/2	1 00:00	Received: 03/	18/21 13:17 Ma	atrix: Water					
			Report										
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua				
6010D ATL ICP	Analytical	Method: EPA	6010D Pre	paration Met	hod: El	PA 3010A							
	Pace Anal	ytical Service	s - Peachtre	e Corners, C	βA								
Calcium	109	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 20:18	7440-70-2					
6020 MET ICPMS	Analytical	Method: EPA	6020B Pre	paration Met	hod: Ef	PA 3005A							
	Pace Anal	ytical Service	s - Peachtre	e Corners, C	βA								
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 20:53	7440-38-2					
Barium	0.030	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 20:53	7440-39-3					
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 20:53	7440-41-7					
Boron	2.7	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 20:53	7440-42-8					
Cadmium	0.00092	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 20:53	7440-43-9					
Chromium	0.10	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 20:53	7440-47-3					
Cobalt	0.0014J	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 20:53	7440-48-4					
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 20:53	7439-92-1					
Lithium	0.0013J	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 20:53	7439-93-2					
2540C Total Dissolved Solids	Analytical	Method: SM 2	2450C-2011										
	Pace Anal	ytical Service	s - Peachtre	e Corners, C	βA								
Total Dissolved Solids	612	mg/L	20.0	20.0	1		03/23/21 08:41						
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993									
	Pace Anal	Pace Analytical Services - Asheville											
Chloride	7.2	mg/L	1.0	0.60	1		03/23/21 08:19	16887-00-6					
Fluoride	ND	mg/L	0.10	0.050	1		03/23/21 08:19	16984-48-8					
Sulfate	336	mg/L	7.0	3.5	7		03/23/21 16:01	14808-79-8					



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: HGWC-103	Lab ID:	92527612012	Collecte	ed: 03/18/2	11:53	Received: 03/	19/21 13:40 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte	•					
Performed by	CUSTOME R				1		03/22/21 11:59		
рН	5.51	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical	Method: EPA	6010D Pre	paration Met	hod: Ef	PA 3010A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	SA.				
Calcium	83.7	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 20:23	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA	6020B Pre	paration Met	hod: EF	PA 3005A			
	-	lytical Services							
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 20:59	7440-38-2	
Barium	0.042	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 20:59	7440-39-3	
Beryllium	0.000061J	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 20:59	7440-41-7	
Boron	2.4	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 20:59	7440-42-8	
Cadmium	0.00068	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 20:59	7440-43-9	
Chromium	0.0030J	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 20:59	7440-47-3	
Cobalt	0.0021J	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 20:59	7440-48-4	
_ead	0.00024J	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 20:59	7439-92-1	
Lithium	0.0018J	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 20:59	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Ana	lytical Services	- Peachtre	e Corners, C	SA.				
Total Dissolved Solids	465	mg/L	10.0	10.0	1		03/25/21 11:10		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
•	•	lytical Services							
Chloride	6.2	mg/L	1.0	0.60	1		03/26/21 00:16	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/26/21 00:16	16984-48-8	
Sulfate	286	mg/L	6.0	3.0	6		03/26/21 18:23	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: HGWC-105	Lab ID:	92527612013	Collecte	ed: 03/18/2	1 12:46	Received: 03/	/19/21 13:40 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical								
	Pace Anal	ytical Services	- Charlotte	;					
Performed by	CUSTOME R				1		03/22/21 11:59		
рН	6.57	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	hod: EF	PA 3010A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	βA				
Calcium	97.7	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 20:27	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	§A				
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 21:05	7440-38-2	
Barium	0.082	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 21:05	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 21:05	7440-41-7	
Boron	1.5	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 21:05	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 21:05	7440-43-9	
Chromium	0.00058J	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 21:05	7440-47-3	
Cobalt	0.00045J	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 21:05	7440-48-4	
Lead	0.000058J	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 21:05	7439-92-1	
Lithium	0.0042J	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 21:05	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Anal	ytical Services	- Peachtre	e Corners, C	§A				
Total Dissolved Solids	410	mg/L	10.0	10.0	1		03/25/21 11:10		
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0 Rev 2	2.1 1993					
	Pace Anal	ytical Services	- Asheville						
Chloride	4.3	mg/L	1.0	0.60	1		03/26/21 00:30	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/26/21 00:30	16984-48-8	
Sulfate	196	mg/L	4.0	2.0	4		03/26/21 18:38	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: HGWC-107	Lab ID:	92527612014	Collecte	ed: 03/18/21	18:01	Received: 03/	/19/21 13:40 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical	Method:							
	Pace Ana	lytical Services	- Charlotte)					
Performed by	CUSTOME R				1		03/22/21 11:59		
рН	6.20	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	hod: Ef	PA 3010A			
	Pace Ana	lytical Services	- Peachtre	e Corners, G	SA.				
Calcium	56.0	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 20:32	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Ana	lytical Services	- Peachtre	e Corners, C	βA				
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 21:11	7440-38-2	
Barium	0.041	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 21:11	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 21:11	7440-41-7	
Boron	0.92	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 21:11	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 21:11	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 21:11	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 21:11	7440-48-4	
Lead	0.000091J	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 21:11	7439-92-1	
Lithium	0.0011J	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 21:11	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 24	450C-2011						
	Pace Ana	lytical Services	- Peachtre	e Corners, C	SA.				
Total Dissolved Solids	255	mg/L	10.0	10.0	1		03/25/21 11:10		D6
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	300.0 Rev 2	2.1 1993					
-	-	lytical Services							
Chloride	3.2	mg/L	1.0	0.60	1		03/26/21 01:10	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/26/21 01:10	16984-48-8	
Sulfate	128	mg/L	3.0	1.5	3		03/26/21 18:54	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: HGWC-118	Lab ID:	92527612015	Collecte	ed: 03/18/2 ²	17:18	Received: 03/	19/21 13:40 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	- Charlotte	9					
Performed by	CUSTOME R				1		03/22/21 11:59		
рН	7.11	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical	Method: EPA	6010D Pre	paration Met	hod: El	PA 3010A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Calcium	85.4	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 20:37	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA	6020B Pre	paration Met	hod: Ef	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	βA				
Arsenic	0.0010J	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 21:16	7440-38-2	
Barium	0.067	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 21:16	7440-39-3	
Beryllium	0.000093J	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 21:16	7440-41-7	
Boron	0.81	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 21:16	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 21:16	7440-43-9	
Chromium	0.0021J	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 21:16	7440-47-3	
Cobalt	0.0012J	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 21:16	7440-48-4	
Lead	0.00088J	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 21:16	7439-92-1	
Lithium	0.0029J	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 21:16	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Total Dissolved Solids	328	mg/L	10.0	10.0	1		03/25/21 11:10		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
	Pace Anal	ytical Services	- Asheville	•					
Chloride	4.3	mg/L	1.0	0.60	1		03/26/21 01:24	16887-00-6	
Fluoride	0.079J	mg/L	0.10	0.050	1		03/26/21 01:24	16984-48-8	
Sulfate	87.8	mg/L	1.0	0.50	1		03/26/21 01:24	14808-79-8	M1



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: HGWC-118 FILTERED	Lab ID:	92527612016	Collecte	ed: 03/18/2	17:18	Received: 03/	19/21 13:40 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
Field Data	Analytical	Method:							
	Pace Anal	lytical Services	- Charlotte	;					
Performed by	CUSTOME R				1		03/22/21 11:59		
pH	7.11	Std. Units			1		03/22/21 11:59		
6010D ATL ICP	Analytical	Method: EPA 6	010D Pre	paration Met	hod: EF	PA 3010A			
	Pace Anal	lytical Services	- Peachtre	e Corners, C	SA.				
Calcium	86.2	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 20:42	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	6020B Pre	paration Met	hod: EF	PA 3005A			
	-	lytical Services							
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 21:33	7440-38-2	
Barium	0.062	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 21:33	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 21:33	7440-41-7	
Boron	0.78	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 21:33	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 21:33	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 21:33	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 21:33	7440-48-4	
_ead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 21:33	7439-92-1	
Lithium	0.0020J	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 21:33	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Anal	lytical Services	- Peachtre	e Corners, C	SA.				
Total Dissolved Solids	321	mg/L	10.0	10.0	1		03/25/21 11:10		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
-	Pace Anal	lytical Services	- Asheville						
Chloride	4.0	mg/L	1.0	0.60	1		03/25/21 17:02	16887-00-6	
Fluoride	0.073J	mg/L	0.10	0.050	1		03/25/21 17:02	16984-48-8	
Sulfate	81.7	mg/L	1.0	0.50	1		03/25/21 17:02	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: HGWC-117	Lab ID:	92527612017	Collecte	ed: 03/19/2 ²	l 11:45	Received: 03/	/22/21 15:41 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical								
	Pace Anal	lytical Services	- Charlotte	;					
Performed by	CUSTOME R				1		03/22/21 17:08		
pH	6.14	Std. Units			1		03/22/21 17:08		
6010D ATL ICP	Analytical	Method: EPA 6	6010D Pre	paration Met	hod: EF	PA 3010A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	βA				
Calcium	87.3	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 20:46	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA 6	6020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 21:39	7440-38-2	
Barium	0.058	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 21:39	7440-39-3	
Beryllium	0.000081J	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 21:39	7440-41-7	
Boron	1.5	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 21:39	7440-42-8	
Cadmium	0.0010	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 21:39	7440-43-9	
Chromium	0.0010J	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 21:39	7440-47-3	
Cobalt	0.011	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 21:39	7440-48-4	
Lead	0.00038J	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 21:39	7439-92-1	
Lithium	0.0035J	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 21:39	7439-93-2	
2540C Total Dissolved Solids	Analytical	Method: SM 2	450C-2011						
	Pace Anal	ytical Services	- Peachtre	e Corners, C	SA.				
Total Dissolved Solids	371	mg/L	10.0	10.0	1		03/26/21 09:32		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	2.1 1993					
	Pace Anal	ytical Services	- Asheville						
Chloride	24.9	mg/L	1.0	0.60	1		03/25/21 17:31	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/25/21 17:31	16984-48-8	
Sulfate	162	mg/L	3.0	1.5	3		03/26/21 14:10	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Sample: FB-4	Lab ID:	92527612018	Collecte	ed: 03/19/2 ²	00:00	Received: 03/	22/21 15:41 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qua
6010D ATL ICP	Analytical I	Method: EPA	6010D Pre	paration Met	hod: Ef	PA 3010A			
	Pace Analy	tical Services	- Peachtre	e Corners, C	SA.				
Calcium	ND	mg/L	1.0	0.070	1	04/01/21 10:54	04/01/21 21:06	7440-70-2	
6020 MET ICPMS	Analytical I	Method: EPA	6020B Pre	paration Met	hod: EF	PA 3005A			
	Pace Analy	tical Services	- Peachtre	e Corners, C	βA				
Arsenic	ND	mg/L	0.0050	0.00078	1	04/01/21 10:56	04/05/21 21:51	7440-38-2	
Barium	ND	mg/L	0.0050	0.00071	1	04/01/21 10:56	04/05/21 21:51	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	04/01/21 10:56	04/05/21 21:51	7440-41-7	
Boron	ND	mg/L	0.040	0.0052	1	04/01/21 10:56	04/05/21 21:51	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	04/01/21 10:56	04/05/21 21:51	7440-43-9	
Chromium	0.00077J	mg/L	0.0050	0.00055	1	04/01/21 10:56	04/05/21 21:51	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	04/01/21 10:56	04/05/21 21:51	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	04/01/21 10:56	04/05/21 21:51	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	04/01/21 10:56	04/05/21 21:51	7439-93-2	
2540C Total Dissolved Solids	Analytical I	Method: SM 2	450C-2011						
	Pace Analy	tical Services	- Peachtre	e Corners, C	SA.				
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/26/21 09:33		
300.0 IC Anions 28 Days	Analytical I	Method: EPA	300.0 Rev 2	2.1 1993					
	Pace Analy	tical Services	- Asheville						
Chloride	ND	mg/L	1.0	0.60	1		03/25/21 18:44	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/25/21 18:44		
Sulfate	ND	mg/L	1.0	0.50	1		03/25/21 18:44	14808-79-8	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

LABORATORY CONTROL SAMPLE:

Date: 04/12/2021 09:24 AM

QC Batch: 610583 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527612001, 92527612002, 92527612003, 92527612004, 92527612005, 92527612006, 92527612007,

92527612008, 92527612009, 92527612010, 92527612011, 92527612012, 92527612013, 92527612014,

92527612015, 92527612016, 92527612017, 92527612018

METHOD BLANK: 3215315 Matrix: Water

Associated Lab Samples: 92527612001, 92527612002, 92527612003, 92527612004, 92527612005, 92527612006, 92527612007,

92527612008, 92527612009, 92527612010, 92527612011, 92527612012, 92527612013, 92527612014,

92527612015, 92527612016, 92527612017, 92527612018

ParameterUnitsBlank Reporting ResultReporting LimitMDLAnalyzedQualifiersCalciummg/LND1.00.07004/01/21 18:46

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3215317 3215318 MS MSD

3215316

92527612001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD Qual 20 M1 Calcium 53.2 56.8 366 75-125 2 mg/L 55.7 256



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

QC Batch: 610584 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527612001, 92527612002, 92527612003, 92527612004, 92527612005, 92527612006, 92527612007,

92527612008, 92527612009, 92527612010, 92527612011, 92527612012, 92527612013, 92527612014,

92527612015, 92527612016, 92527612017, 92527612018

METHOD BLANK: 3215320 Matrix: Water

Associated Lab Samples: 92527612001, 92527612002, 92527612003, 92527612004, 92527612005, 92527612006, 92527612007,

92527612008, 92527612009, 92527612010, 92527612011, 92527612012, 92527612013, 92527612014,

92527612015, 92527612016, 92527612017, 92527612018

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND ND	0.0050	0.00078	04/05/21 19:16	
Barium	mg/L	ND	0.0050	0.00071	04/05/21 19:16	
Beryllium	mg/L	ND	0.00050	0.000046	04/05/21 19:16	
Boron	mg/L	ND	0.040	0.0052	04/05/21 19:16	
Cadmium	mg/L	ND	0.00050	0.00012	04/05/21 19:16	
Chromium	mg/L	ND	0.0050	0.00055	04/05/21 19:16	
Cobalt	mg/L	ND	0.0050	0.00038	04/05/21 19:16	
Lead	mg/L	ND	0.0010	0.000036	04/05/21 19:16	
Lithium	mg/L	ND	0.030	0.00081	04/05/21 19:16	

LABORATORY CONTROL SAMPLE:	3215321					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Arsenic	mg/L	0.1	0.10	103	80-120	
Barium	mg/L	0.1	0.10	103	80-120	
Beryllium	mg/L	0.1	0.11	108	80-120	
Boron	mg/L	1	1.1	107	80-120	
Cadmium	mg/L	0.1	0.10	104	80-120	
Chromium	mg/L	0.1	0.10	104	80-120	
Cobalt	mg/L	0.1	0.10	104	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.10	105	80-120	

MATRIX SPIKE & MATRIX S	SPIKE DUPI	LICATE: 3215	322 MS	MSD	3215323	i						
Parameter	Units	92527612001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Farameter			Conc.	COIIC.			70 KeC	70 KeC	LIIIIIIS	KPD	KPD	Quai
Arsenic	mg/L	ND	0.1	0.1	0.10	0.11	102	105	75-125	3	20	
Barium	mg/L	0.037	0.1	0.1	0.14	0.14	104	105	75-125	0	20	
Beryllium	mg/L	0.00014J	0.1	0.1	0.10	0.10	102	103	75-125	1	20	
Boron	mg/L	0.010J	1	1	1.0	1.0	100	100	75-125	0	20	
Cadmium	mg/L	ND	0.1	0.1	0.11	0.11	105	106	75-125	0	20	
Chromium	mg/L	0.0020J	0.1	0.1	0.11	0.11	104	103	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	103	103	75-125	0	20	

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



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

MATRIX SPIKE & MATRIX SP	PIKE DUPL	ICATE: 3215	322		3215323							
		92527612001	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Lead	mg/L	0.0011	0.1	0.1	0.10	0.10	100	101	75-125		20	
Lithium	mg/L	0.0047J	0.1	0.1	0.11	0.11	101	103	75-125	2	20	



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

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: 92527612001, 92527612002

METHOD BLANK: 3199480 Matrix: Water

Associated Lab Samples: 92527612001, 92527612002

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 10.0 03/17/21 17:40

LABORATORY CONTROL SAMPLE: 3199481

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units **Total Dissolved Solids** 400 400 100 90-111 mg/L

SAMPLE DUPLICATE: 3199482

92527256010 Dup Max Parameter Units Result Result **RPD RPD** Qualifiers 279 **Total Dissolved Solids** 278 0 mg/L 10

SAMPLE DUPLICATE: 3199483

Date: 04/12/2021 09:24 AM

92526996006 Dup Max RPD RPD Parameter Units Result Result Qualifiers Total Dissolved Solids 255 258 10 mg/L 1

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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

QC Batch Method:

QC Batch: 608067

SM 2450C-2011

Analysis Method:

SM 2450C-2011

Analysis Description:

2540C Total Dissolved Solids

Laboratory:

Pace Analytical Services - Peachtree Corners, GA

92527612003, 92527612004, 92527612005 Associated Lab Samples:

METHOD BLANK:

Matrix: Water

Associated Lab Samples:

92527612003, 92527612004, 92527612005

Blank Result Reporting

Parameter Units

Limit

MDL

Analyzed

Qualifiers

Total Dissolved Solids

mg/L

ND

10.0

10.0 03/19/21 18:44

LABORATORY CONTROL SAMPLE: Parameter

3203363

Spike Conc.

LCS Result

LCS % Rec % Rec Limits

Qualifiers

Total Dissolved Solids

Total Dissolved Solids

Date: 04/12/2021 09:24 AM

Units mg/L

mg/L

400

391

98

4

90-111

10

SAMPLE DUPLICATE: 3203364

Parameter

Units

92527261009 Result

664

Dup Result

690

RPD

Max **RPD**

Qualifiers

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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

QC Batch: 608136 Analysis Method: SM 2450C-2011

QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527612006, 92527612007

METHOD BLANK: 3203650 Matrix: Water

Associated Lab Samples: 92527612006, 92527612007

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 03/23/21 07:58

LABORATORY CONTROL SAMPLE: 3203651

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units **Total Dissolved Solids** 400 414 104 90-111 mg/L

.....<u>g</u>______

SAMPLE DUPLICATE: 3203652

92527612006 Dup Max Parameter Units Result Result **RPD RPD** Qualifiers 99.0 **Total Dissolved Solids** 97.0 2 mg/L 10

SAMPLE DUPLICATE: 3203653

Date: 04/12/2021 09:24 AM

92528339001 Dup Max RPD RPD Parameter Units Result Result Qualifiers Total Dissolved Solids 952 1020 7 10 mg/L



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

QC Batch: 608443 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: 92527612008, 92527612009, 92527612010, 92527612011

METHOD BLANK: 3204949 Matrix: Water

Associated Lab Samples: 92527612008, 92527612009, 92527612010, 92527612011

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 03/23/21 08:29

LABORATORY CONTROL SAMPLE: 3204950

Spike LCS LCS % Rec
Parameter Units Conc. Result % Rec Limits Qualifiers

Total Dissolved Solids mg/L 400 398 100 90-111

SAMPLE DUPLICATE: 3204951

92527612008 Dup Max Parameter Units Result Result **RPD RPD** Qualifiers 213 **Total Dissolved Solids** 225 mg/L 5 10

SAMPLE DUPLICATE: 3204952

Date: 04/12/2021 09:24 AM

92528787024 Dup Max RPD RPD Parameter Units Result Result Qualifiers Total Dissolved Solids 47.0 72.0 10 D6 mg/L 42



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

QC Batch: 608913 Analysis Method:

QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

SM 2450C-2011

Associated Lab Samples: 92527612012, 92527612013, 92527612014, 92527612015, 92527612016

METHOD BLANK: 3207223 Matrix: Water

Associated Lab Samples: 92527612012, 92527612013, 92527612014, 92527612015, 92527612016

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 03/25/21 11:08

LABORATORY CONTROL SAMPLE: 3207224

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

SAMPLE DUPLICATE: 3207225

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

SAMPLE DUPLICATE: 3207226

Date: 04/12/2021 09:24 AM

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



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

QC Batch: 609221 Analysis Method: SM 2450C-2011

QC Batch Method: SM 2450C-2011 Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527612017, 92527612018

METHOD BLANK: 3208754 Matrix: Water

Associated Lab Samples: 92527612017, 92527612018

Blank Reporting
Parameter Units Result Limit MDL Analyzed Qualifiers

Total Dissolved Solids mg/L ND 10.0 10.0 03/26/21 09:30

LABORATORY CONTROL SAMPLE: 3208755

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

SAMPLE DUPLICATE: 3208757

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

SAMPLE DUPLICATE: 3208759

Date: 04/12/2021 09:24 AM

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



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

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: 92527612001, 92527612002

METHOD BLANK: 3201757 Matrix: Water

Associated Lab Samples: 92527612001, 92527612002

LABORATORY CONTROL SAMPLE: 2201750

Date: 04/12/2021 09:24 AM

		Blank	Reporting			
Parameter	Units	Result	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	

LABORATORT CONTROL SAMPLE.	3201736	Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% 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 SP		3201760										
			MS	MSD								
		92528475003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	2510	50	50	2520	2520	27	27	90-110	0	10	M6
Fluoride	mg/L	4.6	2.5	2.5	12.1	11.9	302	294	90-110	2	10	M6
Sulfate	mg/L	1530	50	50	1510	1480	-49	-112	90-110	2	10	M6

MATRIX SPIKE & MATRIX SP	761		3201762									
			MS	MSD								
		92527256007	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	5.9	50	50	58.9	57.5	106	103	90-110	2	10	
Fluoride	mg/L	ND	2.5	2.5	2.3	2.3	91	90	90-110	1	10	
Sulfate	mg/L	50.4	50	50	102	101	103	101	90-110	1	10	

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.



Project: HAMMOND AP-4 SEMIANNUAL

LABORATORY CONTROL SAMPLE: 2201002

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

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: 92527612003, 92527612004, 92527612005

METHOD BLANK: 3201801 Matrix: Water

Associated Lab Samples: 92527612003, 92527612004, 92527612005

		Blank	Reporting			
Parameter	Units	Result	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.	3201002					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% 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 SP	803		3201804									
			MS	MSD								
		92526996007	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	8.0	50	50	57.8	58.5	99	101	90-110	1	10	
Fluoride	mg/L	0.058J	2.5	2.5	2.5	2.6	98	100	90-110	2	10	
Sulfate	mg/L	154	50	50	255	259	201	210	90-110	2	10	M6

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201805					3201806							
			MS	MSD								
		92527261012	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	3.2	50	50	53.9	53.4	101	100	90-110	1	10	
Fluoride	mg/L	0.83	2.5	2.5	3.5	3.5	107	106	90-110	1	10	
Sulfate	mg/L	166	50	50	183	208	33	84	90-110	13	10	M1,R1

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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

QC Batch Method:

QC Batch: 607984

Analysis Method: EPA 300.0 Rev 2.1 1993

Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527612006, 92527612007

EPA 300.0 Rev 2.1 1993

METHOD BLANK: 3202745 Matrix: Water

Associated Lab Samples: 92527612006, 92527612007

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/21/21 19:26	
Fluoride	mg/L	ND	0.10	0.050	03/21/21 19:26	
Sulfate	mg/L	ND	1.0	0.50	03/21/21 19:26	

LABORATORY CONTROL SAMPLE:	3202746					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	50	52.2	104	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	50	52.8	106	90-110	

MATRIX SPIKE & MATRIX SP	747		3202748									
			MS	MSD								
		92527234030	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	ND	50	50	51.8	50.4	104	101	90-110	3	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	104	101	90-110	3	10	
Sulfate	mg/L	ND	50	50	52.2	50.8	104	102	90-110	3	10	

MATRIX SPIKE & MATRIX SP	749		3202750									
			MS	MSD								
		92527612006	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	1.6	50	50	52.6	51.8	102	100	90-110	1	10	
Fluoride	mg/L	0.18	2.5	2.5	2.7	2.7	99	102	90-110	2	10	
Sulfate	mg/L	7.7	50	50	57.9	57.5	100	100	90-110	1	10	

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.



Project: HAMMOND AP-4 SEMIANNUAL

LABORATORY CONTROL SAMPLE: 320/500

Date: 04/12/2021 09:24 AM

Pace Project No.: 92527612

QC Batch: 608285 Analysis Method: EPA 300.0 Rev 2.1 1993

QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527612008, 92527612009, 92527612010, 92527612011

METHOD BLANK: 3204508 Matrix: Water

Associated Lab Samples: 92527612008, 92527612009, 92527612010, 92527612011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/23/21 04:02	
Fluoride	mg/L	ND	0.10	0.050	03/23/21 04:02	
Sulfate	mg/L	ND	1.0	0.50	03/23/21 04:02	

LABONATORT CONTROL SAWIFLE.	3204309	Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	50	50.7	101	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	51.8	104	90-110	

MATRIX SPIKE & MATRIX SP		3204511										
			MS	MSD								
		92528339002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	53.4	50	50	91.2	90.1	75	73	90-110	1	10	M6
Fluoride	mg/L	0.74	2.5	2.5	3.3	3.2	102	100	90-110	2	10	
Sulfate	mg/L	457	50	50	503	503	93	93	90-110	0	10	

MATRIX SPIKE & MATRIX SI	PIKE DUPL	ICATE: 3204		3204513								
			MS	MSD								
		92527612010	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	4.7	50	50	58.1	56.8	107	104	90-110	2	10	
Fluoride	mg/L	0.089J	2.5	2.5	2.8	2.7	107	104	90-110	2	10	
Sulfate	mg/L	28.3	50	50	80.9	79.7	105	103	90-110	2	10	

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.



Project: HAMMOND AP-4 SEMIANNUAL

LABORATORY CONTROL SAMPLE: 3206838

Date: 04/12/2021 09:24 AM

Pace Project No.: 92527612

QC Batch: 608857 Analysis Method: EPA 300.0 Rev 2.1 1993

QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527612012, 92527612013, 92527612014, 92527612015

METHOD BLANK: 3206837 Matrix: Water

Associated Lab Samples: 92527612012, 92527612013, 92527612014, 92527612015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND ND	1.0	0.60	03/25/21 18:48	
Fluoride	mg/L	ND	0.10	0.050	03/25/21 18:48	
Sulfate	mg/L	ND	1.0	0.50	03/25/21 18:48	

LABONATORT CONTROL SAWIFLE.	3200030	Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	50	52.4	105	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	50	53.8	108	90-110	

MATRIX SPIKE & MATRIX SP	3206840											
			MS	MSD								
		92527256017	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	138	50	50	182	183	88	90	90-110	1	10	M6
Fluoride	mg/L	0.057J	2.5	2.5	2.8	2.8	108	108	90-110	0	10	
Sulfate	mg/L	447	50	50	490	492	86	91	90-110	0	10	M6

MATRIX SPIKE & MATRIX SP		3206842										
			MS	MSD								
		92527612015	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	4.3	50	50	56.2	56.5	104	104	90-110	0	10	
Fluoride	mg/L	0.079J	2.5	2.5	2.7	2.7	105	106	90-110	1	10	
Sulfate	mg/L	87.8	50	50	128	129	81	82	90-110	0	10	M1

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.



Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

QC Batch: 608960 Analysis Method: EPA 300.0 Rev 2.1 1993

QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527612016, 92527612017, 92527612018

METHOD BLANK: 3207640 Matrix: Water

Associated Lab Samples: 92527612016, 92527612017, 92527612018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/25/21 13:06	
Fluoride	mg/L	ND	0.10	0.050	03/25/21 13:06	
Sulfate	mg/L	ND	1.0	0.50	03/25/21 13:06	

LABORATORY CONTROL SAMPLE:	3207641					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L		51.3	103	90-110	
Fluoride	mg/L	2.5	2.5	98	90-110	
Sulfate	mg/L	50	51.7	103	90-110	

MATRIX SPIKE & MATRIX SP		3207643										
			MS	MSD								
		92529156001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	24.2	50	50	71.9	72.2	95	96	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	98	98	90-110	0	10	
Sulfate	mg/L	ND	50	50	71.0	71.3	142	142	90-110	0	10	M1

MATRIX SPIKE & MATRIX SP	IKE DUPL	LICATE: 3207		3207645								
			MS	MSD								
		92527612017	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	24.9	50	50	76.4	76.6	103	103	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	103	102	90-110	1	10	
Sulfate	mg/L	162	50	50	209	207	93	90	90-110	1	10	

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.



QUALIFIERS

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

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

Date: 04/12/2021 09:24 AM

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.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytic Batch
2527612001	HGWA-111				
2527612002	HGWA-111 FILTERED				
2527612003	HGWA-47				
2527612004	HGWA-48D				
2527612005	HGWA-112				
2527612006	HGWA-113				
2527612007	HGWA-113 FILTERED				
2527612008	HGWC-101				
2527612009	HGWC-102				
2527612010	HGWC-109				
2527612012	HGWC-103				
2527612013	HGWC-105				
2527612014	HGWC-107				
2527612015	HGWC-118				
2527612016	HGWC-118 FILTERED				
2527612017	HGWC-117				
2527612001	HGWA-111	EPA 3010A	610583	EPA 6010D	610875
2527612002	HGWA-111 FILTERED	EPA 3010A	610583	EPA 6010D	610875
2527612003	HGWA-47	EPA 3010A	610583	EPA 6010D	610875
2527612004	HGWA-48D	EPA 3010A	610583	EPA 6010D	610875
2527612005	HGWA-112	EPA 3010A	610583	EPA 6010D	610875
2527612006	HGWA-113	EPA 3010A	610583	EPA 6010D	610875
2527612007	HGWA-113 FILTERED	EPA 3010A	610583	EPA 6010D	610875
2527612008	HGWC-101	EPA 3010A	610583	EPA 6010D	610875
2527612009	HGWC-102	EPA 3010A	610583	EPA 6010D	610875
2527612010	HGWC-109	EPA 3010A	610583	EPA 6010D	610875
2527612011	DUP-4	EPA 3010A	610583	EPA 6010D	610875
2527612012	HGWC-103	EPA 3010A	610583	EPA 6010D	610875
2527612013	HGWC-105	EPA 3010A	610583	EPA 6010D	610875
2527612014	HGWC-107	EPA 3010A	610583	EPA 6010D	610875
2527612015	HGWC-118	EPA 3010A	610583	EPA 6010D	610875
2527612016	HGWC-118 FILTERED	EPA 3010A	610583	EPA 6010D	610875
2527612017	HGWC-117	EPA 3010A	610583	EPA 6010D	610875
2527612018	FB-4	EPA 3010A	610583	EPA 6010D	610875
2527612001	HGWA-111	EPA 3005A	610584	EPA 6020B	610872
2527612002	HGWA-111 FILTERED	EPA 3005A	610584	EPA 6020B	610872
2527612003	HGWA-47	EPA 3005A	610584	EPA 6020B	610872
2527612004	HGWA-48D	EPA 3005A	610584	EPA 6020B	610872
2527612005	HGWA-112	EPA 3005A	610584	EPA 6020B	610872
527612006	HGWA-113	EPA 3005A	610584	EPA 6020B	610872
527612007	HGWA-113 FILTERED	EPA 3005A	610584	EPA 6020B	610872
527612008	HGWC-101	EPA 3005A	610584	EPA 6020B	610872
2527612009	HGWC-102	EPA 3005A	610584	EPA 6020B	610872
2527612010	HGWC-109	EPA 3005A	610584	EPA 6020B	610872
2527612011	DUP-4	EPA 3005A	610584	EPA 6020B	610872
2527612012	HGWC-103	EPA 3005A	610584	EPA 6020B	610872
2527612013	HGWC-105	EPA 3005A	610584	EPA 6020B	610872
2527612014	HGWC-107	EPA 3005A	610584	EPA 6020B	610872



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 SEMIANNUAL

Pace Project No.: 92527612

Date: 04/12/2021 09:24 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytica Batch
92527612015	HGWC-118	EPA 3005A	610584	EPA 6020B	610872
92527612016	HGWC-118 FILTERED	EPA 3005A	610584	EPA 6020B	610872
2527612017	HGWC-117	EPA 3005A	610584	EPA 6020B	610872
92527612018	FB-4	EPA 3005A	610584	EPA 6020B	610872
2527612001	HGWA-111	SM 2450C-2011	607316		
92527612002	HGWA-111 FILTERED	SM 2450C-2011	607316		
92527612003	HGWA-47	SM 2450C-2011	608067		
2527612004	HGWA-48D	SM 2450C-2011	608067		
2527612005	HGWA-112	SM 2450C-2011	608067		
2527612006	HGWA-113	SM 2450C-2011	608136		
92527612007	HGWA-113 FILTERED	SM 2450C-2011	608136		
92527612008	HGWC-101	SM 2450C-2011	608443		
92527612009	HGWC-102	SM 2450C-2011	608443		
92527612010	HGWC-109	SM 2450C-2011	608443		
92527612011	DUP-4	SM 2450C-2011	608443		
92527612012	HGWC-103	SM 2450C-2011	608913		
92527612013	HGWC-105	SM 2450C-2011	608913		
92527612014	HGWC-107	SM 2450C-2011	608913		
92527612015	HGWC-118	SM 2450C-2011	608913		
92527612016	HGWC-118 FILTERED	SM 2450C-2011	608913		
92527612017	HGWC-117	SM 2450C-2011	609221		
92527612018	FB-4	SM 2450C-2011	609221		
92527612001	HGWA-111	EPA 300.0 Rev 2.1 1993	607751		
92527612002	HGWA-111 FILTERED	EPA 300.0 Rev 2.1 1993	607751		
92527612003	HGWA-47	EPA 300.0 Rev 2.1 1993	607758		
92527612004	HGWA-48D	EPA 300.0 Rev 2.1 1993	607758		
92527612005	HGWA-112	EPA 300.0 Rev 2.1 1993	607758		
2527612006	HGWA-113	EPA 300.0 Rev 2.1 1993	607984		
92527612007	HGWA-113 FILTERED	EPA 300.0 Rev 2.1 1993	607984		
2527612008	HGWC-101	EPA 300.0 Rev 2.1 1993	608285		
2527612009	HGWC-102	EPA 300.0 Rev 2.1 1993	608285		
2527612010	HGWC-109	EPA 300.0 Rev 2.1 1993	608285		
92527612011	DUP-4	EPA 300.0 Rev 2.1 1993	608285		
2527612012	HGWC-103	EPA 300.0 Rev 2.1 1993	608857		
92527612013	HGWC-105	EPA 300.0 Rev 2.1 1993	608857		
92527612014	HGWC-107	EPA 300.0 Rev 2.1 1993	608857		
92527612015	HGWC-118	EPA 300.0 Rev 2.1 1993	608857		
92527612016	HGWC-118 FILTERED	EPA 300.0 Rev 2.1 1993	608960		
92527612017	HGWC-117	EPA 300.0 Rev 2.1 1993	608960		
92527612018	FB-4	EPA 300.0 Rev 2.1 1993	608960		

Pace Analytical*

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

Upon Receipt Client Name:	wer		1	Project #	WO# : 92	252761	2
ler: Fed Ex UPS ommercial Pace	USPS Other	*		ent	92527612		
dy Seal Present? Yes No Seals	intact? .	□Yes	□No		Date/initials Person	n Examining Contents)	5/12/4
ig Material: Bubble Wrap Bui nometer: 230	bble Bags	None	e 🔲 o	ther		ogical Tissue Frozen?	(Defense
Correction Factor Add/Subtract (*C): Regulated Soil (N/A, water sample) mples originate in a quarantine zone within the Unity Systems (No.)	o <u>10,00</u>	3.	C (check ma	ngs)? D	has begun	p criteria. Samples on id n a foreign source (inter	
						ints/Discrepancy:	
Chain of Custody Present?	4∑Yes	<u> Dno</u>	□n/a	1.			· · · · · · · · · · · · · · · · · · ·
Samples Arrived within Hold Time?	Yes	□No	□N/A	2.			
Short Hold Time Analysis (<72 hr.)?	Yes	J∤No °	. □n/a	3.		ppanananani markataran dalam a di ali ma	·
tush Turn Around Time Requested?	[]Yes	ZÑo	□n/a	4,		The second secon	4
iufficient Volume?	□Yes	[]No	□n/a	5.		in to the first state of the second	
Correct Containers Used? -Pace Containers Used?		□No	□N/A □N/A	6.			
Containers Intact?	₩ Tes	□No	□n/a	7.			and the second s
Dissolved analysis: Samples Field Filtered?	Yes	По	TIN/A	8.	4	The second secon	
-Includes Date/Time/ID/Analysis Matrix:	W	[]No	de constitución de constitución de constitución de constitución de constitución de constitución de constitución	-9,	To specify the second		rangila () ja on gazirania kanana
Headspace in VOA Vials (>5-6mm)?	Yes	□No	<u>EN/A</u>	10.	and the same of th	a harmonia de la constitución de	
Trip Blank Present?	Yes	∏No	ZIN/A	11.			
Trip Blank Custody Seals Present? MMENTS/SAMPLE DISCREPANCY	□Yes_	No	_Ом/а	agenya ana maneka na maneka karan ka		Field Data Required?	☐Yes ☐No
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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 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#: 92527612

PM: KLH1

Due Date: 03/26/21

CLIENT: GA-GA Power

**************************************	tent	BP4U-125 mL Plastic Unpreserved (N/A) (G-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP45-125 mL Plastic H2504 (pH < 2) (CI-)	8P3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (CI-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (CI-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (CI-)	AG15-1 liter Amber H2SO4 (pH < 2)	AG35-250 mL Amber H2SO4 (pH < 2)	AG3A[DG3A]-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCI (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mt VOA H3PO4 (N/A)	VOAK (6 wals per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterife Plastic (N/A – lab)	SPXT-250 mL Sterile flastic (N/A - lab)	BP/N	BP3A-250 ml. Plastic (NH2)2504 (9.3-9.7)	AGOU-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mt Scintillation vials {N/A}	DG9U-40 mL Amber Unpreserved vials (N/A)	
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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.

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MATRIX CODE MATRIX CODE	MATRIX CODE	COLLECTED COLLECTED	COORDE C	Fox	Fig.
AND AND	THE SAMPLE TEMP AT COLLECTION MATERIA CODE See valid code	COLLECTED MATRIX CODE	Walt Mark Project Number GW65811 Properties 10839-12 Walt water codes Walter Walt	Fox	SCS Contacts Porthago Oter No. Plant Hammond AP-4 Semiannual Plant Repert Komin Herring Propert Name Plant Hammond AP-4 Semiannual Plant Repert Komin Herring Propert Name Plant Hammond AP-4 Semiannual Plant Repert Komin Herring Propert Name Plant Hammond AP-4 Semiannual Plant Repert Komin Herring Propert Name Plant Hammond AP-4 Semiannual Plant Representation Plant Representat
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Required Project information

CHAIN-OF-CUSTODY / Analytical Request Document

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Section A
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'Important Note: By signing this form you are accepting Pace's NET 30 day pays agreeing to late charges #1 1.5% per month for any investigation paid within 30 days.

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





April 15, 2021

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

RE: Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 12, 2021 and March 22, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

• Pace Analytical Services - Greensburg

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

Sincerely,

Kevin Herring

kevin.herring@pacelabs.com

1(704)875-9092

Ken Her

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.





CERTIFICATIONS

Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

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 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

Missouri Certification #: 235

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



SAMPLE SUMMARY

Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92527605001	HGWA-111	Water	03/11/21 16:25	03/12/21 13:43
92527605002	HGWA-111 FILTERED	Water	03/11/21 16:25	03/12/21 13:43
92527605003	HGWA-47	Water	03/12/21 15:02	03/15/21 12:00
92527605004	HGWA-48D	Water	03/12/21 12:42	03/15/21 12:00
92527605005	HGWA-112	Water	03/12/21 13:30	03/15/21 12:00
92527605006	HGWA-113	Water	03/16/21 12:50	03/17/21 13:10
92527605007	HGWA-113 FILTERED	Water	03/16/21 12:50	03/17/21 13:10
92527605008	HGWC-101	Water	03/17/21 11:48	03/18/21 13:17
92527605009	HGWC-102	Water	03/17/21 14:25	03/18/21 13:17
92527605010	HGWC-109	Water	03/17/21 12:52	03/18/21 13:17
92527605011	DUP-4	Water	03/17/21 00:00	03/18/21 13:17
92527605012	HGWC-103	Water	03/18/21 11:53	03/19/21 13:40
92527605013	HGWC-105	Water	03/18/21 12:46	03/19/21 13:40
92527605014	HGWC-107	Water	03/18/21 18:01	03/19/21 13:40
92527605015	HGWC-118	Water	03/18/21 17:18	03/19/21 13:40
92527605016	HGWC-118 FILTERED	Water	03/18/21 17:18	03/19/21 13:40
92527605017	HGWC-117	Water	03/19/21 11:45	03/22/21 15:41
92527605018	FB-4	Water	03/19/21 00:00	03/22/21 15:41



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92527605001	HGWA-111	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527605002	HGWA-111 FILTERED	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527605003	HGWA-47	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2527605004	HGWA-48D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527605005	HGWA-112	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2527605006	HGWA-113	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2527605007	HGWA-113 FILTERED	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
2527605008	HGWC-101	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2527605009	HGWC-102	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527605010	HGWC-109	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2527605011	DUP-4	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
2527605012	HGWC-103	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527605013	HGWC-105	EPA 9315	LAL	1	PASI-PA



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527605014	HGWC-107	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527605015	HGWC-118	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527605016	HGWC-118 FILTERED	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527605017	HGWC-117	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527605018	FB-4	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Lab Sample ID	Client Sample ID					
Method	Parameters —	Result	Units	Report Limit	Analyzed	Qualifiers
92527605001	HGWA-111					
EPA 9315	Radium-226	0.178 ± 0.158 (0.289)	pCi/L		03/29/21 07:35	
EPA 9320	Radium-228	C:91% T:NA 0.176 ± 0.837 (1.89) C:61%	pCi/L		04/09/21 19:48	
Total Radium Calculation	Total Radium	T:89% 0.354 ± 0.995 (2.18)	pCi/L		04/13/21 15:22	
92527605002	HGWA-111 FILTERED					
EPA 9315	Radium-226	0.0552 ± 0.0999 (0.226) C:101% T:NA	pCi/L		03/29/21 07:36	
EPA 9320	Radium-228	0.636 ± 0.783 (1.66) C:63% T:86%	pCi/L		04/09/21 19:48	
Total Radium Calculation	Total Radium	0.691 ± 0.883 (1.89)	pCi/L		04/13/21 15:22	
92527605003	HGWA-47					
EPA 9315	Radium-226	-0.0152 ± 0.0974 (0.292) C:84% T:NA	pCi/L		04/05/21 07:59	
EPA 9320	Radium-228	-0.155 ± 0.337 (0.817) C:69% T:93%	pCi/L		04/12/21 14:35	
Total Radium Calculation	Total Radium	0.000 ± 0.434 (1.11)	pCi/L		04/14/21 11:08	
2527605004	HGWA-48D					
EPA 9315	Radium-226	0.242 ± 0.172 (0.275)	pCi/L		04/05/21 07:59	
EPA 9320	Radium-228	C:89% T:NA 0.587 ± 0.490 (0.987) C:68% T:85%	pCi/L		04/12/21 14:35	
Total Radium Calculation	Total Radium	0.829 ± 0.662 (1.26)	pCi/L		04/14/21 11:08	

REPORT OF LABORATORY ANALYSIS

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Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
IVIGUIUU	- arameters		UTIILS		Allalyzeu	Qualilieis
92527605005	HGWA-112					
EPA 9315	Radium-226	0.164 ± 0.142	pCi/L		04/05/21 07:59	
		(0.245) C:91% T:NA				
EPA 9320	Radium-228	-0.00811 ± 0.372	pCi/L		04/12/21 14:36	
		(0.862) C:68%				
		T:96%				
Total Radium Calculation	Total Radium	0.164 ± 0.514	pCi/L		04/14/21 11:08	
		(1.11)				
92527605006	HGWA-113					
EPA 9315	Radium-226	0.294 ±	pCi/L		04/05/21 12:44	
		0.131				
		(0.165) C:87% T:NA				
EPA 9320	Radium-228	0.265 ±	pCi/L		04/09/21 19:48	
_:		0.831	P-"-		1.00.10	
		(1.86)				
		C:63% T:83%				
Total Radium Calculation	Total Radium	0.559 ±	pCi/L		04/14/21 13:05	
Total Hadiani Galodiation	rotal regulari	0.962	PO#E		01/11/21 10:00	
		(2.03)				
92527605007	HGWA-113 FILTERED					
EPA 9315	Radium-226	0.0762 ±	pCi/L		04/05/21 12:44	
		0.0911 (0.186)				
		C:95% T:NA				
EPA 9320	Radium-228	-0.720 ±	pCi/L		04/09/21 19:48	
		0.783	•			
		(1.89) C:65%				
		T:87%				
Total Radium Calculation	Total Radium	0.0762 ±	pCi/L		04/14/21 13:05	
		0.874	•			
02527605009	HGWC-101	(2.08)				
92527605008		0.040	a		0.440=10.4 := ==	
EPA 9315	Radium-226	0.248 ±	pCi/L		04/05/21 16:08	
		0.121 (0.160)				
		C:84% T:NA				
EPA 9320	Radium-228	-0.246 ±	pCi/L		04/09/21 15:25	
		0.376				
		(0.927) C:66%				
		T:79%				
Total Radium Calculation	Total Radium	0.248 ±	pCi/L		04/14/21 15:46	
		0.497				
		(1.09)				



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527605009	HGWC-102					
EPA 9315	Radium-226	-0.00353 ± 0.0726 (0.187)	pCi/L		04/05/21 19:39	
EPA 9320	Radium-228	C:84% T:NA 0.401 ± 0.400 (0.826)	pCi/L		04/12/21 11:35	
Total Radium Calculation	Total Radium	(0.820) C:68% T:85% 0.401 ± 0.473 (1.01)	pCi/L		04/14/21 15:46	
92527605010	HGWC-109	,				
EPA 9315	Radium-226	0.138 ± 0.108 (0.193)	pCi/L		04/05/21 19:39	
EPA 9320	Radium-228	C:78% T:NA 0.418 ± 0.364 (0.736) C:71%	pCi/L		04/12/21 11:35	
Total Radium Calculation	Total Radium	T:89% 0.556 ± 0.472 (0.929)	pCi/L		04/14/21 15:46	
92527605011	DUP-4	,				
EPA 9315	Radium-226	0.221 ± 0.116 (0.165)	pCi/L		04/05/21 19:39	
EPA 9320	Radium-228	C:79% T:NA 0.171 ± 0.367 (0.812) C:70%	pCi/L		04/12/21 11:35	
Total Radium Calculation	Total Radium	T:85% 0.392 ± 0.483 (0.977)	pCi/L		04/14/21 15:46	
92527605012	HGWC-103					
EPA 9315	Radium-226	0.0742 ± 0.0886 (0.181) C:92% T:NA	pCi/L		04/05/21 19:39	
EPA 9320	Radium-228	0.200 ± 0.389 (0.855) C:68%	pCi/L		04/12/21 11:35	
Total Radium Calculation	Total Radium	T:88% 0.274 ± 0.478 (1.04)	pCi/L		04/14/21 15:46	

REPORT OF LABORATORY ANALYSIS

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Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527605013	HGWC-105					
EPA 9315	Radium-226	0.107 ± 0.0987 (0.187)	pCi/L		04/05/21 19:39	
EPA 9320	Radium-228	C:80% T:NA 0.145 ± 0.367 (0.820) C:70%	pCi/L		04/12/21 11:35	
Total Radium Calculation	Total Radium	T:79% 0.252 ± 0.466 (1.01)	pCi/L		04/14/21 15:46	
92527605014	HGWC-107					
EPA 9315	Radium-226	0.0611 ± 0.0775 (0.158) C:84% T:NA	pCi/L		04/05/21 19:39	
EPA 9320	Radium-228	0.0841 ± 0.291 (0.660) C:67% T:94%	pCi/L		04/12/21 11:36	
Total Radium Calculation	Total Radium	0.145 ± 0.369 (0.818)	pCi/L		04/14/21 15:46	
92527605015	HGWC-118					
EPA 9315	Radium-226	-0.0147 ± 0.261 (0.660) C:87% T:NA	pCi/L		04/05/21 07:54	
EPA 9320	Radium-228	0.323 ± 0.450 (0.966) C:67% T:77%	pCi/L		04/12/21 11:35	
Total Radium Calculation	Total Radium	0.323 ± 0.711 (1.63)	pCi/L		04/14/21 15:46	
92527605016	HGWC-118 FILTERED					
EPA 9315	Radium-226	0.0919 ± 0.201 (0.469)	pCi/L		04/05/21 07:54	
EPA 9320	Radium-228	C:86% T:NA 0.686 ± 0.494 (0.978) C:71% T:83%	pCi/L		04/12/21 11:33	
Total Radium Calculation	Total Radium	0.778 ± 0.695 (1.45)	pCi/L		04/14/21 15:46	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527605017	HGWC-117					
EPA 9315	Radium-226	0.218 ± 0.374 (0.848) C:91% T:NA	pCi/L		04/09/21 09:15	
EPA 9320	Radium-228	0.0846 ± 0.425 (0.968) C:63% T:85%	pCi/L		04/13/21 11:58	
92527605018	FB-4					
EPA 9315	Radium-226	-0.106 ± 0.257 (0.730) C:91% T:NA	pCi/L		04/09/21 09:15	
EPA 9320	Radium-228	0.116 ± 0.380 (0.856) C:61% T:96%	pCi/L		04/13/21 11:58	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: HGWA-111 PWS:	Lab ID: 9252 Site ID:	7605001 Collected: 03/11/21 16:25 Sample Type:	Received:	03/12/21 13:43	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.178 ± 0.158 (0.289) C:91% T:NA	pCi/L	03/29/21 07:35	5 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.176 ± 0.837 (1.89) C:61% T:89%	pCi/L	04/09/21 19:48	3 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.354 ± 0.995 (2.18)	pCi/L	04/13/21 15:22	2 7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: HGWA-111 FILTERED PWS:	Lab ID: 9252 Site ID:	7605002 Collected: 03/11/21 16:25 Sample Type:	Received:	03/12/21 13:43	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.0552 ± 0.0999 (0.226) C:101% T:NA	pCi/L	03/29/21 07:36	3 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.636 ± 0.783 (1.66) C:63% T:86%	pCi/L	04/09/21 19:48	3 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.691 ± 0.883 (1.89)	pCi/L	04/13/21 15:22	2 7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: HGWA-47 PWS:	Lab ID: 9252 Site ID:	7605003 Collected: 03/12/21 15:02 Sample Type:	Received:	03/15/21 12:00	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	-0.0152 ± 0.0974 (0.292) C:84% T:NA	pCi/L	04/05/21 07:59	9 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	-0.155 ± 0.337 (0.817) C:69% T:93%	pCi/L	04/12/21 14:3	5 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	$0.000 \pm 0.434 (1.11)$	pCi/L	04/14/21 11:08	3 7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: HGWA-48D PWS:	Lab ID: 9252 Site ID:	7605004 Collected: 03/12/21 12:42 Sample Type:	Received:	03/15/21 12:00	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				,
Radium-226	EPA 9315	0.242 ± 0.172 (0.275) C:89% T:NA	pCi/L	04/05/21 07:59	9 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.587 ± 0.490 (0.987) C:68% T:85%	pCi/L	04/12/21 14:3	5 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.829 ± 0.662 (1.26)	pCi/L	04/14/21 11:08	3 7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: HGWA-112 PWS:	Lab ID: 9252 Site ID:	7605005 Collected: 03/12/21 13:30 Sample Type:	Received:	03/15/21 12:00 M	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.164 ± 0.142 (0.245) C:91% T:NA	pCi/L	04/05/21 07:59	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	-0.00811 ± 0.372 (0.862) C:68% T:96%	pCi/L	04/12/21 14:36	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.164 ± 0.514 (1.11)	pCi/L	04/14/21 11:08	7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: HGWA-113 PWS:	Lab ID: 9252 Site ID:	7605006 Collected: 03/16/21 12:50 Sample Type:	Received:	03/17/21 13:10 M	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.294 ± 0.131 (0.165) C:87% T:NA	pCi/L	04/05/21 12:44	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.265 ± 0.831 (1.86) C:63% T:83%	pCi/L	04/09/21 19:48	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.559 ± 0.962 (2.03)	pCi/L	04/14/21 13:05	7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: HGWA-113 FILTERED PWS:	Lab ID: 9252 Site ID:	7605007 Collected: 03/16/21 12:50 Sample Type:	Received:	03/17/21 13:10	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.0762 ± 0.0911 (0.186) C:95% T:NA	pCi/L	04/05/21 12:44	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	-0.720 ± 0.783 (1.89) C:65% T:87%	pCi/L	04/09/21 19:48	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.0762 ± 0.874 (2.08)	pCi/L	04/14/21 13:05	7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: HGWC-101 PWS:	Lab ID: 9252 Site ID:	7605008 Collected: 03/17/21 11:48 Sample Type:	Received:	03/18/21 13:17 M	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.248 ± 0.121 (0.160) C:84% T:NA	pCi/L	04/05/21 16:08	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	-0.246 ± 0.376 (0.927) C:66% T:79%	pCi/L	04/09/21 15:25	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.248 ± 0.497 (1.09)	pCi/L	04/14/21 15:46	7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: HGWC-102 PWS:	Lab ID: 9252 Site ID:	7605009 Collected: 03/17/21 14:25 Sample Type:	Received:	03/18/21 13:17	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	-0.00353 ± 0.0726 (0.187) C:84% T:NA	pCi/L	04/05/21 19:39	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.401 ± 0.400 (0.826) C:68% T:85%	pCi/L	04/12/21 11:35	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.401 ± 0.473 (1.01)	pCi/L	04/14/21 15:46	7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: HGWC-109 PWS:	Lab ID: 9252 Site ID:	P.7605010 Collected: 03/17/21 12:52 Sample Type:	Received:	03/18/21 13:17	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.138 ± 0.108 (0.193) C:78% T:NA	pCi/L	04/05/21 19:39	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.418 ± 0.364 (0.736) C:71% T:89%	pCi/L	04/12/21 11:35	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.556 ± 0.472 (0.929)	pCi/L	04/14/21 15:46	7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: DUP-4 PWS:	Lab ID: 9252 Site ID:	C7605011 Collected: 03/17/21 00:00 Sample Type:	Received:	03/18/21 13:17	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.221 ± 0.116 (0.165) C:79% T:NA	pCi/L	04/05/21 19:39	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.171 ± 0.367 (0.812) C:70% T:85%	pCi/L	04/12/21 11:35	5 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.392 ± 0.483 (0.977)	pCi/L	04/14/21 15:46	7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: HGWC-103 PWS:	Lab ID: 9252 Site ID:	7605012 Collected: 03/18/21 11:53 Sample Type:	Received:	03/19/21 13:40	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.0742 ± 0.0886 (0.181) C:92% T:NA	pCi/L	04/05/21 19:39	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.200 ± 0.389 (0.855) C:68% T:88%	pCi/L	04/12/21 11:35	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.274 ± 0.478 (1.04)	pCi/L	04/14/21 15:46	7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: HGWC-105 PWS:	Lab ID: 9252 Site ID:	7605013 Collected: 03/18/21 12:46 Sample Type:	Received:	03/19/21 13:40 M	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.107 ± 0.0987 (0.187) C:80% T:NA	pCi/L	04/05/21 19:39	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.145 ± 0.367 (0.820) C:70% T:79%	pCi/L	04/12/21 11:35	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.252 ± 0.466 (1.01)	pCi/L	04/14/21 15:46	7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: HGWC-107 PWS:	Lab ID: 9252 Site ID:	7605014 Collected: 03/18/21 18:01 Sample Type:	Received:	03/19/21 13:40 M	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.0611 ± 0.0775 (0.158) C:84% T:NA	pCi/L	04/05/21 19:39	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.0841 ± 0.291 (0.660) C:67% T:94%	pCi/L	04/12/21 11:36	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.145 ± 0.369 (0.818)	pCi/L	04/14/21 15:46	7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: HGWC-118 PWS:	Lab ID: 9252 Site ID:	7605015 Collected: 03/18/21 17:18 Sample Type:	Received:	03/19/21 13:40	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	-0.0147 ± 0.261 (0.660) C:87% T:NA	pCi/L	04/05/21 07:54	13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.323 ± 0.450 (0.966) C:67% T:77%	pCi/L	04/12/21 11:35	15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.323 ± 0.711 (1.63)	pCi/L	04/14/21 15:46	7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: HGWC-118 FILTERED PWS:	Lab ID: 9252 Site ID:	7605016 Collected: 03/18/21 17:18 Sample Type:	Received:	03/19/21 13:40	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 9315	0.0919 ± 0.201 (0.469) C:86% T:NA	pCi/L	04/05/21 07:54	4 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 9320	0.686 ± 0.494 (0.978) C:71% T:83%	pCi/L	04/12/21 11:33	3 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.778 ± 0.695 (1.45)	pCi/L	04/14/21 15:40	6 7440-14-4	



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: HGWC-117 Lab ID: 92527605017 Collected: 03/19/21 11:45 Received: 03/22/21 15:41 Matrix: Water

C:63% T:85%

PWS: Site ID: Sample Type: Act ± Unc (MDC) Carr Trac Units CAS No. **Parameters** Method Analyzed Qual Pace Analytical Services - Greensburg EPA 9315 $0.218 \pm 0.374 \quad (0.848)$ Radium-226 pCi/L 04/09/21 09:15 13982-63-3 C:91% T:NA Pace Analytical Services - Greensburg 0.0846 ± 0.425 (0.968) EPA 9320 Radium-228 pCi/L 04/13/21 11:58 15262-20-1



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Sample: FB-4 Lab ID: 92527605018 Collected: 03/19/21 00:00 Received: 03/22/21 15:41 Matrix: Water

C:61% T:96%

PWS: Site ID: Sample Type:

Act ± Unc (MDC) Carr Trac Units CAS No. **Parameters** Method Analyzed Qual Pace Analytical Services - Greensburg EPA 9315 -0.106 ± 0.257 (0.730) Radium-226 pCi/L 04/09/21 09:15 13982-63-3 C:91% T:NA Pace Analytical Services - Greensburg EPA 9320 0.116 ± 0.380 (0.856) Radium-228 pCi/L 04/13/21 11:58 15262-20-1



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

QC Batch: 440499 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527605006, 92527605007, 92527605008, 92527605009, 92527605010, 92527605011, 92527605012,

92527605013, 92527605014

METHOD BLANK: 2126661 Matrix: Water

Associated Lab Samples: 92527605006, 92527605007, 92527605008, 92527605009, 92527605010, 92527605011, 92527605012,

92527605013, 92527605014

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-226
 0.0900 ± 0.196 (0.458) C:77% T:NA
 pCi/L
 04/05/21 10:10

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



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

QC Batch: 440493 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527605003, 92527605004, 92527605005, 92527605009, 92527605010, 92527605011, 92527605012,

92527605013, 92527605014, 92527605015, 92527605016

METHOD BLANK: 2126652 Matrix: Water

Associated Lab Samples: 92527605003, 92527605004, 92527605005, 92527605009, 92527605010, 92527605011, 92527605012,

92527605013, 92527605014, 92527605015, 92527605016

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-228
 0.217 ± 0.303 (0.649) C:71% T:96%
 pCi/L
 04/12/21 11:35

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



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

QC Batch: 439778

QC Batch Method:

439778 Analysis Method: EPA 9315
EPA 9315 Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527605001, 92527605002

METHOD BLANK: 2123479 Matrix: Water

Associated Lab Samples: 92527605001, 92527605002

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.



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

QC Batch: 441741 Analysis Method: EPA 9320

QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527605017, 92527605018

METHOD BLANK: 2132377 Matrix: Water

Associated Lab Samples: 92527605017, 92527605018

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-228
 0.289 ± 0.424 (0.915) C:67% T:92%
 pCi/L
 04/13/21 11:49

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.



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

QC Batch Method:

QC Batch: 441700

700 Analysis Method:

Analysis Description: 9315 Total Radium

EPA 9315

Laboratory:

Pace Analytical Services - Greensburg

Associated Lab Samples: 92527605017, 92527605018

EPA 9315

METHOD BLANK: 2132278 Matrix: Water

Associated Lab Samples: 92527605017, 92527605018

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-226
 0.405 ± 0.438 (0.924) C:78% T:NA
 pCi/L
 04/09/21 09:15

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.



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

QC Batch: 440500 Analysis Method: EPA 9315

QC Batch Method: EPA 9315 Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527605003, 92527605004, 92527605005, 92527605015, 92527605016

METHOD BLANK: 2126663 Matrix: Water

Associated Lab Samples: 92527605003, 92527605004, 92527605005, 92527605015, 92527605016

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-226
 0.102 ± 0.173 (0.390) C:90% T:NA
 pCi/L
 04/05/21 07:54

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



Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

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: 92527605001, 92527605002, 92527605006, 92527605007, 92527605008

METHOD BLANK: 2126646 Matrix: Water

Associated Lab Samples: 92527605001, 92527605002, 92527605006, 92527605007, 92527605008

 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.



QUALIFIERS

Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

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

Date: 04/15/2021 04:07 PM

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.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Date: 04/15/2021 04:07 PM

ab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytica Batch
2527605001	HGWA-111	EPA 9315	439778	_	
2527605002	HGWA-111 FILTERED	EPA 9315	439778		
2527605003	HGWA-47	EPA 9315	440500		
2527605004	HGWA-48D	EPA 9315	440500		
2527605005	HGWA-112	EPA 9315	440500		
2527605006	HGWA-113	EPA 9315	440499		
2527605007	HGWA-113 FILTERED	EPA 9315	440499		
2527605008	HGWC-101	EPA 9315	440499		
2527605009	HGWC-102	EPA 9315	440499		
2527605010	HGWC-109	EPA 9315	440499		
2527605011	DUP-4	EPA 9315	440499		
2527605012	HGWC-103	EPA 9315	440499		
2527605013	HGWC-105	EPA 9315	440499		
2527605014	HGWC-107	EPA 9315	440499		
2527605015	HGWC-118	EPA 9315	440500		
2527605016	HGWC-118 FILTERED	EPA 9315	440500		
2527605017	HGWC-117	EPA 9315	441700		
2527605018	FB-4	EPA 9315	441700		
2527605001	HGWA-111	EPA 9320	440491		
2527605002	HGWA-111 FILTERED	EPA 9320	440491		
2527605003	HGWA-47	EPA 9320	440493		
2527605004	HGWA-48D	EPA 9320	440493		
2527605005	HGWA-112	EPA 9320	440493		
2527605006	HGWA-113	EPA 9320	440491		
2527605007	HGWA-113 FILTERED	EPA 9320	440491		
2527605008	HGWC-101	EPA 9320	440491		
2527605009	HGWC-102	EPA 9320	440493		
2527605010	HGWC-109	EPA 9320	440493		
2527605011	DUP-4	EPA 9320	440493		
2527605012	HGWC-103	EPA 9320	440493		
2527605013	HGWC-105	EPA 9320	440493		
2527605014	HGWC-107	EPA 9320	440493		
2527605015	HGWC-118	EPA 9320	440493		
2527605016	HGWC-118 FILTERED	EPA 9320	440493		
2527605017	HGWC-117	EPA 9320	441741		
2527605018	FB-4	EPA 9320	441741		
2527605001	HGWA-111	Total Radium Calculation	443120		
2527605002	HGWA-111 FILTERED	Total Radium Calculation	443120		
2527605003	HGWA-47	Total Radium Calculation	443251		
2527605004	HGWA-48D	Total Radium Calculation	443251		
2527605005	HGWA-112	Total Radium Calculation	443251		
2527605006	HGWA-113	Total Radium Calculation	443291		
	HOTTA HO	rotar radium Galculation	770201		



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4 SEMIANNUAL RADS

Pace Project No.: 92527605

Date: 04/15/2021 04:07 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527605008	HGWC-101	Total Radium Calculation	443356		
92527605009	HGWC-102	Total Radium Calculation	443356		
92527605010	HGWC-109	Total Radium Calculation	443356		
92527605011	DUP-4	Total Radium Calculation	443356		
92527605012	HGWC-103	Total Radium Calculation	443356		
92527605013	HGWC-105	Total Radium Calculation	443356		
92527605014	HGWC-107	Total Radium Calculation	443356		
92527605015	HGWC-118	Total Radium Calculation	443356		
92527605016	HGWC-118 FILTERED	Total Radium Calculation	443356		

Pace Analytical*

Document Name:

Sample Condition Upon Receipt(SCUR)

Document Revised: October 28, 2020 Page 1 of 2 Issuing Authority: Pace Carolinas Quality Office

Document No.: F-CAR-CS-033-Rev.07

Asheville Eden Greenwood	Huntersville	Raleigh	Mechanicsville Atlanta Kernersville
Sample Condition Upon Reccipt Courler: Courl	OWEV PS DUSPS	Proje <u></u> Client	W0#:92527605
Commercial Pace	Other:		
istody Seal Present? Yes ANO S	eals Intact? Yes	□No	Date/Initials Person Examining Contents: 2/12/7
cking Material: Bubble Wrap	Bubble Bags Non	e 🔲 Other	Biological Tissue Frozen?
HTR Gun ID: 230	Type of ice:	lWet □Blue	□Yes ₩No □N/A
poler Temp: Correction F Add/Subtra poler Temp Corrected (°C):	at (°C) <u>O_O</u>	<u></u>	Temp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling process
poler Temp Corrected (°C): SDA Regulated Soil (N/A, water sample) d samples originate in a quarantine zone within the	And the second s	C (check maps)?	has begun Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No
and the second of the second o			Comments/Discrepancy;
Chain of Custody Present?	ACTYES []No	□N/A 1.	and the second s
Samples Arrived within Hold Time?	☑Yes □No	□N/A 2.	
Short Hold Time Analysis (<72 hr.)?	Tyes THO	□n/A 3.	
Rush Turn Around Time Requested?	□Yes ☑No	□N/A 4.	
Sufficient Volume?	□Yes □No	□N/A 5.	
Correct Containers Used? -Pace Containers Used?	☐res ☐no ☑res ☐no	□n/a 6. □n/a	
Containers Intact?	∰Tes □No	□n/a 7.	
Dissolved analysis: Samples Field Filtered?	☐Yes ☐No	LIN/A 8.	
-Includes Date/Time/ID/Analysis Matrix:	W		
Headspace in VOA Vials (>5-6mm)?	☐Yes ☐No	⊡ N/A 10	
Trip Blank Present?	Yes No	ØN/A 11	
Trip Blank Custody Seals Present? COMMENTS/SAMPLE DISCREPANCY	Yes No.	ONA L	Field Data Required? Yes No
LIENT NOTIFICATION/RESOLUTION			ot ID of split containers:
And the second s		wicznochack Mad wat roak fibrioa toc rokulorowa	
Person contacted:		Date/Time:	
Project Manager SCURF Review:	and the second s		Date:
Project Manager SRF Review:		er en skriver en en en en en en en en en en en en en	Date:

Pace Analytical

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

Page 40 of 58

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6.2.700 A.700	erenamen	one on a contract of		in uni	App III & IV Metals = As	note dry wells, sir en the last sampl	ALLO	pa ana	1. sure			A. A			1	#Row #	A.C.Y.			2	SAM (A-22 Sample IDs I	Required Client Into	Section D	· »	Requested Due Date/TAT:	V	SCS		Atlanta, GA	GA Power	Section A Required Client Information:
					As. Ba. Be: B, Cd, Ca. Cr. Co, Ph. Li	Please note dry wells, shike thorugh any wells not sampled, and note when the last sample for the event has been taken.	ADDITIONAL COMMENTS	HGWC-117	HGWC-109	HGWC-107	HGWC-105	HGWC-103	HGWC-102	HGWC-101	HGWA-113	THE HEAVEN THE	HGWA-111	HGWA-48D		- TOWART	SAMPLE ID ARE AND THE RESIDENCE TO THE RESIDENCE TO THE RESIDENCE THE RE	ormation MATRIX	V		: 10 Day	Fax	Contacts		¥	**	æ
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F-ALL-Q-020rev.07, 15-Feb-2007

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

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

Quality Control Sample Performance Assessment

Pace Analytical

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment

MS/MSD 2

MS/MSD

Sample I.D. Sample MS I.D. Sample MSD I.D.

Spike I.D.

Sample Collection Date:

MSAMSD Decay Corrected Spike Concentration (pCVmL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL):

MSD Target Conc. (pCi/L, g, F):

MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):

Sample Result

Sample Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Result: Matrix Spike Result Counting Uncertainty (pC/L, g, F): Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): MS Numerical Performance Indicator:

MSD Numerical Performance Indicator

Sample Matrix Spike Duplicate Result

MS Aliquot (L. g. F): MS Target Conc.(pCi/L, g, F):

CLA 3/26/2021 59452 DW Test: Analyst: Date: Worklist: Matrix:

Method Blank Assessment	
MB Sample ID	2123479
MB concentration;	0.059
M/B Counting Uncertainty:	0.097
MB MDC:	0,215
M8 Numerical Performance Indicator.	1.19
MB Status vs Numerical Indicator.	A/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	CSD (Y or N)?	Ϋ́
	LCS59452	LCSD59452
Count Date:	3/29/2021	3/29/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039	24.039
Volume Used (mL):	0.10	0.10
Aiquot Volume (L, g, F):	0.506	0.508
Target Conc. (pCi/L, g, F):	4.749	4.731
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	4.865	4.528
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.699	0.629
Numerical Performance Indicator.	0.32	69.63
Percent Recovery:	102.45%	95.71%
Status vs Numerical Indicator:	ΥN	¥
Status vs Recovery.	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

MS Percent Recovery:
MSD Percent Recovery:
MS Status vs Numerical Indicator:
MSD Status vs Numerical Indicator:

MS Stafus vs Recovery: MSD Stafus vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:

Duplicate Sample Assessment		
Sample I.D.:	LCS59452	Enter Duplicate
Duplicate Sample I.D.	LCSD59452	sample IDs if
Sample Result (pCVL, g, F):	4.865	other than
Sample Result Counting Uncertainty (pCi/L, g, F):	0.699	LCS/LCSD in
Sample Duplicate Result (pCi/L, g, F):	4.528	the space below.
Sample Duplicate Result Counting Uncertainty (pCirl., g, F):	0.629	
Are sample and/or duplicate results below RL?	2	•
Duplicate Numerical Performance Indicator:	0.702	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	6.79%	
Duplicate Status vs Numerical Indicator:	A/N	
Duplicate Status vs RPD:	Pass	
% RPD Limit	25%	

fatrix Spike/Matrix Spike D					Matrix Spike Res		Matrix Spike Duplicate Res	Duplic	(Based on the Percent F	MS/ MSD DI		
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 (pCirl., 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 Recovenes) MS/ MSD Duplicate RPD:	MS/ MSD Duplicate Status vs Numerical Indicator:	MS/ MSD Duplicate Status vs RPD:	-timi: COO X

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

Comments:

13/05/21

TAR_59452_Wxls Total Alpha Radium (R104-3 11Feb2019).xls

Face Analytical"

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Ra-226 CLA 3/26/2021 59452 DW Test: Analyst: Date: Worklist: Matrix:

2123479 0.059 0.097 0.215 1.19 N/A M/B counting Uncertainty: M/B MDC: MB Numerical Performance Indicator. MB Sample ID MB Status vs Numerical Indicator MB Status vs. MDC Method Blank Assessment

MID STATUS VS. MID.C.	CES.	
Laboratory Control Sample Assessment	LCSD (Y or N)?	z
	LCS59452	LCSD59452
Count Date:	3/29/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.039	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.506	
Target Conc. (pCi/L, g, F):	4.749	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	4.865	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.699	
Numerical Performance Indicator:	0.32	
Percent Recovery:	102.45%	
Status vs Numerical Indicator:	¥	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

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

Duplicate Sample Assessment			Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.:	Sample I.D.: 92527605002 Enter Duplicate	Enter Duplicate	Sample
Duplicate Sample I.D. 92527605002DUP sample IDs if	92527605002DUP	sample IDs if	Sample MS
Sample Result (pCi/L, g, F);	0.055	other than	Sample MSE
Sample Result Counting Uncertainty (pCi/L, g, F):	0.100	LCS/LCSD in	Sample Matrix Spike Re
Sample Duplicate Result (pCi/L, g, F):	0.097	the space below.	Matrix Spike Result Counting Uncertainty (pCi/L, g
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.161		Sample Matrix Spike Duplicate Re
Are sample and/or duplicate results below RL? See Below ##	See Below #		 Matrix Spike Dupficate Result Counting Uncertainty (pCi/L, q

Sample I.D. Sample MS I.D. Sample MSD I.D.

Sample Matrix Spike Result:

Matrix Spike Result Counting Uncertainty (pCi/l., g, F): Sample Matrix Spike Duplicate Result. Matrix Spike Duplicate Result Counting Uncertainty (pCi/l., g. F):

Duplicate Numerical Performance Indicator:

(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:

92527605002 92527605002DUP		Duplicate Numerical Performance Indicator: Duplicate Status vs Numerical Indicator: Duplicate Status vs RPD: Duplicate Status vs RPD: A DUPLICATION INTERPLET
	0.161 See Below ##	ate Result Counting Uncertainty (pCi/L, g, F):
the space below.	0.097	Sample Duplicate Result (pCi/L, g, F):
LCS/LCSD in	0.100	ple Result Counting Uncertainty (pCi/L, g, F):
other than	0.055	Sample Result (pCi/L, g, F):
sample IDs if	92527605002DUP	Duplicate Sample I.D. 92527605002DUP
Enter Duplicate	92527605002	Sample I.D.:

palosis mi "Batch must be Terprepped due to unangeptable praction." N/A GAM 3/30121

Evaluation of duplicate precision is not applicable if either the sample or duplicate results a(e below the MDC).

Comments:

MS/ MSD Duplicate Status vs Numerical Indicator: MS/ MSD Duplicate Status vs RPD: % RPD Limit;

VAM3/30/21

TAR_59452_W.xls Total Alpha Radium (R104-3 11Feb2019).xls

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Quality Control Sample Performance Assessment

Ra-226 CLA 4/8/2021 59702 DW Test Analyst: Date: Worklist: Matríx:

MS/MSD 2

MS/MSD

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) MSD Target Conc. (pCifl., g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):

MS Target Conc.(pCi/L, g, F): MSD Aliquot (L, g, F):

MS Aliquot (L, g, F)

Sample Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Result:

Sample 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

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment Sample Collection Date:

2132278 0.405 0.434 0.924 1.83 N/A MB Sample ID MB concentration: MB Numericel Performance Indicator: MB Status vs Numerical Indicator: MB Status vs. MDC: MB MDC Method Blank Assessment

LCSD (Y or N)? Y	159702 LCSD59702	12021 4/9/2021	H033 19-033	.039 24.039	0.10	The second secon	501 0.505				-	-	:	-		
1 :(1:00)	_		19-033	24.039	0.10		0.501	0.501	0.501 4.798 0.058	0.501 4.798 0.058 5.290	0.501 4.798 0.058 5.290 0.865	0.501 4.798 0.058 5.290 0.865				· · · · · · · · · · · · · · · · · · ·
	LCS59702	4/9/2021	19-033	24.039	0.10		0.501	0.501 4.798	0.501 4.798 0.058	0.501 4.798 0.058 5.290	0.501 4.798 0.058 5.290 0.865	0.501 4.798 0.058 5.290 0.865	0.501 4.798 0.058 5.290 0.865 1.11	0.501 4.798 0.058 5.290 0.865 1.11 110.27% N/A	0.501 4.798 0.058 5.290 0.865 1.11 110.27% N/A Pass	0.501 4.798 0.058 5.290 0.865 1.11 110.27% NA Pass 125%
1S31		Count Date:	Spike I.D.:	(pCi/mL):	Ised (mL):		e (L. g. F):	e (L.g. F): Ci/L.g. F):	e (L, g, F): Ci/L, g, F): alculated):	e (L, g, F): Ci/L, g, F): alculated): Ci/L, g, F):	e (L, g, F); Ci/L, g, F); alculated); Ci/L, g, F); Ci/L, g, F);	e (L, g, F); C/L, g, F); alculated); C/L, g, F); c/L, g, F);	e (L, g, F); Ci/L, g, F); alculated); Ci/L, g, F); Ci/L, g, F); s Indicator; Recovery;	e (L, g, F); Ci/L, g, F); alculated); Ci/L, g, F); Ci/L, g, F); s Indicator; Recovery;	e (L, g, F); C)(L, g, F); alculated); C)(L, g, F); C)(L, g, F); e indicator: Recovery; Recovery;	e (L, g, F): Coll., g, F): Coll., g, F): Coll., g, F): Coll., g, F): Indicator: Recovery: Recovery: Recovery: Recovery: Recovery:
		Cour	Spi	Decay Corrected Spike Concentration (pCi/mL):	Volume Used (mL):		Aliquot Volume (L, g, F):	Aliquot Volume (L, g, F): Target Conc. (pCi/L, g, F):	Aliquot Volume (L, g, F): arget Conc. (pCi/L, g, F): Jncertainty (Calculated):	rt Volume (L Sonc. (pCi/L rainty (Calcu tesuit (pCi/L	Aliquot Volume (L, g, F): Target Conc. (pCi/L, g, F): Uncertainty (Calculada): Result (pCi/L, g, F): LCS/LCSD Counting Uncertainty (pCi/L, g, F):	Aliquot Volume (L, g, F): Target Conc. (pCl/L, g, F): Uncertainty (Calculated): Result (pCl/L, g, F): Counting Uncertainty (pCl/L, g, F): Numerical Performance Indicator:	ot Volume (L, g, F); Conc. (pCi/L, g, F); Tainty (Calculated); Result (pCi/L, g, F); Tainty (pCi/L, g, F); Tainty (pCi/L, g, F); Perrent Recovery;	Aliquot Volume (L, g, F): Target Conc. (pci/L, g, F): Uncertainty (cci/L, g, F): nting Uncertainty (pci/L, g, F): merical Performance Indicator: Percent Recovery: Status vs Numenical indicator.	oot Volume (L, g, F): rConc. (pCi/L, g, F): stainty (calculated): ertainty (pCi/L, g, F): ertainty (pCi/L, g, F): rformance Indicator: Percent Recovery. Numerical Indicator: Status vs Recovery.	Aliquot Volume (L, g, F): Target Conc. (pc)(L, g, F): Uncertainty (pc)(L, g, F): Result (pc)(L, g, F): Juncertainty (pc)(L, g, F): Percent Recovery: Us vs Numerical indicator: Status vs Recovery: Upper % Recovery: Upper % Recovery:
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Laboratory Control Sample Assessment				cted Spik				·	·	ſ	Counting	Counting Numeric	, Counting Numeric	Counting Numeric Stat	Counting Numeric State	Counting Numeric Statt
nple Ass				у Сотес							S/LCSD	S/LCSD	S/LCSD	S/LCSD	S/LCSD	S/LCSD
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ory Con																
aborate																

Duplicate Sample Assessment		
Sample I.D.;	LCS59702	Enter Duplicate
Duplicate Sample I.D.	LCSD59702	sample IDs if
Sample Result (pCi/l, g, F):	5.290	other than
Sample Result Counting Uncertainty (pCi/L, g, F):	0.865	LCS/LCSD in
Sample Duplicate Result (pCi/L, g, F):	4.898	the space below.
Sample Ouplicate Result Counting Uncertainty (pCi/L, g, F):	0.840	
Are sample and/or duplicate results below RL?	2	
Duplicate Numerical Performance Indicator:	0.638	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	9:30%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit	25%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment Sample NS: Sample MS: Sample MSD: Sample MASD: Matrix Spike Result Counting Uncertainty (pCift., g. F): Sample Matrix Spike Duplicate Result Matrix Spike Duplicate Result Counting Uncertainty (pCift., 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:
ಇಬ್ಲ ಇದು ಇದು ಬ್ರಕ್ತ ಬಿಡ∷

MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:

MSD Status vs Recovery

MS Status vs Recovery

MS Status vs Numerical Indicator. MSD Status vs Numerical Indicator.

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

Comments:



12/21/hw47

TAR_59702_W.xls Total Alpha Radium (R104-3 11Feb2019).xls

Assessment	
Performance	
ntrol Sample	
Quality Co	

Ra-226

Test:

Face Analytical"

Analyst Must Manually Enter All Fields Highlighted in Yellow.

MS/MSD 2

MS/MSD ·

Analyst:	SP	9,	Sample Matrix Spike Control Assessment
Date:	4/8/2021		Sample Collection Date:
Worklist	59702		Sample I.D.
Matrix:	MO	•	Sample MS I.D.
		•	Sample MSD I.D.
Method Blank Assessment			Spike 1.D.:
MB Sample iD	2132278		MS/MSD Decay Corrected Spike Concentration (pCi/mL):
MB concentration:	0.405		Spike Volume Used in MS (miL):
M/B Counting Uncertainty:	0.434		Spike Volume Used in MSD (mL):
MB MDC:	0.924		MS Aliquot (L, g, F):
MB Numerical Performance Indicator:	1.83		MS Target Conc.(pCi/L, g, F):
MB Status vs Numerical Indicator.	Ϋ́N		MSD Alignot (L. g. F):
MB Status vs. MDC:	Pass		MSD Target Conc. (pCi/l, g, F):
			MS Spike Uncertainty (calculated):
Laboratory Control Sample Assessment	LCSD (Y or N)?	z	MSD Spike Uncertainty (calculated):

			ing object of the constant of
Introl Sample Assessment	LCSD (Yor N)?	2	MSD Spike Uncertainty (calculated):
	LCS59702	LCSD59702	Sample Result:
Count Date:	4/9/2021		Sample Result Counting Uncertainty (pCi/L, g, F):
Spike I.D.:	19-033		Sample Matrix Spike Result:
Decay Corrected Spike Concentration (pCi/mL):	24.039		Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Volume Used (mL):	0.10		Sample Matrix Spike Duplicate Result:
Aliquot Volume (L, g, F):	0.501		Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Target Conc. (pCi/L, g, F):	4.798		MS Numerical Performance Indicator:
Uncertainty (Calculated):	0.058		MSD Numerical Performance Indicator.
Result (pCi/L, g, F):	5.290		MS Percent Recovery:
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.865		MSD Percent Recovery:
Numerical Performance Indicator:	7.7		MS Status vs Numerical Indicator:
Percent Recovery:	110.27%		MSD Status vs Numerical Indicator:
Status vs Numerical Indicator:	ΑΝ		MS Status vs Recovery:
Status vs Recovery:	Pass		MSD Status vs Recovery:
Upper % Recovery Limits:	125%		MS/MSD Upper % Recovery Limits:
Lower % Recovery Limits:	75%		MS/MSD Lower % Recovery Limits:

Duplicate Sample Assessment			Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.:	Sample I.D.: 92527605017 Enter Duplicate	Enter Duplicate	Sample I.D.
Duplicate Sample I.D. 92527605017DUP sample IDs if	92527605017DUP	sample IDs if	Sample MS I.D.
Sample Result (pCi/L, g, F):	0.218	other than	Sample MSD I.D.
Sample Result Counting Uncertainty (pCi/L, g, F):	0.373	rcs/rcsp in	Sample Matrix Spike Result:
Sample Duplicate Result (pCi/L, g, F):	0.317	the space below.	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.380		Sample Matrix Spike Duplicate Result:
Are sample and/or duplicate results below RL?	See Below 推		Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Duplicate Numerical Performance Indicator:	-0.365	92527605017	Duplicate Numericel Performance Indicator:
Duplicate RPD:	37.04%	92527605017DUP	(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:
Duplicate Status vs Numerical Indicator:	ΝΆ		MS/ MSD Duplicate Status vs Numerical Indicator:
Duplicate Status vs RPD:	Fail***		MS/ MSD Duplicate Status vs RPD:
% RPD Limit:	72%	_	% RPD Limit:

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

Comments:

Batt.

seepteble-precision. N/A 4/12/21

90/3

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TAR_59702_W.xls Total Alpha Radium (R104-3 11Feb2019).xls

1 of 1

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Pace Analytical

Quality Control Sample Performance Assessment

Ra-226 Test

Analyst Must Manually Enter All Fields Highlighted in Yellow.

_	Pass	MB Status vs. MDC;
	Z /A	MB Status vs Numerical Indicator:
	1.16	MB Numerical Performanca Indicator.
	0.390	MB MDC;
igS	0.172	M/B Counting Uncertainty:
8	0.102	MB concentration:
MS/MSD Decay Corrected	2126663	MB Sample ID
		Method Blank Assessment
	DW	Matrix:
	59561	Worklist
	4/1/2021	Date:
Sample Matrix Spike Control Asse	₹	Analyst:

	Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD
	Sample Collection Date:		
	Sample I.D.		-
	Sample MS I.D.		
	Sample MSD I.D.		
	Spike I.D.:		
	MS/MSD Decay Corrected Spike Concantration (pCi/mL):		
	Spike Volume Used in MS (mL):		
	Spike Volume Used in MSD (mL):		
	MS Aliquot (L. g. F):		
	MS Target Conc.(pCi/L, g, F):		
	MSD Aliquot (L, g, F):		
	MSD Target Conc. (pCi/L, g, F):		
	MS Spike Uncertainty (calculated):		
Υ.	MSD Spike Uncertainty (calculated):		
CSD59561	Sample Result:		
4/5/2021	Sample Result Counting Uncartainty (pCiVL, g, F):		
19-033	Sample Matrix Spike Result:		
24.039	Matrix Spike Result Counting Uncertainty (pCVL, g, F).		
0.10	Sample Matrix Spike Duplicate Result:		
0.502	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
4.785	MS Numerical Performance Indicator:		
0.057	MSD Numerical Performance Indicator:		
4.762	MS Percent Recovery:		
0.617	MSD Percent Recovery:		
-0.07	MS Status vs Numerical Indicator:		
99.51%	MSD Status vs Numerical Indicator:		
NA AN	MS Status vs Recovery:		
Pass	MSD Status vs Recovery:		
125%	MS/MSD Upper % Recovery Limits:		
75%	MS/MSD Lower % Recovery Limits:		

Laboratory Control Sample Assessment	CSD (Y or N)?	, ¥
	LCS59561	LCSD59561
Count Date:	4/5/2021	4/5/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039	24.039
Volume Used (mL.):	0.10	0.10
Aliquot Volume (L, g, F):	0.515	0.502
Target Conc. (pCi/L, g, F):	4.664	4.785
Uncertainty (Calculated):	0.056	0.057
Result (pCi/L, g, F):	4.047	4.762
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.578	0.617
Numerical Performance Indicator:	-2.08	-0.07
Percent Recovery:	86.77%	99.51%
Status vs Numerical Indicator:	ΑN	NA
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Matrix Spike/Matrix Spike Duplicate Sample Assessment	Sample I.D.: LCS59561 Enter Duplicate	Duplicate Sample 1.D. LCSD59561 sample IDs if	Sample Result (pCi/L, g, F): 4.047 other than	Sample Result Counting Uncertainty (pCt/L, g, F): 0.578 LCS/LCSD in	Sample Duplicate Result (pCi/L, g, F): 4.762 the space below. Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	: 0.617	Are sample and/or duplicate results below RL? NO Matrix Spike Duplicate Result Counting Uncertainty (pCiVL, q. F):	-1.655	(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: 13.67% (Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	Duplicate Status vs Numerical Indicator: N/A N/A NAS Numerical Indicator	Duplicate Status vs RPD: Pass	% RPD Limit: 25%
		<u>ದ</u>	Sample	Result Counting Unce	Sample Duplicate	Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	ample and/or duplicat	uplicate Numerical Per	CSD Percent Recover	Duplicate Status vs I	Duplic	

Evaluation of duplicete 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.

Ra-226

Test: Date: Worklist: Matrix:

Analyst:

59560 DW

MS/MSD 2 MS/MSD 1 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): MS Target Conc.(pCi/L, g, F): MSD Aliquot (L. g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): Matrix Spike Duplicate Result Counting Uncertainty (pCif., g. F):
MS Numerical Performance Indicator: Spike I.D. Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): Sample Result Counting Uncertainty (pCi/L, g, F): Matrix Spike Result Counting Uncertainty (pCi/L, q, F): Sample Matrix Spike Duplicate Result: MSD Spike Uncertainty (calculated) Sample Result Sample Matrix Spike Result Sample Matrix Spike Control Assessment LAL 4/5/2021

0.090 0.196 0.458 0.90 N/A Pass

M/B Counting Uncertainty: MB MDC:

MB Sample ID MB concentration:

Method Blank Assessment

MB Numerical Performance Indicator: MB Status vs Numerical Indicator: MB Status vs. MDC:

	LCSD (Y or N)? LCS59560	N LCSD59560
Count Date:	4/5/2021	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.039	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F);	0.504	
Target Conc. (pCi/L, g, F):	4.771	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	5.065	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.277	
Numerical Performance Indicator:	2.04	
Percent Recovery:	106.17%	
Status vs Numerical Indicator:	A/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

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

	0	<u>-</u>	<u>.</u>	ij	ä	Ħ	Ë	ŢŌ.	ë	ţ	ä	ij
Matrix Spike/Matrix Spike Duplicate Sample Assessment	Sample I.D.	Sample MS I.D.	Sample MSD I.D.	Sample Matrix Spike Result:	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Duplicate Numerical Performance Indicator.	(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	MS/ MSD Duplicate Status vs Numerical Indicator:	MS/ MSD Duplicate Status vs RPD:	% RPD Limit
	Enter Duplicate	sample iDs if	other than	LCS/LCSD in	the space below.			92527258011	32527258011DUP		•	/
	Sample I.D.: 92527258011 Enter Duplicate	92527258011DUP	0.015	0.075	0:020	0.058	See Below 排	-1.338	375.86%	N/A	Fail**	25%
Duplicate Sample Assessment	Sample I.D.:	Duplicate Sample 1.D. 92527258011DUP sample 1Ds i	Sample Result (pCi/L, g, F):	Sample Result Counting Uncertainty (pCi/L, g, F):	Sample Duplicate Result (pCi/L, g, F):	Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	Are sample and/or duplicate results below RL?	Duplicate Numerical Performance Indicator:	Duplicate RPD:	Duplicate Status vs Numerical Indicator:	Duplicate Status vs RPD:	% RPD Limit:

MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:

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

Comments:

*** Bakch must be re-prepagadus to orango: spring precision: 10/18 UAM 4 12/2/



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TAR_59560_W.xls Total Alpha Radium (R104-3 11Feb2019).xls

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment

MS/MSD 2

MS/MSD 1

Sample Collection Date:

Pace Analytical"

Ra-226 LAL 4/5/2021 59560 DW 2126661 0.090 0.196 0.458 0.90 N/A Pass Test: Analyst: Date: Worklist: Matrix: MB Sample ID MB concentration: M/B Counting Uncertainty: MB MDC: MB Numerical Performance Indicator: MB Status vs Numerical Indicator: MB Status vs. MDC: Method Blank Assessment

. :																											
Sample I,D. Sample MS I,D.	Sample MSD i.D.	Spike I.D.:	MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike Volume Used in MS (mL):	Spike Volume Used in MSD (mL):	MS Aliquot (L, g, F):	MS Target Conc.(pCi/L, g, F):	MSD Aliquot (L, g, F);	MSD Target Conc. (pCi/L, g, F):	MS Spike Uncertainty (calculated):	MSD Spike Uncertainty (calculated):	Sample Result:	Sample Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Result:	Matrix Spike Result Counting Uncertainty (pCl/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:
											Υ	CSD59560	4/5/2021	19-033	24.039	0.0	0.518	1.641	0.056	4.810	0.261	1.24	103.65%	A/N	Pass	125%	75%

Σ	Matr
Y LCSD8360 4/5/2021 19-033 24.039 0.10 0.518 4.810 0.056 4.810 0.261 1.24 103.65% NA Pass 125% 75%	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
LCSS0 (Y or N)? LCSS950 46/2021 46/2021 24.039 24.039 0.10 0.504 4.771 0.057 5.065 0.277 2.04 106.17% NA Pass 125% 75%	LCS59560 LCSD55560 5.065 0.277 4.810 0.261 NO 1.314 2.40% NA Pass
Laboratory Control Sample Assessment Count Date: Spike 1.D.: Spike 1.D.: Nolume Used (mL): Aliquot Volume (L. 9, F): Target Conc. (pCi/L. 9, F): Uncertainty (Calculated): Result (pCi/L. 9, F): LCS/LCSD Counting Uncertainty (pCi/L. 9, F): Numerical Performance Indicator: Status vs Numerical Indicator: Status vs Numerical Indicator: Status vs Recovery: Upper % Recovery: Lints: Lower % Recovery: Lints: Lower % Recovery: Lints: Lower % Recovery: Lints: Lower % Recovery: Lints: Lower % Recovery: Lints: Lower % Recovery Lints: Lower % Recovery Lints: Lower % Recovery Lints:	Sample Assessment Sample LD.: Bample Result (Counting Uncertainty (CCIL. 9, F): Sample Duplicate Result (COLIL, 9, F): Sample Duplicate Result (COLIL, 9, F): Sample Duplicate Result (COLIL, 9, F): Are sample and/or duplicate results below RL? Duplicate Numerical Performance Indicator: (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: Duplicate Status vs Numerical indicator: Duplicate Status vs RPD: Duplicate Status vs RPD: Outlicate Status vs RPD: RRD: R

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

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

Comments:



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TAR_59560_W.xls Total Alpha Radium (R104-3 11Feb2019).xls

Quality Control Sample Performance Assessment

VAL 4/6/2021 Ra-228 59552 WT Analyst: Date: Test Worklist: Matrix:

MS/MSD 2

MS/MSD 1

Sample I.D. Sample MS I.D. Sample MSD I.D.

Spike I.D.

Sample Collection Date:

MS/MSD Decay Corrected Spike Concentration (pCl/mL):
Spike Volume Used in MS (mL):
Spike Volume Used in MSD (mL):

MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F):

MS Aliquot (L. g, F): MS Target Conc.(pCi/L, g, F):

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Sample Matrix Spike Control Assessment

2126646 0.826 0.447 0.791 3.62 Fail* MB concentration: M/B 2 Sigma CSU: MB MDC: MB Sampte iD MB Numerical Performance Indicator: MB Status vs Numerical Indicator: MB Status vs. MDC: Method Blank Assessment

			MS Spike Uncertainty (calculated):
rol Sample Assessment	LCSD (Y or N)?	¥	MSD Spike Uncertainty (calculated):
	LC\$59552	LCSD59552	Sample Result:
Count Date:	4/9/2021	4/9/2021	Sample Result 2 Sigma CSU (pCi/L, g, F):
Spike I.D.:	21-003	21-003	Sample Matrix Spike Result:
Decay Corrected Spike Concentration (pCi/mt.):	38.140	38.140	Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):
Volume Used (mL):	0.10	0.10	Sample Matrix Spike Duplicate Result:
Aliquot Volume (L, g, F):	0.803	0.815	Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):
Target Conc. (pCi/L, g, F):	4.752	4.682	MS Numerical Performance Indicator:
Uncertainty (Calculated):	0.233	0.229	MSD Numerical Performance Indicator:
Result (pCi/L, g, F):	4.576	4.583	MS Percent Recovery:
LCS/LCSD 2 Sigma CSU (pCi/l, g, F):	1.088	1.068	MSD Percent Recovery:
Numerical Performance Indicator;	-0.31	-0.18	MS Status vs Numerical Indicator.
Percent Recovery:	96.30%	94.88%	MSD Status vs Numerical Indicator:
Status vs Numerical Indicator:	N/A	¥	MS Status vs Recovery:
Status vs Recovery:	Pass	Pass	MSD Status vs Recovery:
Upper % Recovery Limits:	135%	135%	MS/MSD Upper % Recovery Limits:
Lower % Recovery Limits:	60%	%09	MS/MSD Lower % Recovery Limits:

Laboratory Control Sample Assessment

mple Assessment			Matrix
Sample I.D.:	LCS59552	Enter Dublicate	
Duplicate Sample I.D.	LCSD59552	sample IDs if	
Sample Result (pCi/L, g, F):	4.576	other than	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.088	LCS/LCSD in	
Sample Duplicate Result (pCi/L, g, F):	4.583	the space below.	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F);	1,068		
Are sample and/or duplicate results below RL?	S.		
Duplicate Numerical Performance Indicator:	-0.008		
the LCS/LCSD Percent Recoveries) Duplicate RPD:	1.62%		_
Duplicate Status vs Numerical Indicator:	Pass		
Duplicate Status vs RPD:	Pass		
% RPD Limit	36%		

Duplicate Sample Assessment

(Based on the LCS/LCSD Percen

Matrix Spike/Matrix Spike Duplicate Sample Assessment	Sample I.D. Sample MS I.D. Sample MS I.D. Sample MS I.D. Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCiJL, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCiJL, 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: MS/ MSD Duplicate Status vs RPD:

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.



Ra-228_59552_W Ra-228 (R086-8 04Sep2019).xls

Assessment
Performance
ntrol Sample
Quality Con

Face Analytical

4/6/2021 59554 WT ₹ Test Worklist: Matrix: Date: Analyst

Sample Matrix Spike Control Assessment

MS/MSD 2

MS/MSD 1

Sample I.D. Sample MS I.D. Sample MSD 1.D. Spike I.D.:

Sample Collection Date

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):

Analyst Must Manually Enter All Fields Highlighted in Yellow.

2126652 0,217 0.303 0.649 1.40 Pass Pass M/B 2 Sigma CSU: MB MDC: MB Sample ID MB Numerical Performance Indicator. MB concentration: MB Status vs Numerical Indicator: MB Status vs. MDC:

Method Blank Assessment

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): MSD Percent Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits: MS Spike Uncertainty (calculated) Sample Result MSD Numerical Performance Indicator MS Percent Recovery MS Status vs Recovery MSD Status vs Recovery MS Numerical Performance Indicator MSD Status vs Numerical Indicator MS Status vs Numerical indicator 0.10 0.823 4.631 0.227 4.143 0.989 -0.94 89.47% 4/12/2021 21-003 38.103 N/A Pass 135% 60%

1.84 126.87%

N/A Pass 135% 60%

Upper % Recovery Limits: Lower % Recovery Limits:

Duplicate Sample Assessment

1.319

LCS/LCSD 2 Sigma CSU (pCi/L, g, F):

Numerical Performance Indicator

Percent Recovery Status vs Numerical Indicator Status vs Recovery

5,932

21-003 38.104 0.10 0.815 4.675 0.229

Spike I.D.

Decay Corrected Spike Concentration (pCi/mL)

Laboratory Control Sample Assessment

Aliquot Volume (L, g, F): Target Conc. (pCi/L, g, F):

Volume Used (mL)

Uncertainty (Catculated):

Result (pCi/L, g, F)

Matrix Spike/Matrix Spike Duplicate Sample Assessment Enter Duplicate sample IDs if LCS/LCSD in he space belov other than LCS59554 LCSD59554 2.127 34.58% Warning Pass 36% 4,143 1.319 9 Sample Result 2 Sigma CSU (pCl/L, g, F): Sample Duplicate Result (pCl/L, g, F): Sample I.D.: Duplicata Sample I.D. Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F): Are sample and/or duplicate results below RL? Duplicate Numerical Performance Indicator: (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD: Sample Result (pCi/L, g, F): Duplicate Status vs Numerical Indicator:

Matrix Spike Duplicate Result 2 Sigma CSU (pCl/L, g, F):
Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD: Sample Matrix Spike Duplicate Result: MS/ MSD Duplicate Status vs Numerical Indicator: MS/ MSD Duplicate Status vs RPD: RPD Limit:

Sample I.D. Sample MS I.D. Sample MSD I.D.

Sample Matrix Spike Result:

Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):

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

Duplicate Status vs RPD: % RPD Limit

Comments:

Quality Control Sample Performance Assessment

VAL 4/8/2021 59742 WT Analyst: Date: Worklist Matrix:

Analyst Must Manually Enter All Fields Highlighted in Yellow.

	Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
	Sample Collection Date:		
	Sample I.D. Sample MS I.D.		
	Sample MSD I.D.		
	Spike I.D.:		
	MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
	Spike Volume Used in MS (mt.):		
	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):		
Υ	MSD Spike Uncertainty (calculated):		
LCSD59742	Sample Result:		
4/13/2021	Sample Result 2 Sigma CSU (pCi/L, g, F):		
21-003	Sample Matrix Spike Result:		
38.091	Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
0.10	Sample Matrix Spike Duplicate Result:		
0.814	Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
4.678	MS Numerical Performance Indicator:		
0.229	MSD Numerical Performance Indicator:		
4.425	MS Percent Recovery:		
1.017	MSD Percent Recovery:		
-0.48	MS Status vs Numerical Indicator:	_	
94.58%	MSD Status vs Numerical Indicator:		
¥ Ž	MS Status vs Recovery:		
Pass	MSD Status vs Recovery:		
135%	MSMSD Upper % Recovery Limits:		
%09	MS/MSD Lower % Recovery Limits:		

CS59742 4/13/2021 21-003 38.091 0.10

Count Date:

Laboratory Control Sample Assessment

Spike I.D.:
Decay Corrected Spike Concentration (pCi/mL):
Volume Used (mL):
Aliquot Volume (I. g. F):
Target Conc. (pCi/L, g. F):

2132377 0.289 0.424 0.915 1.33 Pass Pass

MB Numerical Performance Indicator. MB Status vs Numerical Indicator. MB Status vs. MDC:

MB Sample ID MB concentration: MB 2 Sigma CSU: MB MDC:

Method Blank Assessment

0.814 4.681 0.229 4.140 0.980 -1.05

Result (pCi/L, g, F): LCS/LCSD 2 Sigma CSU (pCi/L, g, F): Numerical Performance Indicator;

Uncertainty (Calculated):

¥

Percent Recovery:

Status vs Numerical Indicator: Status vs Recovery:

Upper % Recovery Limits: Lower % Recovery Limits:

Duplicate Sample Assessment

Matrix Spike/Matrix Spike Duplicate Sample Assessment	Sample LD.	Sample MS 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:
	Enter Duplicate	sample IDs if	LCS/LCSD in	the space below.							

_CSD59742

Duplicate Sample I.D.
Sample Result (pCi/L, g, F):
Sample Result 2 Signa CSU (pCi/L, g, F):
Sample Duplicate Result (pCi/L, g, F):
Sample Duplicate Result Signa CSU (pCi/L, g, F):
Are sample and/or duplicate results below RL?

Duplicate Numerical Performance Indicator: (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:

LCS59742

Sample I.D.:

Matrix Spike Result 2 Sigma CSL	Sample Matrix Spike Du	Matrix Spike Duplicate Result 2 Sigma CSL	Duplicate Numerical Performs	(Based on the Percent Recovenes) MS/ MSD D	MS/ MSD Duplicate Status vs Nume	MS/ MSD Duplicate S		в МDС.	2	>	 نسد	
the space below.								esults are below th				
4.425	1.017	9	-0.396	6.72%	Pass	Pass	36%	nple or duplicate r				
Sample Duplicate Result (pCi/L, g, F):	uplicate Result 2 Sigma CSU (pCi/L, g, F):	sample and/or duplicate results below RL?	uplicate Numerical Performance Indicator.	.CSD Percent Recoveries) Duplicate RPD:	Duplicate Status vs Numerical Indicator:	Duplicate Status vs RPD:	% RPD Limit:	rate precision is not applicable if either the sample or duplicate results are below the MDC.				

Evaluation of duplicate pred

Comments:

Ra-228 NELAC DW2 Printed; 4/13/2021 3:12 PM

1 of 1

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June 2021





June 28, 2021

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

RE: Project: HAMMOND AP-4

Pace Project No.: 92546094

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on June 24, 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

Ken Lung

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.





CERTIFICATIONS

Project: HAMMOND AP-4

Pace Project No.: 92546094

Pace Analytical Services Charlotte

9800 Kincey Ave. Ste 100, Huntersville, NC 28078 Louisiana/NELAP Certification # LA170028 North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342 North Carolina Wastewater Certification #: 12

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804 Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

Pace Analytical Services Peachtree Corners

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

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

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

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



SAMPLE SUMMARY

Project: HAMMOND AP-4

Pace Project No.: 92546094

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92546094001	HGWC-117	Water	06/23/21 12:36	06/24/21 08:20
92546094002	EB-1	Water	06/23/21 13:47	06/24/21 08:20



SAMPLE ANALYTE COUNT

Project: HAMMOND AP-4

Pace Project No.: 92546094

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92546094001	HGWC-117	EPA 6010D	DRB	1
		EPA 6020B	CW1	2
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92546094002	EB-1	EPA 6010D	DRB	1
		EPA 6020B	CW1	2
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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



SUMMARY OF DETECTION

Project: HAMMOND AP-4

Pace Project No.: 92546094

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92546094001	HGWC-117					
	Performed by	CUSTOME R			06/24/21 08:44	
	рН	5.72	Std. Units		06/24/21 08:44	
EPA 6010D	Calcium	56.5	mg/L	1.0	06/24/21 16:43	M1
EPA 6020B	Boron	1.0	mg/L	0.040	06/24/21 17:10	
EPA 6020B	Cobalt	0.016	mg/L	0.0050	06/24/21 17:10	
SM 2540C-2011	Total Dissolved Solids	325	mg/L	10.0	06/24/21 11:43	
EPA 300.0 Rev 2.1 1993	Chloride	8.8	mg/L	1.0	06/25/21 16:02	
EPA 300.0 Rev 2.1 1993	Sulfate	125	mg/L	3.0	06/26/21 01:41	
92546094002	EB-1					
	Performed by	CUSTOME R			06/24/21 08:44	
	рН	6.03	Std. Units		06/24/21 08:44	



ANALYTICAL RESULTS

Project: HAMMOND AP-4

Pace Project No.: 92546094

Date: 06/28/2021 04:18 PM

Sample: HGWC-117	Lab ID:	92546094001	Collecte	d: 06/23/2	1 12:36	Received: 06/	/24/21 08:20 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical	Method:							
	Pace Anal	ytical Services	- Charlotte						
Performed by	CUSTOME R				1		06/24/21 08:44		
pH	5.72	Std. Units			1		06/24/21 08:44		
6010D ATL ICP	Analytical	Method: EPA	6010D Prep	paration Me	thod: El	PA 3010A			
	Pace Anal	ytical Services	- Peachtre	e Corners, (βA				
Calcium	56.5	mg/L	1.0	0.13	1	06/24/21 11:59	06/24/21 16:43	7440-70-2	M1
6020 MET ICPMS	Analytical	Method: EPA	6020B Prep	oaration Me	hod: El	PA 3005A			
	Pace Anal	ytical Services	- Peachtre	e Corners, (βA				
Boron	1.0	mg/L	0.040	0.0052	1	06/24/21 11:10	06/24/21 17:10	7440-42-8	
Cobalt	0.016	mg/L	0.0050	0.00038	1	06/24/21 11:10	06/24/21 17:10	7440-48-4	
2540C Total Dissolved Solids	Analytical	Method: SM 2	540C-2011						
	Pace Anal	ytical Services	- Peachtre	e Corners, (βA				
Total Dissolved Solids	325	mg/L	10.0	10.0	1		06/24/21 11:43		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	.1 1993					
	Pace Anal	ytical Services	- Asheville						
Chloride	8.8	mg/L	1.0	0.60	1		06/25/21 16:02	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		06/25/21 16:02	16984-48-8	M1
Sulfate	125	mg/L	3.0	1.5	3		06/26/21 01:41	14808-79-8	



ANALYTICAL RESULTS

Project: HAMMOND AP-4

Pace Project No.: 92546094

Date: 06/28/2021 04:18 PM

Sample: EB-1	Lab ID:	9254609400	2 Collecte	d: 06/23/2	1 13:47	Received: 06	/24/21 08:20 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical	Method:							
	Pace Anal	ytical Service	s - Charlotte						
Performed by	CUSTOME R				1		06/24/21 08:44		
pH	6.03	Std. Units			1		06/24/21 08:44		
6010D ATL ICP	Analytical	Method: EPA	.6010D Prep	paration Me	thod: El	PA 3010A			
	Pace Anal	ytical Service	s - Peachtre	e Corners, (GΑ				
Calcium	ND	mg/L	1.0	0.13	1	06/24/21 11:59	06/24/21 17:58	7440-70-2	
6020 MET ICPMS	Analytical	Method: EPA	.6020B Prep	oaration Me	thod: El	PA 3005A			
	Pace Anal	ytical Service	s - Peachtre	e Corners, (GΑ				
Boron	ND	mg/L	0.040	0.0052	1	06/24/21 11:10	06/24/21 17:16	7440-42-8	
Cobalt	ND	mg/L	0.0050	0.00038	1	06/24/21 11:10	06/24/21 17:16	7440-48-4	
2540C Total Dissolved Solids	Analytical	Method: SM	2540C-2011						
	Pace Anal	ytical Service	s - Peachtre	e Corners, (GA				
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		06/24/21 11:43		
300.0 IC Anions 28 Days	Analytical	Method: EPA	300.0 Rev 2	.1 1993					
	Pace Anal	ytical Service	s - Asheville						
Chloride	ND	mg/L	1.0	0.60	1		06/25/21 16:42	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		06/25/21 16:42	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		06/25/21 16:42	14808-79-8	



Project:

HAMMOND AP-4

Pace Project No.:

92546094

QC Batch: QC Batch Method: 629278

EPA 3010A

Analysis Method:

EPA 6010D

Analysis Description:

6010D ATL

Laboratory:

Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples:

92546094001, 92546094002

METHOD BLANK:

Matrix: Water

Associated Lab Samples:

92546094001, 92546094002

Blank Result

Reporting

MDL Limit

Qualifiers Analyzed

Calcium

Units mg/L

ND

1.0

0.13 06/24/21 16:34

LABORATORY CONTROL SAMPLE: Parameter

Parameter

3307190

Spike Conc.

LCS Result

LCS % Rec % Rec Limits

Qualifiers

Calcium

Parameter

Date: 06/28/2021 04:18 PM

Units mg/L

1.0

104

80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

3307191

MSD

MS

MSD Result MS

157

MSD

% Rec Max **RPD**

RPD Qual

Units

mg/L

MS

92546094001 Result

56.5

Spike Spike Conc. Conc.

Result 58.1

3307192

% Rec 54.6

% Rec -187

Limits 75-125

20 M1

Calcium

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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Project:

HAMMOND AP-4

Pace Project No.:

92546094

QC Batch:

629279

QC Batch Method:

EPA 3005A

Analysis Method:

EPA 6020B

Analysis Description:

6020 MET

Laboratory:

Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples:

92546094001, 92546094002

METHOD BLANK:

Matrix: Water

Associated Lab Samples: 92546094001, 92546094002

> Blank Result

Reporting Limit

Analyzed

Qualifiers

Boron Cobalt mg/L mg/L

Units

ND ND

0.040 0.0050

0.0052 06/24/21 16:56 0.00038 06/24/21 16:56

MDL

LABORATORY CONTROL SAMPLE:

Parameter

Date: 06/28/2021 04:18 PM

Parameter

Parameter

3307196

Units

92546063002

Result

ND

ND

Units

mg/L

mg/L

Spike LCS

LCS % Rec % Rec Limits

106

98

Qualifiers

Boron Cobalt mg/L mg/L

1 0.1

Conc.

106 98 80-120

80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

3307197 MS

0.1

Result

3307198

1.1

0.098

MSD

MSD

% Rec

Max RPD

Boron Cobalt Spike Conc.

1

0.1

MSD Spike Conc.

MS Result

1.1

0.098

MS Result % Rec 1.1

0.10

% Rec 108

100

Limits

RPD

2

75-125 20 75-125 2 20

Qual

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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Project:

HAMMOND AP-4

Pace Project No.:

92546094

QC Batch:

629284

QC Batch Method:

SM 2540C-2011

Analysis Method:

SM 2540C-2011

Analysis Description:

Matrix: Water

2540C Total Dissolved Solids

Laboratory:

Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples:

92546094001, 92546094002

METHOD BLANK:

Associated Lab Samples:

92546094001, 92546094002

Blank

Result

Reporting Limit

Qualifiers

Total Dissolved Solids

Units mg/L

Units

mg/L

Units

mg/L

ND

10.0

10.0 06/24/21 11:41

Analyzed

LABORATORY CONTROL SAMPLE:

Parameter

Parameter

3307238

Spike Conc.

400

68.0

1340

LCS Result

LCS % Rec

MDL

% Rec Limits

Qualifiers

SAMPLE DUPLICATE: 3307239

Total Dissolved Solids

Parameter

92545315001 Result

Dup Result

72.0

394

RPD

6

3

98

Max **RPD**

10

10

90-111

Qualifiers

SAMPLE DUPLICATE:

Date: 06/28/2021 04:18 PM

Total Dissolved Solids

3307240

Parameter Total Dissolved Solids mg/L

92545687002 Units Result

Dup Result 1380

RPD

Max RPD

Qualifiers

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.



Project: HAMMOND AP-4

Pace Project No.: 92546094

QC Batch Method:

Date: 06/28/2021 04:18 PM

QC Batch: 629646

Analysis Method: EPA 300.0 Rev 2.1 1993

Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92546094001, 92546094002

EPA 300.0 Rev 2.1 1993

METHOD BLANK: 3309082 Matrix: Water

Associated Lab Samples: 92546094001, 92546094002

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	06/25/21 15:35	
Fluoride	mg/L	ND	0.10	0.050	06/25/21 15:35	
Sulfate	mg/L	ND	1.0	0.50	06/25/21 15:35	

LABORATORY CONTROL SAMPLE:	3309083					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	50	48.4	97	90-110	
Fluoride	mg/L	2.5	2.3	94	90-110	
Sulfate	mg/L	50	48.1	96	90-110	

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 3309		3309085								
			MS	MSD								
		92546094001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	8.8	50	50	58.3	59.5	99	101	90-110	2	10	
Fluoride	mg/L	ND	2.5	2.5	3.3	3.3	129	130	90-110	0	10	M1
Sulfate	mg/L	125	50	50	171	170	92	90	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3309086					3309087							
			MS	MSD								
		92545943002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	25.6	50	50	75.1	75.7	99	100	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	ND	50	50	49.6	50.3	99	101	90-110	2	10	

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



QUALIFIERS

Project: HAMMOND AP-4

Pace Project No.: 92546094

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

Date: 06/28/2021 04:18 PM

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



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-4

Pace Project No.: 92546094

Date: 06/28/2021 04:18 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92546094001 92546094002	HGWC-117 EB-1			_	
92546094001 92546094002	HGWC-117 EB-1	EPA 3010A EPA 3010A	629278 629278	EPA 6010D EPA 6010D	629378 629378
92546094001 92546094002	HGWC-117 EB-1	EPA 3005A EPA 3005A	629279 629279	EPA 6020B EPA 6020B	629454 629454
92546094001 92546094002	HGWC-117 EB-1	SM 2540C-2011 SM 2540C-2011	629284 629284		
92546094001 92546094002	HGWC-117 EB-1	EPA 300.0 Rev 2.1 1993 EPA 300.0 Rev 2.1 1993	629646 629646		

Pace Analytical

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

Sample Condition Client Name:				LIAH . OOE ACOOA
Upon Receipt	Parles	1		Project #: WO# : 92546094
Courier: Fed Ex DUP. Commercial Pace	S USPS		ද්ධර	Client 92346094
ustody Seal Present? Yes GNO Se	eals Intact?	□Yes	□No	Date/Initials Person Examining Contents: (2/24/21/4)
acking Material: Bubble Wrap	Bubble Bags	□Non	e De	Other Biological Tissue Frozen?
hermometes: OHR Gun ID: THE 230 Correction Fa cooler Temp: 4-0 Add/Subtrace		e:]Wet □	Yes N/A Blue None Temp should be above freezing to 6°C □Samples out of temp criteria. Samples on ice, cooling process
Solet Temp Community	3.8			has begun
SDA Regulated Soil (A/A, water sample) id samples originate in a quarantine zone within the larger samples A/A (A/A)	United States: CA	NY, or S	6C (check m	including Hawaii and Puerto Ricol? Tres
		-		Comments/Discrepancy:
Chain of Custody Present?	_ Char	- □No	□N/A	<u> </u>
Samples Arrived within Hold Time?	Ques	□No	□N/A	2,
Short Hold Time Analysis (<72 hr.)?	☐Yes	_ANO	□N/A	3.
Rush Turn Around Time Requested?		□No	□N/A	4.48 hr 1117
Sufficient Volume?	- Dwes	□No	□N/A	5.
Correct Containers Used? -Pace Containers Used?	ARes	□No	□N/A □N/A	6.
Containers Intact?	Altes	□No	□N/A	7.
Dissolved analysis: Samples Field Filtered?	Yes	□No,	-EN/A	8.
Sample Labels Match COC?	Yes	□No	□n/a	9.
-Includes Date/Time/ID/Analysis Matrix:	WI		No.	
Headspace in VOA Vials (>5-6mm)?	☐Yes ☐Yes	□No	EN/A	10.
Trip Blank Present?			EMA	
Trip Blank Custody Seals Present? COMMENTS/SAMPLE DISCREPANCY	□Yes	□No		Field Data Required? ☐Yes ☐No
				Lot ID of split containers:
CLIENT NOTIFICATION/RESOLUTION				
Person contacted:	-0-		_ Date/1	/Time:
Project Manager SCURF Review:				Date:
Project Manager Scott Review.				



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 # 110#: 92546094

PM: KLH1

Due Date: 06/28/21

CLIENT: GA-GA Power

Kent	BP4U-125 mL Plastic Unpreserved (N/A) (CI-)	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) (CI-)	BP3N-250 mL plastic HNO3 (pH < 2)	8P4Z-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) (CI-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (CI-)	AG15-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A){CI-}	DG9H-40 mL VOA HCI (N/A)	VG9T-40 mL VOA Na25203 (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)	Red -BPIN	N BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AGOU-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1	1	1	1		1	Ar	K	1			1		1	1	1									X				
2	1	1	1		1	X	Z,	1			1		1	1	1									XV	X)			
3	1				1	1	1	1			1		1	1	1									1	1			
4	/				/	1	1	1			/		1	1	1									1	1			
5	1				/	/	/	1			1		/	/	1									/	1			
6	1				/	/	/	1			1		1	/	1							***		1				
7	1				/	/	/	1			1		1	1	1			-						/	1			
8	/				/	7	1	1			1		/	/	1									1	1			
9	/				1	/	/	1			1		1	/							1	77		1	1			-
10	/			B	/	/	/	1			7		1	/	7									1	1	-	-	
11	1				/	/	/	1			1		1	1	1									1	1			-
12	1				1	1	7				1		1	7	1									1	1			

		pH Ad	Justment Log for Pres	erved 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 accu

Received on Ice() (Y/N)	TEMP in C	2	DATE Signed:	Signed:	DATE		1	76	1	MA	homes	18	77 77	SAMPLE	PRINT Name of SAMPLER: SIGNATURE of SAMPLER:	PRINT							
\forall								+					a	A SIGNAL	NAME A	SAMPLER NAME AND SIGNATURE	\$0						
	B	0/2/1/2	-62	NOE	13	3	00	18	1	1		0280		0 B4/21		nessly loses		8	Howak		C	K IAT, Shottles	8h
2,MAPPLE	i i	DATE	8		HOULWITE HY LAS GRE	HEN	AS CEL	A CO				386	M2	DATE	(1) (2)	RELINGUISHED BY / AFFILIATION	DBYIAS	SHREET	RELAK			Арритона сошиентя	
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				1									-					-					8
						1	1											-					69
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P I I				×	×	v						Ť	2 2	1347	Clex	346	No.	1	TW				2 E8-01
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Residual Chlorine (Y/N)	Particul Courts		- Carl 1991	Metals (CU,B,Ca wh)	TOS	Analyses Test	Methanol Other	Ne28203	NaOH	HNO3 HCI	H2SO4	Unpreserved	# OF CONTAINERS	TIME	DATE	M .		SAMPLE TYPE (G=GRAB C	MATRIX CODE (sae valid cod	Water Ward Will Will Photolic Surfacial Sun Sun Sun Sun Sun Sun Sun Sun Sun Sun	# Q & \$ Q \$ P \$ \$	SAMPLE ID One Character per box. (A-Z, 0-9/,-) Sample lds must be unique	ITEM#
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VALIDATION REPORTS

July 2020



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

Final Review: JK Caprio 2/11/2021

Memorandum

Date: 11 November 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 92487351 and 92487354

SITE: Plant Hammond AP4

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of one aqueous sample collected 21 July 2020, as part of the Plant Hammond AP4 on-site sampling event.

The sample was 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 sample was analyzed at Pace Analytical Services, LLC, Asheville, North Caroline, for the following analytical test:

• Chloride, Fluoride and Sulfate by USEPA Method 300.0

The sample was 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 sample was analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
92487351001	HGWC-102

Laboratory ID	Client ID
92487354001	HGWC-102

The sample was 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:

- 92487351 and 92487354: The year was not documented on the COC for the collection time. The collection time was logged in with the collection year on 2020.
- 92487351 and 92487354: There was a time discrepancy for the second sample transfer on the COC. The *relinquished by* time was documented as 7/22/2020 1140 and the *received by* time was documented as 7/22/20 1141.

The field pH data included with the report were not validated.

1.0 METALS

The sample was 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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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). Two method blanks were reported (batches 555656 and 555325). Metals were not detected in the method blanks above the method detection limits (MDLs).

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported using sample HGWC-102.

The calcium concentration in sample HGWC-102 was greater than four times the spiked concentration. Therefore, no qualifications were applied to the calcium data based on the MS/MSD pair results.

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.

1.5 <u>Laboratory Control Sample (LCS)</u>

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**

Equipment blanks were not collected with the sample set.

1.7 Field Blank

Field blanks were not collected with the sample set.

1.8 Field Duplicate

Field duplicates were not collected with the sample set.

1.9 Sensitivity

The sample was reported to the MDLs. Elevated nondetect results were not reported.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flag M1 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 sample was analyzed for mercury by USEPA method 7470A.

The areas of data review are listed below. A leading check mark (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 dataset is 100%.

2.2 Holding Time

The holding time for the mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 555226). Mercury was not detected in the method blank above the MDL.

2.4 <u>Matrix Spike/Matrix Spike Duplicate</u>

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.

Final Review: JK Caprio 2/11/2021

2.6 Equipment Blank

Equipment blanks were not collected with the sample set.

2.7 Field Blank

Field blanks were not collected with the sample set.

2.8 Field Duplicate

Field duplicates were not collected with the sample set.

2.9 Sensitivity

The sample was 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 sample was 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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 dataset 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 555676) and one method blank was reported for the anions (batch 555626). The wet chemistry parameters were not detected in the method blanks above the MDLs.

3.4 <u>Matrix Spike/Matrix Spike Duplicate</u>

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

3.5 <u>Laboratory Control Sample</u>

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

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.

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3.7 **Equipment Blank**

Equipment blanks were not collected with the sample set.

3.8 Field Blank

Field blanks were not collected with the sample set.

3.9 Field Duplicate

Field duplicates were not collected with the sample set.

3.10 Sensitivity

The sample was 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 sample was 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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 dataset is 100%.

4.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported for the radium-228 data (batch 407458). One method blank was reported for the radium-226 data (batch 407104). 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 <u>Laboratory Control Sample</u>

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS/LCS duplicate (LCSD) pair was reported for radium-226. One LCS was 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.

4.7 <u>Tracers and Carriers</u>

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.

Final Review: JK Caprio 2/11/2021

4.8 **Equipment Blank**

Equipment blanks were not collected with the sample set.

4.9 Field Blank

Field blanks were not collected with the sample set.

4.10 Field Duplicate

Field duplicates were not collected with the sample set.

4.11 **Sensitivity**

The sample was 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.

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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	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

Final Review: JK Caprio 2/11/2021

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

August 2020



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

Final Review: JK Caprio 2/11/2021

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 92492559 and 92492563

SITE: Plant Hammond AP4

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of eleven aqueous samples, one field duplicate and one field blank, collected 25-27 August 2020, as part of the Plant Hammond AP4 on-site sampling event.

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

- 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 Caroline, 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
92492559001	HGWA-111
92492559002	HGWA-112
92492559003	HGWA-113
92492559004	HGWC-118
92492559005	HGWC-102
92492559006	FB-02
92492559007	FD-02
92492559008	HGWC-101
92492559009	HGWC-103
92492559010	HGWC-107
92492559011	HGWC-105
92492559012	HGWC-109
92492559013	HGWC-117

Laboratory ID	Client ID
92492563001	HGWA-111
92492563002	HGWA-112
92492563003	HGWA-113
92492563004	HGWC-118
92492563005	HGWC-102
92492563006	FB-02
92492563007	FD-02
92492563008	HGWC-101
92492563009	HGWC-103
92492563010	HGWC-107
92492563011	HGWC-105
92492563012	HGWC-109
92492563013	HGWC-117

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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:

• 92492559 and 92492563: The collection dates and times were not documented on the COC for samples HGWA-111, HGWA-112 and HGWA-113. The samples were logged in with the collection times of 10:03, 12:10 and 15:17, respectively, and with the collection date of 08/25/20.

- 92492559 and 92492563: The year was not documented on the COC for the collection times. The collection times were logged in with the collection year of 2020.
- 92492559 and 92492563: There was a time discrepancy for the second sample transfer on page 1 of the COC. The *relinquished by* time was documented as 8/26 0949 and the *received by* time was documented as 8/26 950. The *relinquished by* signature, date and time were missing for the third sample transfer on page 1 of the COC.
- 92492559 and 92492563: 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 3005A/6020B. (Mercury was evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 dataset is 100%.

1.2 **Holding Time**

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 562831 and 563747). Metals were not detected in the method blanks above the method detection limits (MDLs).

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported, using sample HGWC-118. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

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

1.5 <u>Laboratory Control Sample (LCS)</u>

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

Equipment blanks were 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.

Barium and boron were detected in the field blank at estimated concentrations greater than the MDLs and less than the reporting limits (RLs). Since barium and boron were detected at concentrations greater than the RLs 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-02. Acceptable precision (RPD \leq 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, HGWC-102.

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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 dataset is 100%.

2.2 Holding Time

The holding time for the mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 563370).

Mercury was detected in the method blank 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). One sample set specific MS/MSD pair was reported, using sample HGWA-111. The recovery and RPD results were within the laboratory specified acceptance criteria.

2.5 <u>Laboratory Control Sample</u>

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

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 sets, FD-02. Acceptable precision (RPD $\leq 20\%$ or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, HGWC-102.

Final Review: JK Caprio 2/11/2021

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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 dataset 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 four method blanks were reported for the anions (batches 562698, 563042, 563290 and 563291). 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 HGWC-103. 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 <u>Laboratory Control Sample</u>

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

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 were 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 MDLs.

3.9 Field Duplicate

One field duplicate sample was collected with the sample sets, FD-02. Acceptable precision (RPD $\leq 20\%$ or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, HGWC-102.

3.10 Sensitivity

The samples were reported to the MDLs. Elevated nondetect results were not reported.

3.11 <u>Electronic Data Deliverable Review</u>

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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 dataset is 100%.

4.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported for the radium-228 data (batches 412342, 412347, 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. Therefore, the radium-226 concentration in the associated sample greater than the MDC and less than the method blank concentration was U qualified as not detected at the reported concentration and the radium-226 concentrations in the associated samples greater than the method blank concentration and less than ten times the method blank concentration were J+qualified as estimated with high biases.

Radium-228 (0.749 pCi/L) was detected in the method blank in batch 412346 at a concentration greater than the MDC. Since radium-228 was not detected at a concentration greater than the MDCs in the associated sample, no qualifications were applied to the data.

Final Review: JK Caprio 2/11/2021

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier*	Reason Code**
FB-02	Radium-226	0.288	NA	0.288	J+	3
FD-02	Radium-226	0.269	NA	0.269	J+	3
HGWC-107	Radium-226	0.264	NA	0.264	J+	3
HGWC-105	Radium-226	0.300	NA	0.3	J+	3
HGWC-109	Radium-226	0.278	NA	0.278	J+	3
HGWC-117	Radium-226	0.193	NA	0.193	U	3

pCi/L-picocuries per liter

NA-not applicable

4.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

^{*} 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

4.5 <u>Laboratory Control Sample</u>

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four LCSs were reported for radium-226. Four LCS/LCS duplicate (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 FB-02. The RER (2σ) result was within the laboratory specified acceptance criteria.

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

4.7 Tracers and Carriers

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

4.8 **Equipment Blank**

Equipment blanks were 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 sets, FD-02. Acceptable precision (RER $(2\sigma) < 3$) was demonstrated between the field duplicate and the original sample, HGWC-102.

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

Final Review: JK Caprio 2/11/2021

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

September 2020



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

Memorandum

Date: December 11, 2020

To: Whitney Law

From: Kristoffer Henderson

CC: J. Caprio

Subject: Stage 2A Data Validation - Level II Data Deliverables - Pace

Analytical Services, LLC Project Numbers 92496518 and 92496524

SITE: Plant Hammond AP-4

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of thirteen aqueous samples, one filtered aqueous sample, one field duplicate and one field blank, collected 18-28 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:

- 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

DVR Sep 2020C Final Review: JK Caprio 12/15/2020

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
92496518001	HGWA-111
92496518002	HGWA-112
92496518003	HGWA-47
92496518004	HGWA-48D
92496518005	FB-04
92496518006	HGWA-113
92496518007	HGWA-113 FILTERED
92496518008	HGWC-102
92496518009	HGWC-101
92496518010	HGWC-103
92496518011	HGWC-105
92496518012	FD-04
92496518013	HGWC-107
92496518014	HGWC-109
92496518015	HGWC-117
92496518016	HGWC-118

Laboratory ID	Client ID
92496524001	HGWA-111
92496524002	HGWA-112
92496524003	HGWA-47
92496524004	HGWA-48D
92496524005	FB-04
92496524006	HGWA-113
92496524007	HGWA-113 FILTERED
92496524008	HGWC-102
92496524009	HGWC-101
92496524010	HGWC-103
92496524011	HGWC-105
92496524012	FD-04
92496524013	HGWC-107
92496524014	HGWC-109
92496524015	HGWC-117
92496524016	HGWC-118

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:

- There were time discrepancies for the third sample transfer on page 1 and the second transfer on page 6-7 of the COC. The *relinquished by* time was documented as 9/25/20 1233 and the *received by* time was documented as 9/25/20 1232.
- The year was not documented for the *relinquished by* and *received by* dates for the first transfer and the *relinquished by* date for the second transfer on pages 1, 7, 8 and 10 of the COC.
- The year was not documented for the *received by* date for the first transfer and the *relinquished by* date for the second transfer on pages 2, 4, 6 and 9 of the COC.
- The year was not documented for the *relinquished by* date for the first transfer on pages 3 and 5 of the COC.
- The year was not documented for the collection times of samples HGWA-111, HGWA-112, MW-48D, FB-04, HGWC-102, HGWC-107, HGWC-109 and HGWC-118. The samples were logged in with the collection year of 2020.
- The *relinquished by* signature, date and time were not documented for the fourth sample transfer on page 8-9 on the COC.
- A collection time was not documented on the COC for field duplicate, FD-04. FD-04 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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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). Eleven method blanks were reported (batches 568426, 568748, 569777, 570301, 570395, 568749, 569670, 570006, 570088, 570375 and 570626). 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). Sample set specific MS/MSD pairs were reported by USEPA method 6010D using sample HGWC-117 and by USEPA method 6020B using sample HGWC-103. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

No qualifications were applied based on MS/MSD recoveries if the sample concentration was greater than four times the spiked concentration.

Ten 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 <u>Laboratory Control Sample (LCS)</u>

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Eleven 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-04. Metals were not detected in the field blank above the MDLs.

1.8 Field Duplicate

One field duplicate sample was collected with the sample set, FD-04. Acceptable precision (RPD $\leq 20\%$ or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, HGWC-103.

1.9 **Sensitivity**

The samples were reported to the MDLs. Elevated nondetect results were not reported.

1.10 <u>Total vs Dissolved Metals Assessment</u>

Sample HGWA-113 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.

1.11 <u>Electronic Data Deliverable (EDD) Review</u>

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The laboratory flag M1 used in the level II report were not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

2.0 MERCURY

The samples were analyzed for mercury by USEPA method 7470A.

The areas of data review are listed below. A leading check mark (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 568007 and 569307). Mercury was not detected in the method blanks above the MDL.

2.4 <u>Matrix Spike/Matrix Spike Duplicate</u>

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 <u>Laboratory Control Sample</u>

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.

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-04. Acceptable precision (RPD $\leq 20\%$ or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, HGWC-103.

2.9 Sensitivity

The samples were reported to the MDL. No elevated nondetect results were reported.

2.10 <u>Total vs Dissolved Mercury Assessment</u>

Sample HGWA-113 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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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). Four method blanks were reported for TDS (batches 568395, 568648, 569874 and 570220) and seven method blanks were reported for the anions (batches 568377, 568980, 569204, 569516, 569577, 569831 and 570137). The wet chemistry parameters were not detected in the method blanks above the MDLs.

3.4 <u>Matrix Spike/Matrix Spike Duplicate</u>

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 HGWA-111 and FD-04. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exception.

The recovery of fluoride in the MS using sample FD-04 was low and outside the laboratory specified acceptance criteria. Therefore, the non-detect fluoride result in sample FD-04 was UJ qualified as estimated less than the MDL.

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Ten batch MS/MSD pairs were reported for alkalinity and twelve 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.

Sa	ample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
FI	D-04	Fluoride	0.050	U M1	0.050	UJ	4

mg/L-milligrams per liter

U-not detected at or above the MDL

M1-laboratory flag indicating MS recovery was outside the QC limits

3.5 <u>Laboratory Control Sample</u>

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

3.6 <u>Laboratory Duplicate</u>

One sample set specific laboratory duplicate was reported using sample HGWC-109. The RPD results were within the laboratory specified acceptance criteria.

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

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-04. 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-04. Acceptable precision (RPD $\leq 20\%$ or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, HGWC-103, with the following exception.

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^{*} 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

The RPD of chloride was greater than 20%; therefore, the chloride 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-103	Chloride	6.0	NA	39	6.0	J	7
FD-04	Chloride	8.9	NA		8.9	J	7

mg/L-milligrams per liter

NA-not applicable

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 HGWA-113 was collected as both an unfiltered and filtered sample. The unfiltered wet chemistry concentrations were greater than or equal to the filtered wet chemistry concentrations, with the exception of TDS.

The TDS concentration in HGWA-113 FILTERED was greater than the TDS concentration in HGWA-113. Since the RPD between these concentrations was less than 30% and based on professional and technical judgment, no qualifications were applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD
HGWA-113	TDS	84.0	NA	6
HGWA-113 FILTERED	TDS	89.0	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. The laboratory flag M1 used in the level II report were not included in the EDD. No other discrepancies were identified between the level II report and the EDD.

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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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). Three method blanks were reported for the radium-228 data (batches 415405, 417135 and 417137). Three method blanks were reported for the radium-226 data (batches 417134, 415404 and 417136). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs).

4.4 <u>Matrix Spike/Matrix Spike Duplicate</u>

MS/MSD pairs were not reported with the data.

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4.5 <u>Laboratory Control Sample</u>

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS and two LCS/LCS duplicate (LCSD) pairs were reported for radium-226. Three LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [2 sigma (2σ)] results were within the laboratory specified acceptance criteria, with the following exception.

The recovery of radium-228 in the LCS in batch 417135 was low and outside the laboratory specified acceptance criteria. Therefore, the non-detect results of radium-228 and combined radium in the associated sample 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-113	Radium-228	0.310	U	0.310	UJ	5
HGWA-113	Combined Radium 226 + 228	0.551	U	0.551	UJ	5
HGWA-113 FILTERED	Radium-228	0.172	U	0.172	UJ	5
HGWA-113 FILTERED	Combined Radium 226 + 228	0.323	U	0.323	UJ	5

pCi/L- picocuries per liter

U-not detected at or above the MDC

4.6 <u>Laboratory Duplicate</u>

Two sample set specific laboratory duplicates were reported using samples HGWA-2 and FB-04. The RER (2σ) results were within the laboratory specified acceptance criteria.

Three 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 <u>Tracers and Carriers</u>

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-04. 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-04. Acceptable precision (RER $(2\sigma) < 3$) was demonstrated between the field duplicate and the original sample, HGWC-103.

4.11 Sensitivity

The samples were reported to the MDCs. No elevated nondetect results were reported.

4.12 Total vs Dissolved Radiochemistry Assessment

Sample HGWA-113 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 OC 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.

DVR Sep 2020C Final Review: JK Caprio 12/15/2020

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



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

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 92505469 and 92505478

SITE: Plant Hammond AP-4

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of two aqueous samples and one equipment blank, collected 10-11 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

DVR 11_20 AP-4 Final Review: JK Caprio 2/5/2021

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
92505469001	HGWA-47
92505469002	EB-01
92505469003	HGWA-48D

Laboratory ID	Client ID
92505478001	HGWA-47
92505478002	EB-01
92505478003	HGWA-48D

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 page one of the COC and for the second transfer on page two of the COC.
- The *received by* signature, date and time were not documented for the second sample transfer on page one of the COC.
- The year was not documented for the *received by* date for the first sample transfer on page two of the COC.
- The *relinquished by* signature, date and time were not documented for the third sample transfer on page two of the COC.
- The year was not documented for the collection times of samples HGWA-47 and EB-01. 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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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). Four method blanks were reported (batches 580529, 580692, 581313 and 581474). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

DVR 11_20 AP-4 Final Review: JK Caprio 2/5/2021

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 concentration in the associated sample was U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result	Validation Qualifier*	Reason Code**
HGWA-48D	Antimony	0.00031	JВ	0.0030	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

1.4 <u>Matrix Spike/Matrix Spike Duplicate (MS/MSD)</u>

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 HGWA-47. The relative percent difference (RPD) result was within the laboratory specified acceptance criteria. The MS recovery was high, and the MSD recovery was low, both outside the laboratory specified acceptance criteria. However, since the calcium concentration in sample HGWA-47 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 <u>Laboratory Control Sample (LCS)</u>

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.

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

1.8 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. 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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 580637). Mercury was not detected in the method blank above the MDL.

2.4 <u>Matrix Spike/Matrix Spike Duplicate</u>

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 qualification was 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.

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 <u>Electronic Data Deliverable Review</u>

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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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). Three method blanks were reported for TDS (batches 580276, 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). One sample set specific MS/MSD pair was reported using sample HGWA-47. The recovery and RPD results were within the laboratory specified acceptance criteria.

Three 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). Three 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 <u>Laboratory Duplicate</u>

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

3.7 **Equipment Blank**

One equipment blank was collected with the sample set, EB-01. The wet chemistry parameters were not detected in the equipment blank above the MDL, 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.

3.8 <u>Field Blank</u>

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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 424420 and 423745). Two method blanks were reported for the radium-226 data (batches 425257 and 423681). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs).

4.4 <u>Matrix Spike/Matrix Spike Duplicate</u>

MS/MSD pairs were not reported with the data.

4.5 <u>Laboratory Control Sample</u>

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCS/LCS duplicate (LCSD) pairs were reported for radium-226. 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

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.

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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 OC 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.

DVR 11_20 AP-4 Final Review: JK Caprio 2/5/2021

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



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

Memorandum

Date: February 9, 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 92512557 and 92512587

SITE: Plant Hammond AP-4

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of two aqueous samples and one equipment blank, collected 15 December 2020, as part of the Plant Hammond AP on-site sampling event.

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

- Calcium by United States (US) Environmental Protection Agency (EPA) Methods 3010A/6010D
- Metals by USEPA Methods 3005A/6020B
- Mercury by USEPA Method 7470A
- Total Dissolved Solids (TDS) by Standard Method 2540C

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

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

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

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total Radium by Calculation

DVR 12_20 AP-4 Final Review: JK Caprio 2/11/2021

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
92512557001	HGWA-47
92512557002	HGWA-48D
92512557003	EB-01

Laboratory ID	Client ID
92512587001	HGWA-47
92512587002	HGWA-48D
92512587003	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 *relinquished by* date for the first sample transfer and *received by* date for the second transfer.

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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 <u>Matrix Spike/Matrix Spike Duplicate (MS/MSD)</u>

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.

DVR 12_20 AP-4 Final Review: JK Caprio 2/11/2021

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 at concentrations greater than the RL in the associated samples, 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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 qualification was 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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 <u>Holding Times</u>

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride and sulfate) analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported for TDS (batch 588373) and one method blank was reported for the anions (batch 589104). The wet chemistry parameters were not detected in the method blanks above the MDLs.

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two batch MS/MSD pairs were reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.5 <u>Laboratory Control Sample</u>

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

3.6 Laboratory Duplicate

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.

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 <u>Electronic Data Deliverable Review</u>

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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 <u>Holding Times</u>

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported for the radium-228 data (batch 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).

4.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

4.5 Laboratory Control Sample

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

4.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for radium-226 using sample HGWA-47. The RER (1σ) result was within the laboratory specified acceptance criteria.

4.7 <u>Tracers and Carriers</u>

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.

Plant Hammond AP Site Data Validation 9 February 2021 Page 10

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.

* * * * *

DVR 12_20 AP-4 Final Review: JK Caprio 2/11/2021

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 OC 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.

DVR 12_20 AP-4 Final Review: JK Caprio 2/11/2021

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 92517879 and 92517911

SITE: Plant Hammond AP-4

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of two 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

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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
92517879001	HGWA-47
92517879002	HGWA-48D
92517879003	EB-01

Laboratory ID	Client ID
92517911001	HGWA-47
92517911002	HGWA-48D
92517911003	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-47 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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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). Four method blanks were reported (batches 596653, 596683, 596887 and 596939). 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). Since antimony was not detected in the associated sample, 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 HGWA-47 and HGWA-48D. 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-47 were low and outside of the laboratory specified acceptance criteria. Since the recovery of calcium in sample HGWA-47 was greater than four times the spiked concentration, no qualifications were applied to the data based on the MS/MSD recovery results.

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

1.5 <u>Laboratory Control Sample (LCS)</u>

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. 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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 <u>Matrix Spike/Matrix Spike Duplicate</u>

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 <u>Laboratory Control Sample</u>

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.

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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 <u>Holding Times</u>

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 <u>Matrix Spike/Matrix Spike Duplicate</u>

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 <u>Laboratory Control Sample</u>

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 <u>Laboratory Duplicate</u>

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

3.7 **Equipment Blank**

One equipment blank was collected with the sample set, EB-01. The wet chemistry parameters were not detected in the equipment blank above the MDL.

3.8 Field Blank

A field blank was not collected with the sample set.

3.9 Field Duplicate

A field duplicate was not collected with the sample set.

3.10 **Sensitivity**

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

3.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

4.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 <u>Holding Times</u>

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported for the radium-228 data (batch 432561). Two method blanks were reported for the radium-226 data (batches 433326 and 433327). 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). Two LCS/LCS duplicate (LCSD) pairs were reported for radium-226. One LCS/LCSD pair was reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma (1σ)] results were within the laboratory specified acceptance criteria, 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-47	Radium-228	0.176	U	0.176	UJ	5
HGWA-47	Combined Radium 226 + 228	0.176	U	0.176	UJ	5
HGWA-48D	Radium-228	1.03	U	1.03	UJ	5
HGWA-48D	Combined Radium 226 + 228	1.35	U	1.35	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 <u>Tracers and Carriers</u>

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.

^{*} 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

4.11 **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 92527605 and 92527612

SITE: Plant Hammond AP-4

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of thirteen aqueous samples, three field filtered samples, one field duplicate and one field blank, collected 11-19 March 2021, as part of the Plant Hammond AP on-site sampling event.

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

- Calcium by 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

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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
92527605001	HGWA-111
92527605002	HGWA-111 FILTERED
92527605003	HGWA-47
92527605004	HGWA-48D
92527605005	HGWA-112
92527605006	HGWA-113
92527605007	HGWA-113 FILTERED
92527605008	HGWC-101
92527605009	HGWC-102
92527605010	HGWC-109
92527605011	DUP-4
92527605012	HGWC-103
92527605013	HGWC-105
92527605014	HGWC-107
92527605015	HGWC-118
92527605016	HGWC-118 FILTERED
92527612001	HGWA-111

Laboratory ID	Client ID
92527612002	HGWA-111 FILTERED
92527612003	HGWA-47
92527612004	HGWA-48D
92527612005	HGWA-112
92527612006	HGWA-113
92527612007	HGWA-113 FILTERED
92527612008	HGWC-101
92527612009	HGWC-102
92527612010	HGWC-109
92527612011	DUP-4
92527612012	HGWC-103
92527612013	HGWC-105
92527612014	HGWC-107
92527612015	HGWC-118
92527612016	HGWC-118 FILTERED
92527612017	HGWC-117
92527612018	FB-4

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 times were not documented on the COC for the field duplicate and field blank, DUP-4 and FB-4, respectively. The field duplicate and field blank were logged in with the collection time of 00:00.
- There were time discrepancies for sample transfers on page 2 of the COC. The first relinquished by time was documented as 3/15/21 1145 and the received by time was documented as 3/15/21 1200. The second relinquished by time was documented as 3/15/21 1558 and the received by time was documented as 3/15/21 1458.
- The received by signature, date and time were missing for the final sample transfers on page 7 of the COC.
- Incorrect error corrections were observed on the COC, instead of the proper procedure of a single strike through, correction, and initials and date of person making the corrections.

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

1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and USEPA methods 3005A/6020B.

The areas of data review are listed below. A leading check mark (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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 610583 and 610584). Metals were not detected in the method blanks above the method detection limits (MDLs).

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific MS/MSD pairs were reported, both using sample HGWA-111. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

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 <u>Laboratory Control Sample (LCS)</u>

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**

Equipment blanks were not collected with the sample set.

1.7 Field Blank

One field blank was collected with the sample set, FB-4. Metals were not detected in the field blank above the MDLs, with the following exception.

Chromium was detected in FB-4 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated chromium concentrations in the associated samples were U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HGWA-111	Chromium	0.0020	J	0.0050	U	3
HGWA-111 FILTERED	Chromium	0.0011	J	0.0050	U	3
HGWA-48D	Chromium	0.00062	J	0.0050	U	3
HGWA-112	Chromium	0.0045	J	0.0050	U	3
HGWA-113 FILTERED	Chromium	0.0025	J	0.0050	U	3
HGWC-101	Chromium	0.00075	J	0.0050	U	3
HGWC-103	Chromium	0.0030	J	0.0050	U	3
HGWC-105	Chromium	0.00058	J	0.0050	U	3
HGWC-118	Chromium	0.0021	J	0.0050	U	3
HGWC-117	Chromium	0.0010	J	0.0050	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

1.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-4. Acceptable precision (RPD \leq 20% or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, HGWC-102, with the following exception.

Chromium was not detected in HGWC-102 and was detected in DUP-4 at a concentration greater than the RL, resulting in a noncalculable RPD. Therefore, based on professional and technical judgment the non-detect chromium result in HGWC-102 was J qualified as estimated and the chromium concentration in DUP-4 was J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWC-102	Chromium	0.00055	U	NC	0.00055	UJ	7
DUP-4	Chromium	0.10	NA		0.10	J	7

mg/L-milligrams per liter

U-not detected at or above the MDL

NA-not applicable

NC-not calculable

1.9 Sensitivity

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

^{*} 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

1.10 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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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). Six method blanks were reported for TDS (batches 607316, 608067, 608136, 608443, 608913 and 609221) and six method blanks were reported for the anions (batches 607751, 607758, 607984, 608285, 608857 and 608960). 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). Four sample set specific MS/MSD pairs were reported for the anions using samples HGWA-113, HGWC-109, HGWC-118 and HGWC-117. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The sulfate recoveries in the MS/MSD pair using sample HGWC-118 were low and outside the laboratory specified acceptance criteria. Therefore, the sulfate concentration in sample HGWC-118 was J- qualified as estimated with low bias.

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

Sample	v	•	Flag		Validation Qualifier	Reason Code
HGWC-118	Sulfate	87.8	M1	87.8	J-	4

mg/L-milligrams per liter

M1-laboratory flag indicating the MS recovery exceeded the QC limits

2.5 Laboratory Control Sample

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

2.6 Laboratory Duplicate

Four sample set specific laboratory duplicates were reported using samples HGWA-113, HGWC-101, HGWC-107 and HGWC-117. The RPD results were within the laboratory specified acceptance criteria, with the following exception.

The RPD of TDS in the laboratory duplicate using sample HGWC-107 was high and outside the laboratory specified acceptance criteria. Therefore, the TDS concentration in sample HGWC-107 was J qualified as estimated.

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.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWC-107	TDS	255	D6	255	J	12

mg/L-milligrams per liter

D6-laboratory flag indicating the precision between the sample and sample duplicate exceeded the laboratory control limits

2.7 **Equipment Blank**

Equipment blanks were not collected with the sample set.

2.8 Field Blank

One field blank was collected with the sample set, FB-4. 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-4. Acceptable precision (RPD $\leq 20\%$ or the difference between the concentrations < RL) was demonstrated between the field duplicate and the original sample, HGWC-102.

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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

3.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported for the radium-228 data (batches 440499, 439778, 441700 and 440500). Three method blanks were reported for the radium-226 data (batches 440493, 441741 and 440491). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exceptions.

DVR 3_21 AP-4 FINALfinal Final Review: L. Scharpenberg

Radium-228 was detected in the method blank in batch 440491 (0.826 pCi/L) at a concentration greater than the MDC. Since radium-228 was not detected at concentrations greater than the MDCs in the associated samples, no qualifications were applied to the data.

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four LCS/LCS duplicate (LCSD) pairs were reported for radium-226. Three 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 <u>Laboratory Duplicate</u>

Two sample set specific laboratory duplicates were reported using samples HGWA-111 FILTERED and HGWC-117. The RER (1σ) results were within the laboratory specified acceptance criteria.

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

3.7 Tracers and Carriers

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

3.8 **Equipment Blank**

Equipment blanks were not collected with the sample set.

3.9 Field Blank

One field blank was collected with the sample set, FB-4. 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-4. Acceptable precision (RER $(1\sigma) < 3$) was demonstrated between the field duplicate and the original sample, HGWC-102.

3.11 **Sensitivity**

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

3.12 <u>Electronic Data Deliverable Review</u>

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

June 2021



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

Memorandum

Date: July 15, 2021

To: Whitney Law

From: Kristoffer Henderson

CC: J. Caprio

Subject: Stage 2A Data Validation - Level II Data Deliverable - Pace

Analytical Services, LLC Project Number 92546094

SITE: Plant Hammond AP-4

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of one aqueous sample and one equipment blank, collected 23 June 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
- Boron and Cobalt 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

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 report, professional and technical judgment, and the following documents:

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

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

Laboratory ID	Client ID
92546094001	HGWC-117

Laboratory ID	Client ID
92546094002	EB-1

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

Incorrect error corrections were observed on the chain of custody (COC), instead of the proper procedure of a single strike through, correction, and initials and date of person making the corrections.

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

1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and USEPA methods 3005A/6020B.

The areas of data review are listed below. A leading check mark (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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
- ✓ 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 the samples submitted for these analyses, 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 629278 and 629279). Metals were not detected in the method blanks above the method detection limits (MDLs).

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported for calcium, using sample HGWC-117. The relative percent difference (RPD) result was within the laboratory specified acceptance criteria.

The MS recovery was high, and the MSD recovery was low for calcium, both outside the laboratory specified acceptance criteria. Since the calcium concentration in HGWC-117 was 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.

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

1.5 <u>Laboratory Control Sample (LCS)</u>

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

1.6 **Equipment Blank**

One equipment blank was collected with the sample set, EB-1. Metals were not detected in the equipment blank above the MDLs.

1.7 Sensitivity

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

1.8 <u>Electronic Data Deliverable (EDD) Review</u>

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 (\checkmark) indicates an area of review in which the data were acceptable. A preceding crossed circle (\otimes) 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
- ✓ 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). One method blank was reported for TDS (batch 629284) and one method blank was reported for the anions (batch 629646). The wet chemistry parameters were not detected in the method blanks above the MDLs.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported for the anions, using sample HGWC-117. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exceptions.

The fluoride recoveries in the MS/MSD pair were high and outside the laboratory specified acceptance criteria. Since fluoride was not detected in sample HGWC-117, no qualifications were applied to the data.

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.

2.5 <u>Laboratory Control Sample</u>

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 <u>Laboratory Duplicate</u>

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.

2.7 Equipment Blank

One equipment blank was collected with the sample set, EB-1. The wet chemistry parameters were not detected in the equipment blank above the MDLs.

Plant Hammond AP Site Data Validation 15 July 2021 Page 6

2.8 Sensitivity

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

2.9 <u>Electronic Data Deliverable Review</u>

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.

DVR 92546094 AP-4 final Final Review: ME Tyler 7/26/2021

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
NV	Not Validated

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

FIELD SAMPLING REPORTS

July 2020

Date: 2020-07-21 15:17:09

Tubing Type

Pumping Information:

Alexis

polyethylene

Project Information:

Pump Information: **Operator Name** Chad Russo Pump Model/Type

Company Name

Project Name Tubing Diameter Plant Hammond in Site Name Tubing Length 33 ft Plant Hammond

Latitude 0° 0' 0" 0° 0' 0" Longitude Sonde SN 613229

Turbidity Make/Model Pump placement from TOC 33 ft

Well Information:

Final Pumping Rate Well ID HGWC-102 200 mL/min Well diameter Total System Volume 0.09 L 2 in Well Total Depth ft Calculated Sample Rate 300 sec Screen Length 10 ft Stabilization Drawdown 0 in Depth to Water **Total Volume Pumped** 13.18 ft 7 L

Low-Flow Sa	mpling Stabiliz	zation Summary	/						
	Time	Elapsed	Temp C	рН	SpCond μS	/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:52:34	600.01	21.07	5.79	883.45	2.33	13.46	0.12	64.17
Last 5	14:57:34	900.01	21.14	5.79	883.85	2.15	13.47	0.09	63.84
Last 5	15:02:34	1200.00	21.48	5.78	880.53	2.25	13.47	0.08	63.74
Last 5	15:07:34	1499.99	21.55	5.78	879.06	2.04	13.48	0.07	64.22
Last 5	15:12:34	1799.98	21.55	5.77	879.76	0.91	13.47	0.06	64.81
Variance 0			0.33	-0.01	-3.33			-0.01	-0.11
Variance 1			0.07	-0.01	-1.47			-0.01	0.48
Variance 2			-0.00	-0.01	0.70			-0.01	0.59

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 CI, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B).

Grab Samples HGWC-102 Grab

August 2020

Date: 2020-08-25 10:04:32

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

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 placement from TOC

38.67 ft

QED MP50

0.17 in

39.0 ft

polyethylene

Well Information:

Well ID HGWA-111
Well diameter 2 in
Well Total Depth 43.20 ft
Screen Length 10 ft
Depth to Water 12.60 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.65907 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	рН	SpCond μS/cm Turb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:41:45	2099.96	20.04	6.57	256.74	7.77	13.70	3.67	89.46
Last 5	09:46:45	2399.96	20.16	6.63	274.45	8.47	13.65	3.54	89.47
Last 5	09:51:45	2699.95	20.13	6.66	275.33	11.50	13.61	3.52	90.60
Last 5	09:56:45	2999.94	20.17	6.68	277.70	12.10	13.55	3.56	90.98
Last 5	10:01:44	3299.93	20.51	6.70	283.62	4.92	13.55	3.52	90.82
Variance 0			-0.03	0.03	0.88			-0.02	1.13
Variance 1			0.04	0.02	2.37			0.03	0.39
Variance 2			0.34	0.02	5.92			-0.03	-0.16

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples HGWA-111 Grab

Date: 2020-08-25 12:13:17

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

35.15 ft

150 mL/min

Tubing Diameter 0.17 in Tubing Length 36.15 ft

Pump placement from TOC

Well Information:

Well ID

HGWA-112

Well diameter

Pumping Information:

Final Pumping Rate

Total System Volume

Well diameter2 inTotal System Volume0.64635 LWell Total Depth39.22 ftCalculated Sample Rate300 secScreen Length10 ftStabilization Drawdown3.6 inDepth to Water12.50 ftTotal Volume Pumped3.75 L

Low-Flow Sampling Stabilization Summary

LOW 1 10W OC	, 0	Lation Gammai								
	Time	Elapsed	Temp C	рН	SpCond µS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV	
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10	
Last 5	11:49:50	300.04	19.86	5.62	80.37	5.15	13.45	1.39	94.54	
Last 5	11:54:50	600.01	20.26	5.55	80.57	6.73	13.45	1.35	95.50	
Last 5	11:59:50	900.00	20.71	5.55	80.23	5.30	13.30	1.47	95.97	
Last 5	12:04:50	1199.99	20.75	5.54	80.09	6.83	13.30	1.37	97.55	
Last 5	12:09:50	1499.98	20.71	5.53	80.23	4.84	13.30	1.39	99.70	
Variance 0			0.45	0.00	-0.34			0.12	0.47	
Variance 1			0.05	-0.01	-0.14			-0.10	1.58	
Variance 2			-0.04	-0.01	0.14			0.02	2.15	

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples HGWA-112 Grab

Date: 2020-08-25 15:20:02

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

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 placement from TOC

31.53 ft

QED MP50

0.17 in

32.53 ft

polyethylene

Well Information:

Well IDHGWA-113Well diameter2 inWell Total Depth36.53 ftScreen Length10 ftDepth to Water11.61 ft

Pumping Information: Final Pumping Rate

Final Pumping Rate 125 mL/min
Total System Volume 0.63020 L
Calculated Sample Rate 300 sec 3.
Stabilization Drawdown 6 in
Total Volume Pumped 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization	n		+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:57:46	6013.85	23.36	5.94	102.05	6.33	17.25	2.09	123.66
Last 5	15:02:46	6313.85	23.51	5.95	101.46	6.25	17.25	2.11	125.36
Last 5	15:07:46	6613.83	23.66	5.93	101.16	5.62	17.25	2.08	128.21
Last 5	15:12:46	6913.83	23.80	5.94	101.21	5.17	17.25	2.19	130.95
Last 5	15:17:46	7213.82	24.00	5.95	101.17	4.82	17.25	2.21	133.57
Variance 0			0.15	-0.02	-0.30			-0.03	2.86
Variance 1			0.14	0.01	0.05			0.12	2.74
Variance 2			0.21	0.01	-0.04			0.01	2.62

Notes

Four bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 250-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. IV metals (EPA 6020B/7470A).

Grab Samples HGWA-113 Grab

Date: 2020-08-27 10:57:13

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

Turbialty Make/Model

Well Information:

Well ID HGWC-101
Well diameter 2 in
Well Total Depth 37.98 ft
Screen Length 10 ft
Depth to Water 13.10 ft

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene

28 ft

Tubing Diameter 0.17 in Tubing Length 29 ft

Pump placement from TOC

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.61444 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 μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:35:33	1501.97	24.50	5.27	287.47	0.64	14.64	0.20	507.67
Last 5	10:40:33	1801.96	24.59	5.28	291.66	0.47	14.68	0.20	547.33
Last 5	10:45:33	2101.95	24.81	5.29	295.16	1.19	14.72	0.19	569.87
Last 5	10:50:35	2403.95	25.01	5.30	300.06	1.02	15.01	0.19	589.65
Last 5	10:55:35	2703.94	24.97	5.32	302.58	1.42	14.76	0.18	604.70
Variance 0			0.22	0.01	3.50			-0.00	22.54
Variance 1			0.20	0.01	4.90			0.00	19.78
Variance 2			-0.05	0.01	2.52			-0.01	15.06

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-101 Grab

Date: 2020-08-27 15:35:59

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

Project Information:

Operator Name Thomas Kessler

Company Name **Geosyntec Consultants Project Name GP-Plant Hammond**

Site Name Plant Hammond Latitude 0° 0' 0"

0° 0' 0" Longitude Sonde SN 597519

Turbidity Make/Model LaMotte 2020we Pump placement from TOC

32 ft

Well Information:

Well ID HGWC-102 Well diameter 2 in Well Total Depth 37.02 ft Screen Length 10 ft Depth to Water 12.95 ft

Pumping Information:

Final Pumping Rate 200 mL/min Total System Volume 0.23729 L Calculated Sample Rate 300 sec Stabilization Drawdown 3.6 in **Total Volume Pumped** 7 L

Alexis

0.17 in

33 ft

polyethylene

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS/cmTur		cm Turb NTU DTW ft		ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:14:27	899.99	22.45	5.70	873.27	0.73	13.11	0.10	363.45
Last 5	15:19:27	1199.98	22.32	5.70	870.34	0.22	13.12	0.08	360.35
Last 5	15:24:27	1499.97	23.13	5.70	869.53	1.07	13.12	0.07	358.60
Last 5	15:29:28	1800.96	23.22	5.70	865.61	0.63	13.13	0.06	423.92
Last 5	15:34:28	2100.96	23.17	5.70	865.18	0.56	13.13	0.06	490.96
Variance 0			0.82	-0.00	-0.81			-0.01	-1.74
Variance 1			0.08	0.00	-3.93			-0.01	65.32
Variance 2			-0.05	-0.00	-0.43			-0.00	67.04

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 CI, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6020B/7470A).

Grab Samples HGWC-102 Grab FD-02

Grab

Date: 2020-08-27 14:10:43

Project Information:

Operator Name Thomas Kessler Company Name **Geosyntec Consultants** Project Name **GP-Plant Hammond** Site Name Plant Hammond

Latitude 0° 0' 0" 0° 0' 0" Longitude Sonde SN 597519

Turbidity Make/Model LaMotte 2020we

Well Information:

Well ID HGWC-103 Well diameter 2 in 36.86 ft Well Total Depth Screen Length 10 ft Depth to Water 14.65 ft

Pump Information:

Pump Model/Type QED MP50 **Tubing Type** polyethylene

27 ft

Tubing Diameter 0.17 in Tubing Length 28 ft

Pump placement from TOC

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** 24 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:47:50	5704.84	19.82	5.52	715.11	6.57	13.85	0.07	251.12
Last 5	13:52:50	6004.83	19.73	5.52	713.64	6.40	13.85	0.08	250.87
Last 5	13:57:50	6304.82	19.68	5.51	715.70	5.31	13.85	0.07	247.29
Last 5	14:02:50	6604.81	19.64	5.52	717.20	5.52	13.85	0.07	243.73
Last 5	14:07:50	6904.80	19.67	5.52	711.99	3.63	13.85	0.07	241.11
Variance 0			-0.04	-0.01	2.05			-0.00	-3.58
Variance 1			-0.04	0.01	1.50			0.00	-3.56
Variance 2			0.03	-0.00	-5.21			-0.00	-2.62

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-103 Grab

Date: 2020-08-27 13:41:26

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

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 placement from TOC

40 ft

QED MP50

0.17 in

41 ft

polyethylene

Well Information:

Well ID HGWC-105
Well diameter 2 in
Well Total Depth 44.88 ft
Screen Length 10 ft
Depth to Water 17.72 ft

Pumping Information:
Final Pumping Rate
Total System Volume
Calculated Sample Rate
Stabilization Drawdown

Total Volume Pumped

200 mL/min 0.6680003 L 300 sec 3.6 in 9 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:18:32	1200.02	19.82	6.51	642.13	3.73	18.02	1.22	25.68
Last 5	13:23:32	1500.02	19.79	6.48	639.54	3.22	18.02	1.73	23.02
Last 5	13:28:32	1800.02	19.87	6.47	634.91	3.04	18.02	0.89	20.98
Last 5	13:33:32	2100.02	19.86	6.45	631.13	2.59	18.02	2.00	18.33
Last 5	13:38:32	2400.01	20.19	6.45	625.08	2.37	18.02	0.40	15.01
Variance 0			0.07	-0.01	-4.62			-0.84	-2.04
Variance 1			-0.01	-0.02	-3.79			1.12	-2.66
Variance 2			0.34	-0.00	-6.04			-1.60	-3.32

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 HGWC-105 Grab

Date: 2020-08-27 17:31:08

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 597519

Turbidity Make/Model LaMotte 2020we

Well Information:

Well ID HGWC-107
Well diameter 2 in
Well Total Depth 38.08 ft
Screen Length 10 ft
Depth to Water 14.95 ft

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in

28 ft

Tubing Diameter 0.17 i
Tubing Length 29 ft

Pump placement from TOC

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.61444 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	рН	SpCond µS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization	1		+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	17:07:51	899.99	20.94	6.10	407.95	1.83	15.00	0.13	283.63
Last 5	17:12:51	1199.98	20.92	6.09	408.24	1.33	15.00	0.12	285.10
Last 5	17:17:51	1499.97	20.88	6.08	407.52	1.17	14.95	0.11	284.11
Last 5	17:22:51	1800.01	20.84	6.08	407.03	1.01	15.03	0.11	281.36
Last 5	17:27:51	2099.98	20.84	6.09	404.82	1.32	15.00	0.11	279.51
Variance 0			-0.05	-0.00	-0.73			-0.01	-0.99
Variance 1			-0.04	0.00	-0.49			-0.00	-2.76
Variance 2			-0.00	0.00	-2.21			-0.00	-1.84

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-107 Grab

Date: 2020-08-27 15:40:24

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

Project Information:

Operator Name Chad Russo Company Name Geosyntec C

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 placement from TOC

26 ft

QED MP50

0.17 in

27 ft

polyethylene

Well Information:

Well IDHGWC-109Well diameter2 inWell Total Depth31.00 ftScreen Length10 ftDepth to Water8.52 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.6055124 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	рН	SpCond μS/cm Turb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:17:35	600.02	19.95	6.57	373.14	3.55	8.60	0.53	-10.13
Last 5	15:22:35	900.02	19.80	6.55	370.23	2.85	8.60	0.49	-19.16
Last 5	15:27:35	1200.03	19.97	6.60	368.80	2.29	8.60	0.40	-5.02
Last 5	15:32:35	1500.02	19.98	6.62	367.99	2.16	8.60	0.36	0.41
Last 5	15:37:35	1800.01	20.04	6.64	366.49	1.94	8.60	0.38	4.27
Variance 0			0.17	0.05	-1.43			-0.09	14.14
Variance 1			0.01	0.02	-0.81			-0.05	5.43
Variance 2			0.06	0.02	-1.50			0.02	3.85

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-109 Grab

Date: 2020-08-27 17:46:27

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

Project Information:

Operator Name Chad Russo Company Name **Geosyntec Consultants**

Project Name **GP-Plant Hammond** Site Name Plant Hammond

Latitude 0° 0' 0" 0° 0' 0" Longitude Sonde SN 643819

Turbidity Make/Model LaMotte 2020we Pump placement from TOC

35 ft

QED MP50

0.17 in

36 ft

polyethylene

Well Information:

Well ID HGWC-117 Well diameter 2 in Well Total Depth 39.90 ft Screen Length 10 ft Depth to Water 16.63 ft

Pumping Information:

Final Pumping Rate 200 mL/min Total System Volume 0.6456832 L Calculated Sample Rate 300 sec Stabilization Drawdown 3.6 in **Total Volume Pumped** 12 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS/cmTurb NTU		SpCond μS/cmTurb NTU DTW ft		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10		
Last 5	17:23:49	2100.01	19.82	5.88	458.18	9.76	16.65	0.17	92.92		
Last 5	17:28:49	2400.01	19.82	5.90	469.25	6.78	16.65	0.16	92.33		
Last 5	17:33:49	2700.01	19.74	5.91	474.04	5.89	16.65	0.16	92.46		
Last 5	17:38:49	3000.01	19.78	5.91	481.03	5.07	16.65	0.16	92.45		
Last 5	17:43:49	3300.01	19.72	5.92	484.16	4.83	16.65	0.15	92.83		
Variance 0			-0.08	0.01	4.79			-0.00	0.12		
Variance 1			0.04	0.01	6.99			-0.00	-0.01		
Variance 2			-0.06	0.01	3.13			-0.01	0.38		

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-117 Grab

Date: 2020-08-26 15:33:25

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

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 placement from TOC

36 ft

0.17 in

37 ft

QED MP50

polyethylene

Well Information:

Well IDHGWC-118Well diameter2 inWell Total Depth40.80 ftScreen Length10 ftDepth to Water13.18 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.6501467 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 37 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:11:10	9599.94	20.77	6.97	547.77	11.30	13.30	0.54	40.13
Last 5	15:16:10	9899.93	20.50	6.97	547.95	12.45	13.30	0.47	41.38
Last 5	15:21:10	10199.93	20.52	6.97	548.69	10.81	13.30	0.52	41.87
Last 5	15:26:10	10499.93	20.42	6.96	547.79	9.58	13.30	0.50	42.77
Last 5	15:31:10	10799.92	20.37	6.97	547.52	9.92	13.30	0.66	43.29
Variance 0			0.01	-0.00	0.74			0.05	0.49
Variance 1			-0.10	-0.00	-0.90			-0.02	0.89
Variance 2			-0.05	0.01	-0.27			0.16	0.53

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-118 Grab September 2020

Date: 2020-09-18 11:43:10

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

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 placement from TOC

38 ft

Alexis

0.17 in

39 ft

polyethylene

Well Information:

Well ID HGWA-47
Well diameter 2 in
Well Total Depth 43.45 ft
Screen Length 10 ft
Depth to Water 7.3 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2640735 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	рН	SpCond μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:13:30	2100.02	22.03	7.54	386.47	2.58	8.80	0.60	35.02
Last 5	11:18:30	2400.02	22.35	7.54	386.00	2.29	8.80	0.61	49.11
Last 5	11:28:30	3000.02	27.62	7.85	0.28			7.82	119.68
Last 5	11:33:38	3308.03	31.60	7.79	0.24			7.23	135.26
Last 5	11:38:38	3608.01	34.65	7.70	0.18			6.80	147.09
Variance 0			5.27	0.31	-385.72			7.21	70.58
Variance 1			3.98	-0.07	-0.04			-0.58	15.58
Variance 2			3.05	-0.09	-0.06			-0.43	11.83

Notes

SmarTroll was not stopped in time before sampling, last reading at 11:18. 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 CI, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6010D/6020B).

Grab Samples HGWA-47 Grab

Date: 2020-09-18 11:04:40

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

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 placement from TOC

69 ft

0.17 in

70 ft

QED MP50

polyethylene

Well Information:

Well ID HGWA-48D
Well diameter 2 in
Well Total Depth 72.92 ft
Screen Length 10 ft
Depth to Water 8.64 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.7974396 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 4.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	10:41:48	600.01	21.20	7.52	403.15	2.95	11.29	0.28	200.75
Last 5	10:46:48	900.00	21.96	7.50	404.76	2.94	11.62	0.26	247.42
Last 5	10:51:48	1199.99	22.32	7.50	402.14	2.31	11.72	0.25	308.19
Last 5	10:56:48	1499.99	22.58	7.50	401.40	2.41	11.79	0.24	367.60
Last 5	11:01:48	1799.98	22.62	7.50	401.61	1.50	11.88	0.23	420.84
Variance 0			0.36	-0.00	-2.62			-0.01	60.77
Variance 1			0.27	-0.00	-0.73			-0.01	59.41
Variance 2			0.04	0.00	0.20			-0.01	53.24

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for CI, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6010D/6020B).

Grab Samples HGWA-48D Grab

Date: 2020-09-18 09:40:39

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

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

Lamotte 2020we Pump placeme

Well Information:

Well ID HGWA-111
Well diameter 2 in
Well Total Depth 43.21 ft
Screen Length 10 ft
Depth to Water 12.95 ft

Pump placement from TOC

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.6456832 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 4 L

QED MP50

0.17 in

36 ft

39 ft

polyethylene

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:19:19	900.02	21.47	6.27	160.92	1.81	13.39	4.53	95.96
Last 5	09:24:19	1200.02	21.52	6.35	186.38	1.61	13.39	4.37	91.61
Last 5	09:29:19	1500.02	21.51	6.40	193.84	1.65	13.39	4.28	88.98
Last 5	09:34:19	1800.01	21.51	6.43	200.22	1.62	13.39	4.20	88.77
Last 5	09:39:19	2100.02	21.51	6.46	203.49	2.19	13.40	4.16	86.66
Variance 0			-0.01	0.05	7.46			-0.09	-2.63
Variance 1			-0.00	0.03	6.38			-0.07	-0.21
Variance 2			0.00	0.03	3.27			-0.04	-2.10

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for CI, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6010D/6020B).

Grab Samples HGWA-111 Grab

Date: 2020-09-18 11:34:05

Project Information:

Operator Name Thomas Kessler Company Name **Geosyntec Consultants** Project Name **GP-Plant Hammond** Site Name Plant Hammond

Latitude 0° 0' 0" 0° 0' 0" Longitude Sonde SN 646773

LaMotte 2020we Turbidity Make/Model

Well Information:

Well ID HGWA-112 Well diameter 2 in Well Total Depth 39.90 ft Screen Length 10 ft Depth to Water 13.40 ft

Pump Information:

Pump Model/Type QED MP50 **Tubing Type** polyethylene Tubing Diameter 0.17 in

35 ft

Tubing Length 42 ft

Pump placement from TOC

Pumping Information: Final Pumping Rate 100 mL/min Total System Volume 0.6724638 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	рН	SpCond µS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization	n		+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:13:21	900.02	22.66	5.58	80.97	6.81	14.00	1.45	109.66
Last 5	11:18:21	1200.02	22.83	5.58	80.59	6.57	14.00	1.35	109.02
Last 5	11:23:21	1500.02	22.93	5.58	80.38	3.95	14.00	1.30	108.00
Last 5	11:28:24	1803.02	23.00	5.57	80.06	4.40	14.00	1.25	108.45
Last 5	11:33:24	2103.01	23.04	5.58	80.14	2.97	14.00	1.23	107.72
Variance 0			0.10	0.00	-0.22			-0.05	-1.02
Variance 1			0.07	-0.01	-0.32			-0.05	0.45
Variance 2			0.05	0.00	0.08			-0.02	-0.72

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 CI, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6010D/6020B).

Grab Samples HGWA-112 Grab

Date: 2020-09-18 14:19:44

Pump Information:

Pump Model/Type

Tubing Diameter

Pump placement from TOC

Pumping Information:

Tubing Length

Tubing Type

QED MP50

0.17 in

40 ft

31 ft

polyethylene

200 mL/min

300 sec

3.6 in

0 L

0.6635369 L

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

Well Information:

Final Pumping Rate Well ID HGWA-113 Well diameter 2 in Total System Volume Well Total Depth Calculated Sample Rate ft Screen Length 10 ft Stabilization Drawdown Depth to Water 12.51 ft **Total Volume Pumped**

Low-Flow Sampling Stabilization Summary

LOW 1 10W Od	mpmig otabinz	Lation Cammai	y						
	Time	Elapsed	Temp C	рН	SpCond µS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:56:50	3900.99	22.18	6.07	117.62	13.30	17.91	1.06	76.97
Last 5	14:01:50	4200.99	23.29	6.08	119.16	14.80	18.10	1.06	76.62
Last 5	14:06:50	4500.99	22.76	6.07	116.85	11.60	18.40	1.13	77.01
Last 5	14:11:50	4800.99	22.55	6.07	119.39	12.00	18.72	1.08	76.69
Last 5	14:16:50	5100.99	22.48	6.09	120.17	9.05	14.10	1.12	78.84
Variance 0			-0.53	-0.01	-2.31			0.07	0.39
Variance 1			-0.21	0.00	2.54			-0.06	-0.32
Variance 2			-0.07	0.02	0.78			0.05	2.15

Notes

Low flow purge canceled to purge well dry. Well was not fully evacuated due to equipment malfunction, restarting on 9/21.

Grab Samples

N/A

Date: 2020-09-21 10:08:11

Tubing Length

Pump Information:

QED MP50

0.17 in

38 ft

polyethylene

Project Information:

Operator Name Thomas Kessler Pump Model/Type
Company Name Geosyntec Consultants Tubing Type
Project Name GP-Plant Hammond Tubing Diameter

Site Name Plant Hammond

Latitude 0° 0' 0" Longitude 0° 0' 0" Sonde SN 646773

Turbidity Make/Model LaMotte 2020we Pump placement from TOC 31 ft

Well Information: Pumping Information:

Final Pumping Rate Well ID HGWA-113 100 mL/min Well diameter 2 in Total System Volume 0.6546101 L Calculated Sample Rate Well Total Depth 300 sec ft Stabilization Drawdown Screen Length 10 ft 3.6 in Depth to Water 12.80 ft **Total Volume Pumped** 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	09:46:52	2999.99	20.36	6.03	119.92	11.40	18.35	1.20	70.15
Last 5	09:51:52	3299.99	20.25	6.04	120.48	15.73	18.70	1.14	69.26
Last 5	09:56:52	3599.98	20.24	6.05	120.46	13.88	19.00	1.13	68.46
Last 5	10:01:52	3900.03	20.39	6.05	120.36	17.49	19.40	1.12	68.19
Last 5	10:06:52	4199.98	20.56	6.05	120.12	12.04	19.75	1.08	67.51
Variance 0			-0.01	0.01	-0.02			-0.01	-0.79
Variance 1			0.16	-0.00	-0.10			-0.02	-0.27
Variance 2			0.17	0.00	-0.23			-0.04	-0.69

Notes

Low flow canceled to purge well dry due to insufficient recharge.

Grab Samples

Date: 2020-09-22 11:41:56

Project Information:

Operator Name
Company Name
Project Name
Site Name

Vashish Taukoor
Geosyntec Consultants
GP-Plant Hammond
Plant Hammond

Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 512733

Turbidity Make/Model LaMotte 2020we

Well Information:

Well ID HGWA-113
Well diameter 2 in
Well Total Depth 36.20ft
Screen Length 10 ft
Depth to Water 12.89 ft

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in

31 ft

Tubing Diameter 0.17 in Tubing Length 34 ft

Pump placement from TOC

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.6367564 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	S/cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization	1		+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	11:15:31	2400.01	22.62	6.10	102.59	26.5	15.41	3.51	181.21
Last 5	11:20:31	2700.01	22.89	6.10	102.24	26.4	15.55	3.53	192.42
Last 5	11:25:31	3000.00	23.16	6.11	101.93			3.54	207.81
Last 5	11:30:31	3300.00	23.88	6.12	102.30			3.71	215.74
Last 5	11:35:31	3600.00	26.44	6.11	100.99			4.87	218.20
Variance 0			0.27	0.00	-0.31			0.01	15.39
Variance 1			0.72	0.01	0.37			0.17	7.93
Variance 2			2.57	-0.00	-1.32			1.17	2.46

Notes

Well purged dry on 9/21, turbidity still high, purged for 1h. SmarTroll was not stopped in time before sampling, last reading at 11:20. 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 CI, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6010D/6020B).

Grab Samples HGWA-113 Grab

Date: 2020-09-24 13:27:30

Project Information:

Operator Name
Company Name
Project Name
Site Name

Vashish Taukoor
Geosyntec Consultants
GP-Plant Hammond
Plant Hammond

Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 512733

Turbidity Make/Model LaMotte 2020we

Well Information:

Well ID HGWC-101
Well diameter 2 in
Well Total Depth 37.95 ft
Screen Length 10 ft
Depth to Water 13.76 ft

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in

33 ft

Tubing Diameter 0.17 in Tubing Length 35 ft

Pump placement from TOC

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.6412198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 9 L

Low-Flow Sampling Stabilization Summary

	Time			рН	SpCond μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	13:00:03	600.03	18.70	5.43	273.03	1.28	19.20	0.21	169.58
Last 5	13:05:03	900.03	19.18	5.44	318.17	1.25	18.75	0.23	156.81
Last 5	13:15:03	1500.02	18.93	5.48	325.64	1.13	18.82	0.21	152.95
Last 5	13:20:03	1800.03	19.01	5.48	319.10	1.18	18.84	0.21	154.56
Last 5	13:25:03	2100.48	19.10	5.48	316.16	1.26	18.84	0.21	157.63
Variance 0			-0.25	0.04	7.47			-0.03	-3.86
Variance 1			0.08	-0.00	-6.54			0.00	1.61
Variance 2			0.09	-0.00	-2.94			0.00	3.07

Notes

Start Purge rate was 200 mL/min, then reduced to 100 mL/min.

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 CI, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6010D/6020B).

Grab Samples HGWC-101 Grab

Date: 2020-09-24 16:49:12

Pump Information:

Pump Model/Type

Tubing Diameter

Tubing Length

Tubing Type

Project Information:

Operator Name Chad Russo

Company Name **Geosyntec Consultants** Project Name **GP-Plant Hammond**

Site Name Plant Hammond

Latitude 0° 0' 0" 0° 0' 0" Longitude Sonde SN 597519

Turbidity Make/Model LaMotte 2020we Pump placement from TOC

33 ft

Alexis

0.17 in

34 ft

polyethylene

Well Information:

Well ID HGWC-102 Well diameter 2 in Well Total Depth 36.84 ft Screen Length 10 ft Depth to Water 13.78 ft

Pumping Information:

Final Pumping Rate 200 mL/min Total System Volume 0.2417564 L Calculated Sample Rate 300 sec Stabilization Drawdown 3.6 in **Total Volume Pumped** 7 L

Low-Flow Sampling Stabilization Summary

	Time	Time Elapsed		рН	SpCond μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:26:25	600.01	19.10	5.80	827.17	0.28	14.02	0.24	108.34
Last 5	16:31:25	900.00	19.06	5.82	860.51	0.16	14.02	0.21	110.94
Last 5	16:36:25	1199.99	19.07	5.82	862.21	0.53	14.03	0.18	113.91
Last 5	16:41:25	1499.98	19.10	5.83	871.90	1.12	14.04	0.16	116.59
Last 5	16:46:25	1799.98	19.10	5.82	891.26	0.74	14.04	0.14	121.29
Variance 0			0.01	0.00	1.70			-0.03	2.98
Variance 1			0.03	0.00	9.69			-0.02	2.68
Variance 2			-0.00	-0.01	19.36			-0.02	4.70

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 CI, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6010D/6020B).

Grab Samples HGWC-102 Grab

Date: 2020-09-24 18:34:14

Project Information:

Operator Name
Company Name
Project Name
Site Name

Vashish Taukoor
Geosyntec Consultants
GP-Plant Hammond
Plant Hammond

Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 512733

Turbidity Make/Model LaMotte 2020we

Turbialty Make/Model Lawotte 2020we

Well Information:

Well ID HGWC-103
Well diameter 2 in
Well Total Depth 37.80 ft
Screen Length 10 ft
Depth to Water 14.13 ft

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in

33 ft

Tubing Diameter 0.17 i
Tubing Length 35 ft

Pump placement from TOC

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.6412198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 15 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS	cm Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	18:10:07	4204.03	18.13	5.59	720.16	7.69	14.20	0.25	148.70
Last 5	18:15:07	4504.03	18.14	5.59	720.11	8.78	14.20	0.26	149.26
Last 5	18:20:07	4804.03	18.10	5.59	719.19	8.97	14.20	0.27	149.44
Last 5	18:25:07	5104.02	18.07	5.60	720.34	7.73	14.20	0.26	149.66
Last 5	18:30:07	5404.02	18.08	5.60	721.31	8.35	14.20	0.27	150.48
Variance 0			-0.04	-0.00	-0.92			0.00	0.18
Variance 1			-0.03	0.01	1.15			-0.01	0.22
Variance 2			0.01	-0.00	0.97			0.01	0.82

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 CI, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6010D/6020B).

Grab Samples HGWC-103 Grab

FD-04 Grab

Date: 2020-09-24 15:09:20

Project Information:

Operator Name
Company Name
Project Name
Site Name

Vashish Taukoor
Geosyntec Consultants
GP-Plant Hammond
Plant Hammond

Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 512733

Turbidity Make/Model LaMotte 2020we

Lawotte 2020we

Well Information:

Well ID HGWC-105
Well diameter 2 in
Well Total Depth 44.58 ft
Screen Length 10 ft
Depth to Water 17.54 ft

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in

39 ft

Tubing Diameter 0.17 i Tubing Length 41 ft

Pumping Information:

Pump placement from TOC

Final Pumping Rate 100 mL/min
Total System Volume 0.6680003 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 5.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	14:45:01	900.02	19.07	6.65	649.64	7.41	19.72	0.59	43.15
Last 5	14:50:01	1200.02	19.15	6.64	644.24	5.56	19.72	0.55	39.50
Last 5	14:55:01	1500.02	19.05	6.64	640.20	4.62	19.72	0.52	37.68
Last 5	15:00:01	1800.03	19.01	6.63	637.78	4.51	19.72	0.52	36.49
Last 5	15:05:01	2100.03	18.99	6.63	635.79	4.30	19.72	0.53	36.32
Variance 0			-0.10	-0.01	-4.04			-0.02	-1.82
Variance 1			-0.04	-0.00	-2.42			-0.00	-1.19
Variance 2			-0.02	-0.00	-2.00			0.01	-0.17

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 CI, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6010D/6020B).

Grab Samples HGWC-105 Grab

Date: 2020-09-24 16:53:09

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

Lamotte 2020we

Well Information:

Well ID HGWC-107
Well diameter 2 in
Well Total Depth 38.07 ft
Screen Length 10 ft
Depth to Water 15.80 ft

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in

32 ft

Tubing Diameter 0.17 in Tubing Length 40 ft

Pumping Information:

Pump placement from TOC

Final Pumping Rate 100 mL/min
Total System Volume 0.6635369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 8.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	16:30:52	4199.98	19.42	6.11	421.68	6.37	15.82	0.26	77.86
Last 5	16:35:52	4499.97	19.42	6.11	417.92	6.87	15.82	0.27	77.59
Last 5	16:40:52	4799.97	19.42	6.11	417.85	5.69	15.82	0.26	78.07
Last 5	16:45:52	5099.96	19.43	6.11	416.90	5.42	15.82	0.27	78.29
Last 5	16:50:52	5399.95	19.42	6.11	418.92	4.59	15.82	0.27	78.03
Variance 0			0.01	0.00	-0.07			-0.01	0.49
Variance 1			0.00	0.00	-0.95			0.01	0.22
Variance 2			-0.01	-0.00	2.02			-0.01	-0.26

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 CI, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6010D/6020B).

Grab Samples HGWC-107 Grab

Date: 2020-09-25 16:16:35

Project Information:

Operator Name Thomas Kessler Company Name **Geosyntec Consultants Project Name GP-Plant Hammond** Site Name Plant Hammond

Latitude 0° 0' 0" 0° 0' 0" Longitude Sonde SN 646773

Turbidity Make/Model LaMotte 2020we

Well Information:

Well ID HGWC-109 Well diameter 2 in Well Total Depth 31.00 ft Screen Length 10 ft Depth to Water 8.93 ft

Pump Information:

Pump Model/Type QED MP50 **Tubing Type** polyethylene

26 ft

Tubing Diameter 0.17 in Tubing Length 27 ft

Pumping Information:

Pump placement from TOC

Final Pumping Rate 200 mL/min Total System Volume 0.6055119 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	рН	SpCond μS/cm Turb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	15:55:06	1200.02	19.18	6.79	382.53	4.25	8.96	0.27	-66.89
Last 5	16:00:06	1500.02	19.19	6.79	381.90	3.49	8.96	0.23	-67.30
Last 5	16:05:06	1800.02	19.19	6.78	381.16	2.65	8.96	0.18	-67.78
Last 5	16:10:06	2100.02	19.16	6.78	380.06	2.90	8.96	0.18	-68.14
Last 5	16:15:06	2400.02	19.15	6.79	379.15	1.90	8.96	0.17	-68.47
Variance 0			-0.00	-0.01	-0.75			-0.05	-0.48
Variance 1			-0.03	0.00	-1.10			-0.00	-0.36
Variance 2			-0.01	0.00	-0.91			-0.01	-0.33

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 CI, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6010D/6020B).

Grab Samples HGWC-109 Grab

Date: 2020-09-25 18:28:39

Project Information:

Operator Name
Company Name
Project Name
Site Name

Vashish Taukoor
Geosyntec Consultants
GP-Plant Hammond
Plant Hammond

Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 512733

Turbidity Make/Model LaMotte 2020we

Well Information:

Well ID HGWC-117
Well diameter 2 in
Well Total Depth 39.95 ft
Screen Length 10 ft
Depth to Water 17.20 ft

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in

35.26 ft

Tubing Diameter 0.17 i
Tubing Length 37 ft

Pump placement from TOC

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.6501467 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 36 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond µS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	18:00:07	3600.01	18.61	6.02	537.41	6.50	17.20	0.09	257.27
Last 5	18:10:07	4200.01	18.57	6.01	537.61	5.50	17.20	0.09	243.12
Last 5	18:15:07	4500.01	18.54	6.02	537.51	5.40	17.20	0.09	239.64
Last 5	18:20:07	4800.01	18.55	6.01	537.96	5.80	17.20	0.09	232.48
Last 5	18:25:07	5100.00	18.53	6.01	539.42	5.20	17.20	0.09	228.00
Variance 0			-0.03	0.01	-0.10			-0.00	-3.48
Variance 1			0.00	-0.01	0.45			-0.00	-7.16
Variance 2			-0.02	0.01	1.46			-0.00	-4.48

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 CI, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6010D/6020B).

Grab Samples HGWC-117 Grab

Date: 2020-09-28 12:53:13

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

Well Information:

Well ID HGWC-118
Well diameter 2 in
Well Total Depth 46.85 ft
Screen Length 10 ft
Depth to Water 13.90 ft

Pump Information:

Pump Model/Type QED MP50
Tubing Type polyethylene
Tubing Diameter 0.17 in

35 ft

Tubing Diameter 0.17 in Tubing Length 40 ft

Pump placement from TOC

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.6635369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 3.6 in
Total Volume Pumped 37 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	рН	SpCond μS/cmTurb NTU		DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0.5	+/- 0.1	+/- 5%	+/- 10		+/- 10%	+/- 10
Last 5	12:31:20	9899.92	22.67	7.03	538.18	9.43	13.95	0.30	40.23
Last 5	12:36:20	10199.92	22.67	7.03	538.95	9.22	13.95	0.30	40.71
Last 5	12:41:20	10499.92	22.74	7.03	537.68	8.01	13.95	0.30	41.44
Last 5	12:46:20	10799.91	22.74	7.03	539.65	7.86	13.95	0.30	41.88
Last 5	12:51:20	11099.91	22.63	7.03	539.07	8.42	13.95	0.31	42.13
Variance 0			0.07	-0.00	-1.27			0.00	0.73
Variance 1			0.00	-0.00	1.97			-0.00	0.44
Variance 2			-0.11	0.01	-0.59			0.00	0.25

Notes

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for CI, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6010D/6020B).

Grab Samples HGWC-118 Grab November 2020

Test Date / Time: 11/10/2020 12:13:49 PM

Project: GP-Plant Hammond **Operator Name:** Thomas Kessler

Location Name: HGWA-47

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33.74 ft

Initial Depth to Water: 7.75 ft

Pump Type: Peristaltic

Tubing Type: Polyethylene
Pump Intake From TOC: 38.74 ft
Estimated Total Volume Pumped:

5000 ml

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.02 ft Instrument Used: Aqua TROLL 400

Serial Number: 728550

Test Notes:

Five bottles: Two 1-L plastic bottles with HNO3 for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO4 (EPA 300.0); and one 250-mL plastic bottle with HNO3 for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 43.35 ft.

Weather Conditions:

Cloudy, 70 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	рН	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 12:13 PM	00:00	7.38 pH	20.45 °C	388.76 μS/cm	0.31 mg/L	30.10 NTU	-18.6 mV	7.75 ft	200.00 ml/min
11/10/2020 12:18 PM	05:00	7.36 pH	20.44 °C	386.45 μS/cm	0.26 mg/L	23.50 NTU	-21.6 mV	7.77 ft	200.00 ml/min
11/10/2020 12:23 PM	10:00	7.36 pH	20.44 °C	387.85 μS/cm	0.23 mg/L	15.40 NTU	-23.9 mV	7.77 ft	200.00 ml/min
11/10/2020 12:28 PM	15:00	7.36 pH	20.44 °C	388.69 μS/cm	0.24 mg/L	10.60 NTU	-24.7 mV	7.77 ft	200.00 ml/min
11/10/2020 12:33 PM	20:00	7.34 pH	20.48 °C	390.01 μS/cm	0.22 mg/L	7.89 NTU	-25.5 mV	7.77 ft	200.00 ml/min
11/10/2020 12:38 PM	25:00	7.34 pH	20.59 °C	390.50 μS/cm	0.21 mg/L	4.34 NTU	-25.5 mV	7.77 ft	200.00 ml/min

Sample ID:	Description:
HGWA-47	Grab Samle

Test Date / Time: 11/11/2020 8:59:27 AM

Project: GP-Plant Hammond **Operator Name:** Shawn Lin

Location Name: HGWA-48D

Well Diameter: 2 cm Screen Length: 10 m Top of Screen: 62.97 m Total Depth: 72.97 m

Initial Depth to Water: 7.64 ft

Pump Type: Bladder

Tubing Type: Polyethylene
Pump Intake From TOC: 67.97 m
Estimated Total Volume Pumped:

11.5 liter

Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 5.1 ft Instrument Used: Aqua TROLL 400

Serial Number: 728634

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 CI, 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 = 74.02 ft.

Weather Conditions:

Cloudy, 70 degrees F

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
11/11/2020 8:59 AM	00:00	7.44 pH	19.72 °C	395.75 μS/cm	3.37 mg/L	13.90 NTU	-23.3 mV	10.10 ft	200.00 ml/min
11/11/2020 9:00 AM	01:31	7.43 pH	19.60 °C	405.35 μS/cm	3.35 mg/L		-53.6 mV	7.64 ft	200.00 ml/min
11/11/2020 9:05 AM	06:31	7.42 pH	19.45 °C	403.04 μS/cm	2.73 mg/L	12.20 NTU	-24.9 mV	11.10 ft	200.00 ml/min
11/11/2020 9:10 AM	11:31	7.41 pH	19.41 °C	406.31 μS/cm	2.27 mg/L	10.60 NTU	-59.8 mV	12.29 ft	200.00 ml/min
11/11/2020 9:15 AM	16:31	7.42 pH	19.94 °C	407.13 μS/cm	1.97 mg/L	5.34 NTU	-25.3 mV	12.32 ft	100.00 ml/min
11/11/2020 9:20 AM	21:31	7.39 pH	20.11 °C	403.68 μS/cm	0.60 mg/L	4.52 NTU	-63.4 mV	12.31 ft	100.00 ml/min
11/11/2020 9:25 AM	26:31	7.39 pH	20.07 °C	402.50 μS/cm	0.52 mg/L	3.23 NTU	-26.8 mV	12.20 ft	100.00 ml/min
11/11/2020 9:30 AM	31:31	7.40 pH	19.84 °C	401.61 μS/cm	0.46 mg/L	3.74 NTU	-24.1 mV	12.29 ft	100.00 ml/min
11/11/2020 9:35 AM	36:31	7.40 pH	19.67 °C	403.70 μS/cm	0.96 mg/L	3.25 NTU	-54.2 mV	12.50 ft	160.00 ml/min
11/11/2020 9:40 AM	41:31	7.40 pH	19.84 °C	402.80 μS/cm	0.71 mg/L	3.09 NTU	-54.3 mV	12.58 ft	150.00 ml/min

11/11/2020 9:45 AM	46:31	7.40 pH	19.80 °C	402.54 μS/cm	0.65 mg/L	2.81 NTU	-22.3 mV	12.63 ft	150.00 ml/min
11/11/2020 9:50 AM	51:31	7.40 pH	19.80 °C	402.08 μS/cm	0.63 mg/L	1.96 NTU	-21.8 mV	12.69 ft	150.00 ml/min
11/11/2020 9:55 AM	56:31	7.41 pH	19.82 °C	402.72 μS/cm	0.58 mg/L	1.92 NTU	-21.9 mV	12.74 ft	150.00 ml/min
11/11/2020 10:00 AM	01:01:31	7.40 pH	19.85 °C	401.93 μS/cm	0.55 mg/L	2.11 NTU	-21.6 mV	12.74 ft	150.00 ml/min
11/11/2020 10:05 AM	01:06:31	7.40 pH	19.80 °C	402.42 μS/cm	0.53 mg/L	2.33 NTU	-52.6 mV	12.74 ft	150.00 ml/min

Sample ID:	Description:
HGWA-48D	Grab Sample

December 2020

Test Date / Time: 12/15/2020 9:50:35 AM

Project: GP-Plant Hammond **Operator Name:** Shawn Lin

Location Name: HGWA-47

Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 33.74 ft Total Depth: 43.74 ft

Initial Depth to Water: 7.22 ft

Pump Type: Peristaltic

Tubing Type: Polyethylene
Pump Intake From TOC: 38.74 ft
Estimated Total Volume Pumped:

5 liters

Flow Cell Volume: 90 ml

Final Flow Rate: 200 ml/min Final

Draw Down: 0.02 ft

Instrument Used: Aqua TROLL 400

Serial Number: 728648

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 CI, 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 = 43.71 ft.

Weather Conditions:

Sunny, Cold

Low-Flow Readings:

Date Time	Elapsed Time	рН	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	7.24 pH	16.13 °C	402.31 μS/cm	0.24 mg/L		-13.5 mV	7.22 ft	200.00 ml/min
12/15/2020 9:55 AM	05:00	7.25 pH	16.27 °C	395.52 μS/cm	0.20 mg/L	2.56 NTU	-28.0 mV	7.24 ft	200.00 ml/min
12/15/2020 10:00 AM	10:00	7.26 pH	16.49 °C	395.78 μS/cm	0.18 mg/L	2.58 NTU	-28.9 mV	7.24 ft	200.00 ml/min
12/15/2020 10:05 AM	15:00	7.27 pH	16.72 °C	394.06 μS/cm	0.16 mg/L	2.77 NTU	-26.5 mV	7.24 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-47	Grab Sample

Test Date / Time: 12/15/2020 11:05:08 AM

Project: GP-Plant Hammond **Operator Name:** Shawn Lin

Location Name: HGWA-48D

Well Diameter: 2 ft Casing Type: PVC Screen Length: 10 ft Top of Screen: 62.97 ft

Initial Depth to Water: 7.14 ft

Pump Type: Bladder

Tubing Type: Polyethylene
Pump Intake From TOC: 67.97 ft
Estimated Total Volume Pumped:

21 liters

Flow Cell Volume: 90 ml

Final Flow Rate: 100 ml/min Final

Draw Down: 2.41 ft

Instrument Used: Aqua TROLL 400

Serial Number: 728648

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 CI, 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 = 74.09 ft.

Weather Conditions:

Sunny, Cold

Date Time	Elapsed Time	рН	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 11:05 AM	00:00	7.32 pH	17.70 °C	411.15 μS/cm	0.27 mg/L		-42.8 mV	7.14 ft	200.00 ml/min
12/15/2020 11:10 AM	05:00	7.31 pH	17.77 °C	400.46 μS/cm	0.21 mg/L	10.34 NTU	-50.2 mV	10.10 ft	200.00 ml/min
12/15/2020 11:15 AM	10:00	7.31 pH	17.72 °C	390.64 μS/cm	0.17 mg/L	8.82 NTU	-75.8 mV	10.73 ft	200.00 ml/min
12/15/2020 11:20 AM	15:00	7.33 pH	16.99 °C	379.54 μS/cm	0.18 mg/L	8.68 NTU	-57.8 mV	10.68 ft	100.00 ml/min
12/15/2020 11:25 AM	20:00	7.33 pH	16.58 °C	376.75 μS/cm	0.22 mg/L	5.66 NTU	-78.6 mV	10.39 ft	100.00 ml/min
12/15/2020 11:30 AM	25:00	7.32 pH	16.72 °C	371.30 μS/cm	0.23 mg/L	5.15 NTU	-79.1 mV	10.26 ft	100.00 ml/min
12/15/2020 11:35 AM	30:00	7.33 pH	16.89 °C	364.80 µS/cm	0.24 mg/L	5.26 NTU	-57.2 mV	10.12 ft	100.00 ml/min
12/15/2020 11:40 AM	35:00	7.33 pH	17.01 °C	369.94 μS/cm	0.23 mg/L	5.15 NTU	-55.7 mV	10.00 ft	100.00 ml/min
12/15/2020 11:45 AM	40:00	7.34 pH	17.14 °C	370.08 μS/cm	0.23 mg/L	5.83 NTU	-75.6 mV	9.70 ft	100.00 ml/min
12/15/2020 11:50 AM	45:00	7.33 pH	17.63 °C	378.42 μS/cm	0.21 mg/L	8.24 NTU	-77.4 mV	10.10 ft	150.00 ml/min
12/15/2020 11:55 AM	50:00	7.34 pH	17.66 °C	376.63 μS/cm	0.17 mg/L	10.36 NTU	-57.3 mV	10.32 ft	150.00 ml/min
12/15/2020 12:00 PM	55:00	7.36 pH	16.99 °C	361.42 μS/cm	0.17 mg/L	11.00 NTU	-76.8 mV	10.11 ft	100.00 ml/min

12/15/2020 12:05 PM	01:00:00	7.36 pH	17.03 °C	361.62 μS/cm	0.18 mg/L	5.03 NTU	-56.1 mV	10.00 ft	100.00 ml/min
12/15/2020 12:10 PM	01:05:00	7.36 pH	17.16 °C	358.90 μS/cm	0.18 mg/L	6.32 NTU	-76.2 mV	9.97 ft	100.00 ml/min
12/15/2020 12:15 PM	01:10:00	7.36 pH	17.16 °C	375.00 μS/cm	0.16 mg/L	6.01 NTU	-76.8 mV	9.94 ft	100.00 ml/min
12/15/2020 12:20 PM	01:15:00	7.36 pH	17.29 °C	372.74 μS/cm	0.15 mg/L	6.62 NTU	-55.8 mV	9.94 ft	100.00 ml/min
12/15/2020 12:25 PM	01:20:00	7.36 pH	17.34 °C	372.81 μS/cm	0.15 mg/L	6.76 NTU	-54.6 mV	9.94 ft	100.00 ml/min
12/15/2020 12:30 PM	01:25:00	7.37 pH	17.25 °C	369.51 μS/cm	0.14 mg/L	7.02 NTU	-53.8 mV	9.94 ft	100.00 ml/min
12/15/2020 12:35 PM	01:30:00	7.37 pH	17.22 °C	368.91 μS/cm	0.13 mg/L	7.44 NTU	-74.4 mV	9.79 ft	100.00 ml/min
12/15/2020 12:40 PM	01:35:00	7.37 pH	17.21 °C	370.94 μS/cm	0.14 mg/L	5.56 NTU	-54.1 mV	9.70 ft	100.00 ml/min
12/15/2020 12:45 PM	01:40:00	7.37 pH	17.39 °C	374.61 μS/cm	0.13 mg/L	7.61 NTU	-53.5 mV	9.70 ft	100.00 ml/min
12/15/2020 12:50 PM	01:45:00	7.38 pH	17.48 °C	378.96 μS/cm	0.13 mg/L	7.51 NTU	-74.4 mV	9.70 ft	100.00 ml/min
12/15/2020 12:55 PM	01:50:00	7.38 pH	17.43 °C	376.44 μS/cm	0.12 mg/L	8.14 NTU	-53.9 mV	9.70 ft	100.00 ml/min
12/15/2020 1:00 PM	01:55:00	7.38 pH	17.38 °C	375.65 μS/cm	0.12 mg/L	7.89 NTU	-74.2 mV	9.65 ft	100.00 ml/min
12/15/2020 1:05 PM	02:00:00	7.38 pH	17.44 °C	371.09 μS/cm	0.12 mg/L	8.09 NTU	-53.6 mV	9.62 ft	100.00 ml/min
12/15/2020 1:10 PM	02:05:00	7.38 pH	17.43 °C	370.02 μS/cm	0.12 mg/L	8.69 NTU	-74.1 mV	9.59 ft	100.00 ml/min
12/15/2020 1:15 PM	02:10:00	7.39 pH	17.53 °C	371.21 μS/cm	0.11 mg/L	8.75 NTU	-53.5 mV	9.59 ft	100.00 ml/min
12/15/2020 1:20 PM	02:15:00	7.39 pH	17.61 °C	373.50 μS/cm	0.11 mg/L	9.26 NTU	-74.2 mV	9.59 ft	100.00 ml/min
12/15/2020 1:25 PM	02:20:00	7.39 pH	17.61 °C	369.25 μS/cm	0.11 mg/L	8.95 NTU	-53.3 mV	9.56 ft	100.00 ml/min
12/15/2020 1:30 PM	02:25:00	7.39 pH	17.52 °C	369.40 μS/cm	0.10 mg/L	9.41 NTU	-73.9 mV	9.56 ft	100.00 ml/min
12/15/2020 1:35 PM	02:30:00	7.39 pH	17.52 °C	370.54 μS/cm	0.10 mg/L	9.70 NTU	-74.6 mV	9.55 ft	100.00 ml/min
12/15/2020 1:40 PM	02:35:00	7.39 pH	17.39 °C	370.57 μS/cm	0.10 mg/L	9.30 NTU	-52.9 mV	9.55 ft	100.00 ml/min
12/15/2020 1:45 PM	02:40:00	7.39 pH	17.57 °C	373.35 μS/cm	0.10 mg/L	9.68 NTU	-74.0 mV	9.55 ft	100.00 ml/min
12/15/2020 1:50 PM	02:45:00	7.39 pH	17.64 °C	367.76 μS/cm	0.09 mg/L	9.59 NTU	-74.9 mV	9.55 ft	100.00 ml/min
12/15/2020 1:55 PM	02:50:00	7.39 pH	17.75 °C	366.78 μS/cm	0.09 mg/L	9.53 NTU	-53.4 mV	9.55 ft	100.00 ml/min

Sample ID:	Description:
HGWA-48D	Grab Sample

January 2021

Test Date / Time: 1/19/2021 12:09:45 PM

Project: GP-Plant Hammond **Operator Name:** Chad Russo

Location Name: HGWA-47

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 34 ft

Initial Depth to Water: 7.52 ft

Pump Type: Alexis

Tubing Type: polyethylene
Tubing Inner Diameter: 0.17 in
Estimated Total Volume Pumped:

5763.333 ml

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.02 ft Instrument Used: Aqua TROLL 400

Serial Number: 728634

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/19/2021 12:09 PM	00:00	7.38 pH	14.05 °C	410.41 μS/cm	1.29 mg/L		-34.5 mV	7.52 ft	200.00 ml/min
1/19/2021 12:13 PM	03:49	7.31 pH	15.56 °C	395.83 μS/cm	0.40 mg/L	9.14 NTU	-89.5 mV	7.54 ft	200.00 ml/min
1/19/2021 12:18 PM	08:49	7.31 pH	15.97 °C	387.23 μS/cm	0.27 mg/L	5.92 NTU	-46.1 mV	7.54 ft	200.00 ml/min
1/19/2021 12:23 PM	13:49	7.31 pH	15.95 °C	392.30 μS/cm	0.21 mg/L	3.76 NTU	-36.1 mV	7.54 ft	200.00 ml/min
1/19/2021 12:28 PM	18:49	7.32 pH	16.10 °C	393.24 μS/cm	0.18 mg/L	2.57 NTU	-67.9 mV	7.54 ft	200.00 ml/min
1/19/2021 12:33 PM	23:49	7.32 pH	16.10 °C	392.43 μS/cm	0.16 mg/L	2.19 NTU	-26.5 mV	7.54 ft	200.00 ml/min
1/19/2021 12:38 PM	28:49	7.32 pH	16.04 °C	392.31 µS/cm	0.16 mg/L	2.05 NTU	-58.0 mV	7.54 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-47	Grab

Test Date / Time: 1/19/2021 12:02:50 PM

Project: GP-Plant Hammond (3) **Operator Name:** Connor Cain

Location Name: HGWA-48D

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 63 ft

Initial Depth to Water: 7.28 ft

Pump Type: QED

Tubing Type: polyethylene
Tubing Inner Diameter: 0.17 in
Estimated Total Volume Pumped:

9000 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

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
1/19/2021 12:02 PM	00:00	7.28 pH	15.98 °C	0.42 μS/cm	0.57 mg/L		-113.2 mV	221.89 ft	200.00 ml/min
1/19/2021 12:07 PM	05:00	7.30 pH	16.34 °C	0.41 μS/cm	0.29 mg/L		-188.3 mV	221.89 ft	200.00 ml/min
1/19/2021 12:12 PM	10:00	7.31 pH	16.47 °C	0.41 μS/cm	0.24 mg/L		-117.4 mV	221.89 ft	200.00 ml/min
1/19/2021 12:17 PM	15:00	7.33 pH	16.66 °C	0.41 μS/cm	0.22 mg/L		-198.4 mV	221.89 ft	200.00 ml/min
1/19/2021 12:22 PM	20:00	7.34 pH	16.73 °C	0.41 μS/cm	0.18 mg/L		-126.8 mV	221.89 ft	200.00 ml/min
1/19/2021 12:27 PM	25:00	7.36 pH	16.79 °C	0.41 μS/cm	0.16 mg/L		-214.0 mV	221.89 ft	200.00 ml/min
1/19/2021 12:32 PM	30:00	7.37 pH	16.82 °C	0.41 μS/cm	0.15 mg/L		-130.3 mV	221.89 ft	200.00 ml/min
1/19/2021 12:37 PM	35:00	7.38 pH	16.71 °C	0.40 μS/cm	0.13 mg/L		-122.0 mV	221.89 ft	200.00 ml/min
1/19/2021 12:42 PM	40:00	7.39 pH	16.72 °C	0.40 μS/cm	0.12 mg/L		-120.1 mV	221.89 ft	200.00 ml/min
1/19/2021 12:47 PM	45:00	7.40 pH	16.69 °C	0.40 µS/cm	0.11 mg/L		-197.7 mV	221.89 ft	200.00 ml/min

Sample ID:	Description:
HGWA-48D	Grab

March 2021

Test Date / Time: 3/12/2021 2:24:24 PM

Project: GP-Plant Hammond **Operator Name:** Chad Russo

Location Name: HGWA-47

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33.74 ft

Total Depth: 43.74 ft

Initial Depth to Water: 6.91 ft

Pump Type: Bladder

Tubing Type: Polyethylene
Pump intake from TOC: 39 ft
Estimated Total Volume Pumped:

6.536667 Liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 2.36 ft Instrument Used: Aqua TROLL 400

Serial Number: 728550

Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium

Low-Flow Readings:

Date Time	Elapsed Time	рН	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 2:24 PM	00:00	7.31 pH	22.55 °C	340.56 μS/cm	4.08 mg/L		71.5 mV	6.91 ft	200.00 ml/min
3/12/2021 2:29 PM	05:00	7.46 pH	19.86 °C	378.44 μS/cm	0.90 mg/L	1.38 NTU	-18.1 mV	6.91 ft	200.00 ml/min
3/12/2021 2:34 PM	10:00	7.50 pH	19.68 °C	381.57 μS/cm	0.52 mg/L	0.99 NTU	-24.7 mV	6.91 ft	200.00 ml/min
3/12/2021 2:39 PM	15:00	7.49 pH	19.73 °C	384.00 μS/cm	0.24 mg/L	0.84 NTU	-18.4 mV	6.91 ft	200.00 ml/min
3/12/2021 2:44 PM	20:00	7.50 pH	19.68 °C	383.40 μS/cm	0.18 mg/L	0.96 NTU	1.4 mV	6.91 ft	200.00 ml/min
3/12/2021 2:47 PM	22:41	7.50 pH	19.73 °C	383.88 μS/cm	0.19 mg/L	0.99 NTU	4.6 mV	6.91 ft	200.00 ml/min
3/12/2021 2:52 PM	27:41	7.50 pH	19.73 °C	381.38 μS/cm	0.15 mg/L	0.72 NTU	8.9 mV	6.91 ft	200.00 ml/min
3/12/2021 2:57 PM	32:41	7.52 pH	19.77 °C	382.32 μS/cm	0.13 mg/L	1.21 NTU	3.5 mV	6.91 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-47	Grab Sample.

Test Date / Time: 3/12/2021 12:02:05 PM

Project: GP-Plant Hammond **Operator Name:** Thomas Kessler

Location Name: HGWA-48D

Well Diameter: 2 in **Casing Type: PVC** Screen Length: 10 ft Top of Screen: 62.97 ft Total Depth: 72.97

Initial Depth to Water: 6.82 ft

Pump Type: Bladder

Tubing Type: polyethylene Pump Intake From TOC: 67.97 ft **Estimated Total Volume Pumped:**

3.5 Liter

Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 1.48 ft

Instrument Used: Aqua TROLL 400

Serial Number: 728566

Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Rainy; 70 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	рН	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 12:02 PM	00:00	7.58 pH	20.35 °C	398.47 μS/cm	2.45 mg/L	9.40 NTU	-99.8 mV	6.82 ft	200.00 ml/min
3/12/2021 12:07 PM	05:00	7.51 pH	17.77 °C	406.60 μS/cm	1.20 mg/L	16.50 NTU	-117.6 mV	8.15 ft	200.00 ml/min
3/12/2021 12:12 PM	10:00	7.51 pH	18.03 °C	404.88 μS/cm	1.28 mg/L	14.10 NTU	-125.0 mV	8.35 ft	200.00 ml/min
3/12/2021 12:17 PM	15:00	7.52 pH	17.88 °C	402.96 μS/cm	1.47 mg/L	11.63 NTU	-127.4 mV	8.31 ft	200.00 ml/min
3/12/2021 12:22 PM	20:00	7.49 pH	18.13 °C	402.59 μS/cm	1.49 mg/L	6.00 NTU	-125.2 mV	8.30 ft	200.00 ml/min
3/12/2021 12:27 PM	25:00	7.51 pH	18.33 °C	401.23 μS/cm	1.49 mg/L	4.94 NTU	-125.8 mV	8.30 ft	200.00 ml/min
3/12/2021 12:32 PM	30:00	7.51 pH	18.44 °C	398.78 µS/cm	1.48 mg/L	4.64 NTU	-124.7 mV	8.30 ft	200.00 ml/min

Sample ID:	Description:
HGWA-48D	Grab Sample.

Test Date / Time: 3/11/2021 1:20:37 PM

Project: GP-Plant Hammond **Operator Name:** Chad Russo

Location Name: HGWA-111

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33.67 ft Total Depth: 43.67 ft

Initial Depth to Water: 11.31 ft

Pump Type: Bladder

Tubing Type: Polyethylene
Pump Intake From TOC: 39 ft
Estimated Total Volume Pumped:

36 Liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 1.21 ft Instrument Used: Aqua TROLL 400

Serial Number: 728550

Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium

Date Time	Elapsed Time	рН	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 1:20 PM	00:00	7.25 pH	22.36 °C	128.30 μS/cm	4.89 mg/L		52.6 mV	11.31 ft	200.00 ml/min
3/11/2021 1:25 PM	05:00	6.39 pH	19.68 °C	133.70 μS/cm	4.97 mg/L	1.54 NTU	64.4 mV	12.15 ft	200.00 ml/min
3/11/2021 1:30 PM	10:00	6.58 pH	19.54 °C	218.30 μS/cm	4.41 mg/L	1.80 NTU	69.9 mV	12.15 ft	200.00 ml/min
3/11/2021 1:35 PM	15:00	6.72 pH	19.46 °C	242.68 μS/cm	4.20 mg/L	2.78 NTU	52.7 mV	12.20 ft	200.00 ml/min
3/11/2021 1:40 PM	20:00	6.80 pH	19.33 °C	258.90 μS/cm	4.08 mg/L	8.00 NTU	50.9 mV	12.25 ft	200.00 ml/min
3/11/2021 1:45 PM	25:00	6.86 pH	19.25 °C	270.24 μS/cm	3.97 mg/L	22.10 NTU	63.1 mV	12.28 ft	200.00 ml/min
3/11/2021 1:50 PM	30:00	6.91 pH	19.03 °C	279.90 μS/cm	3.90 mg/L	30.00 NTU	49.8 mV	12.33 ft	200.00 ml/min
3/11/2021 1:55 PM	35:00	6.93 pH	19.08 °C	287.49 μS/cm	3.86 mg/L	27.90 NTU	62.5 mV	12.35 ft	200.00 ml/min
3/11/2021 2:00 PM	40:00	6.98 pH	19.38 °C	293.51 μS/cm	3.79 mg/L	27.80 NTU	49.2 mV	12.37 ft	200.00 ml/min
3/11/2021 2:05 PM	45:00	7.02 pH	19.60 °C	301.71 μS/cm	3.73 mg/L	31.00 NTU	60.2 mV	12.37 ft	200.00 ml/min
3/11/2021 2:10 PM	50:00	7.06 pH	19.60 °C	306.80 μS/cm	3.70 mg/L	29.50 NTU	48.2 mV	12.37 ft	200.00 ml/min
3/11/2021 2:15 PM	55:00	7.05 pH	19.55 °C	305.50 μS/cm	3.71 mg/L	27.40 NTU	61.0 mV	12.37 ft	200.00 ml/min
3/11/2021 2:20 PM	01:00:00	7.08 pH	19.64 °C	309.86 μS/cm	3.66 mg/L	24.30 NTU	48.6 mV	12.37 ft	200.00 ml/min
3/11/2021 2:25 PM	01:05:00	7.09 pH	19.55 °C	311.80 μS/cm	3.67 mg/L	22.50 NTU	60.3 mV	12.37 ft	200.00 ml/min
3/11/2021 2:30 PM	01:10:00	7.11 pH	19.59 °C	313.23 µS/cm	3.65 mg/L	21.90 NTU	60.7 mV	12.42 ft	200.00 ml/min

3/11/2021									
2:35 PM	01:15:00	7.08 pH	19.68 °C	312.80 μS/cm	3.64 mg/L	23.90 NTU	62.4 mV	12.42 ft	200.00 ml/min
3/11/2021 2:40 PM	01:20:00	7.11 pH	19.60 °C	315.22 µS/cm	3.62 mg/L	24.40 NTU	61.8 mV	12.42 ft	200.00 ml/min
3/11/2021 2:45 PM	01:25:00	7.12 pH	19.48 °C	314.80 μS/cm	3.64 mg/L	23.60 NTU	49.2 mV	12.42 ft	200.00 ml/min
3/11/2021 2:50 PM	01:30:00	7.13 pH	19.36 °C	316.97 μS/cm	3.63 mg/L	23.20 NTU	48.5 mV	12.47 ft	200.00 ml/min
3/11/2021 2:55 PM	01:35:00	7.12 pH	19.24 °C	318.27 μS/cm	3.62 mg/L	22.40 NTU	49.1 mV	12.47 ft	200.00 ml/min
3/11/2021 3:00 PM	01:40:00	7.13 pH	19.20 °C	319.93 μS/cm	3.61 mg/L	20.90 NTU	60.4 mV	12.47 ft	200.00 ml/min
3/11/2021 3:05 PM	01:45:00	7.15 pH	19.28 °C	320.11 μS/cm	3.59 mg/L	20.60 NTU	48.3 mV	12.47 ft	200.00 ml/min
3/11/2021 3:10 PM	01:50:00	7.16 pH	19.53 °C	321.16 μS/cm	3.56 mg/L	22.10 NTU	47.6 mV	12.47 ft	200.00 ml/min
3/11/2021 3:15 PM	01:55:00	7.16 pH	19.46 °C	322.76 μS/cm	3.53 mg/L	19.70 NTU	59.2 mV	12.47 ft	200.00 ml/min
3/11/2021 3:20 PM	02:00:00	7.15 pH	19.55 °C	321.57 μS/cm	3.52 mg/L	19.60 NTU	48.5 mV	12.47 ft	200.00 ml/min
3/11/2021 3:25 PM	02:05:00	7.18 pH	19.59 °C	323.04 μS/cm	3.49 mg/L	19.10 NTU	47.9 mV	12.47 ft	200.00 ml/min
3/11/2021 3:30 PM	02:10:00	7.17 pH	19.62 °C	323.72 μS/cm	3.50 mg/L	18.50 NTU	47.8 mV	12.47 ft	200.00 ml/min
3/11/2021 3:35 PM	02:15:00	7.17 pH	19.61 °C	324.03 μS/cm	3.49 mg/L	21.90 NTU	47.9 mV	12.47 ft	200.00 ml/min
3/11/2021 3:40 PM	02:20:00	7.17 pH	19.68 °C	324.99 μS/cm	3.47 mg/L	21.50 NTU	48.3 mV	12.52 ft	200.00 ml/min
3/11/2021 3:45 PM	02:25:00	7.17 pH	19.74 °C	323.96 μS/cm	3.45 mg/L	20.50 NTU	60.2 mV	12.52 ft	200.00 ml/min
3/11/2021 3:50 PM	02:30:00	7.18 pH	19.55 °C	324.84 μS/cm	3.46 mg/L	20.40 NTU	48.7 mV	12.52 ft	200.00 ml/min
3/11/2021 3:55 PM	02:35:00	7.19 pH	19.62 °C	327.37 μS/cm	3.43 mg/L	22.00 NTU	60.1 mV	12.52 ft	200.00 ml/min
3/11/2021 4:00 PM	02:40:00	7.17 pH	19.55 °C	326.46 μS/cm	3.44 mg/L	21.00 NTU	49.6 mV	12.52 ft	200.00 ml/min
3/11/2021 4:05 PM	02:45:00	7.18 pH	19.64 °C	326.30 μS/cm	3.42 mg/L	21.30 NTU	60.9 mV	12.52 ft	200.00 ml/min
3/11/2021 4:10 PM	02:50:00	7.19 pH	19.51 °C	328.14 μS/cm	3.41 mg/L	24.00 NTU	48.9 mV	12.52 ft	200.00 ml/min
3/11/2021 4:15 PM	02:55:00	7.21 pH	19.52 °C	330.97 μS/cm	3.38 mg/L	25.20 NTU	48.2 mV	12.52 ft	200.00 ml/min
3/11/2021 4:20 PM	03:00:00	7.20 pH	19.50 °C	330.20 μS/cm	3.38 mg/L	26.00 NTU	48.8 mV	12.52 ft	200.00 ml/min

Sample ID:	Description:
HGWA-111	Grab Sample.
HGWA-111 Filtered	Filtered Sample.

Test Date / Time: 3/12/2021 11:33:14 AM

Project: GP-Plant Hammond **Operator Name:** Chad Russo

Location Name: HGWA-112

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 30.15 ft Total Depth: 40.15 ft

Initial Depth to Water: 10.05 ft

Pump Type: Bladder

Tubing Type: Polyethylene
Pump Intake From TOC: 35 ft
Estimated Total Volume Pumped:

22.38 Liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 1.55 ft Instrument Used: Aqua TROLL 400

Serial Number: 728550

Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium

Date Time	Elapsed Time	рН	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 11:33 AM	00:00	5.79 pH	18.02 °C	79.45 μS/cm	1.52 mg/L		117.5 mV	10.05 ft	200.00 ml/min
3/12/2021 11:38 AM	05:00	5.68 pH	18.04 °C	80.23 μS/cm	1.19 mg/L	26.50 NTU	111.1 mV	11.25 ft	200.00 ml/min
3/12/2021 11:43 AM	10:00	5.66 pH	18.20 °C	80.28 μS/cm	1.18 mg/L	21.80 NTU	112.7 mV	11.40 ft	200.00 ml/min
3/12/2021 11:48 AM	15:00	5.64 pH	18.36 °C	80.11 μS/cm	1.14 mg/L	19.90 NTU	114.4 mV	11.45 ft	200.00 ml/min
3/12/2021 11:53 AM	20:00	5.66 pH	18.77 °C	79.72 µS/cm	1.10 mg/L	16.10 NTU	114.9 mV	11.50 ft	200.00 ml/min
3/12/2021 11:58 AM	25:00	5.66 pH	18.80 °C	79.78 µS/cm	1.07 mg/L	14.10 NTU	116.4 mV	11.50 ft	200.00 ml/min
3/12/2021 12:03 PM	30:00	5.66 pH	18.53 °C	79.72 µS/cm	1.06 mg/L	11.50 NTU	117.1 mV	11.50 ft	200.00 ml/min
3/12/2021 12:08 PM	35:00	5.62 pH	18.53 °C	79.69 µS/cm	1.06 mg/L	11.60 NTU	119.9 mV	11.50 ft	200.00 ml/min
3/12/2021 12:13 PM	40:00	5.63 pH	18.39 °C	79.77 µS/cm	1.06 mg/L	11.45 NTU	119.3 mV	11.50 ft	200.00 ml/min
3/12/2021 12:18 PM	45:00	5.65 pH	18.65 °C	79.71 µS/cm	1.05 mg/L	9.99 NTU	120.3 mV	11.50 ft	200.00 ml/min
3/12/2021 12:23 PM	50:00	5.65 pH	18.72 °C	79.64 µS/cm	1.06 mg/L	10.24 NTU	121.0 mV	11.50 ft	200.00 ml/min
3/12/2021 12:28 PM	55:00	5.62 pH	18.88 °C	79.71 µS/cm	1.04 mg/L	8.11 NTU	123.2 mV	11.60 ft	200.00 ml/min
3/12/2021 12:30 PM	56:54	5.63 pH	18.88 °C	79.55 µS/cm	1.05 mg/L	6.60 NTU	127.4 mV	11.60 ft	200.00 ml/min
3/12/2021 12:35 PM	01:01:54	5.64 pH	19.01 °C	79.93 µS/cm	1.07 mg/L	6.18 NTU	188.2 mV	11.60 ft	200.00 ml/min
3/12/2021 12:40 PM	01:06:54	5.64 pH	18.94 °C	79.94 μS/cm	1.06 mg/L	6.17 NTU	127.5 mV	11.60 ft	200.00 ml/min

3/12/2021	01:11:54	5.62 pH	19.02 °C	79.92 µS/cm	1.05 mg/L	5.92 NTU	128.3 mV	11.60 ft	200.00 ml/min
12:45 PM	01.11.04	0.02 pm	10.02	70.02 µ0 /0111	1.00 mg/L	0.02 1410	120.0 1111	11.001	200.00 1111/111111
3/12/2021	01:16:54	5.63 pH	19.11 °C	79.87 µS/cm	1.07 mg/L	5.38 NTU	127.8 mV	11.60 ft	200.00 ml/min
12:50 PM	01.10.54	5.05 pri	19.11	79.07 μο/οπ	1.07 Hig/L	3.30 1110	127.01110	11.0010	200.00 1111/111111
3/12/2021	01:21:54	5.64 pH	19.11 °C	79.88 µS/cm	1.07 mg/L	5.39 NTU	128.0 mV	11.60 ft	200.00 ml/min
12:55 PM	01.21.34	3.04 pri	19.11 C	79.86 μ3/6111	1.07 Hig/L	3.39 1110	120.0 1110	11.00 10	200.00 1111/111111
3/12/2021	01:26:54	5.64 pH	19.22 °C	79.92 µS/cm	1.07 mg/L	5.05 NTU	128.0 mV	11.60 ft	200.00 ml/min
1:00 PM	01.20.34	3.04 pm	19.22 0	79.92 μ3/6111	1.07 Hig/L	3.03 1410	120.0 1110	11.00 11	200.00 1111/111111
3/12/2021	01:31:54	5.60 pH	19.15 °C	79.92 µS/cm	1.05 mg/L	5.80 NTU	129.9 mV	11.60 ft	200.00 ml/min
1:05 PM	01.51.54	3.00 pm	19.15	79.92 μο/οπ	1.05 Hig/L	3.00 1110	129.9 1110	11.00 10	200.00 1111/111111
3/12/2021	01:36:54	5.62 pH	19.08 °C	80.05 µS/cm	1.05 mg/L	5.95 NTU	129.1 mV	11.60 ft	200.00 ml/min
1:10 PM	01.50.54	3.02 pm	19.00 C	00.03 μ3/cm	1.05 Hig/L	3.93 1110	129.11110	11.00 10	200.00 111/111111
3/12/2021	01:41:54	5.63 pH	19.02 °C	80.17 µS/cm	1.07 mg/L	5.94 NTU	196.0 mV	11.60 ft	200.00 ml/min
1:15 PM	01.41.54	5.05 pri	19.02 0	ου. 17 μο/οιτί	1.07 Hig/L	3.94 1110	190.0111	11.0010	200.00 1111/111111
3/12/2021	01:46:54	5.65 pH	19.21 °C	80.12 µS/cm	1.07 mg/L	5.47 NTU	194.0 mV	11.60 ft	200.00 ml/min
1:20 PM	01.40.34	3.03 pri	19.21 0	00.12 μ3/011	1.07 Hig/L	3.47 NTO	194.01110	11.00 10	200.00 1111/111111
3/12/2021	01:51:54	5.60 pH	19.28 °C	80.04 µS/cm	1.06 mg/L	4.84 NTU	197.6 mV	11.60 ft	200.00 ml/min
1:25 PM	01.51.54	3.60 pH	19.20 C	ου.υ4 μο/απ	1.00 Hig/L	4.04 NTO	197.01110	11.0011	200.00 1111/111111

Sample ID:	Description:
HGWC-112	Grab Sample.

Test Date / Time: 3/16/2021 9:44:59 AM

Project: GP-Plant Hammond **Operator Name:** Chad Russo

Location Name: HGWA-113

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 26.52 ft Total Depth: 36.53 ft

Initial Depth to Water: 5.43 ft

Pump Type: Bladder

Tubing Type: Polyethylene
Pump Intake From TOC: 32 ft
Estimated Total Volume Pumped:

18 Liter

Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 8.47 ft Instrument Used: Aqua TROLL 400

Serial Number: 728550

Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/16/2021 9:44 AM	00:00	6.20 pH	14.66 °C	115.31 μS/cm	2.78 mg/L		99.2 mV	5.43 ft	100.00 ml/min
3/16/2021 9:49 AM	05:00	6.20 pH	13.50 °C	116.67 μS/cm	2.10 mg/L	16.90 NTU	82.5 mV	6.63 ft	100.00 ml/min
3/16/2021 9:54 AM	10:00	6.20 pH	13.18 °C	116.25 μS/cm	2.22 mg/L	16.50 NTU	80.8 mV	6.90 ft	100.00 ml/min
3/16/2021 9:59 AM	15:00	6.19 pH	13.04 °C	116.74 μS/cm	2.11 mg/L	20.50 NTU	80.5 mV	7.36 ft	100.00 ml/min
3/16/2021 10:04 AM	20:00	6.18 pH	12.99 °C	117.52 μS/cm	1.97 mg/L	22.20 NTU	80.8 mV	7.67 ft	100.00 ml/min
3/16/2021 10:09 AM	25:00	6.18 pH	12.82 °C	117.48 μS/cm	1.91 mg/L	26.30 NTU	79.2 mV	7.96 ft	100.00 ml/min
3/16/2021 10:14 AM	30:00	6.11 pH	12.80 °C	117.76 μS/cm	1.90 mg/L	29.20 NTU	81.7 mV	8.48 ft	100.00 ml/min
3/16/2021 10:19 AM	35:00	6.13 pH	12.84 °C	118.61 µS/cm	1.87 mg/L	30.20 NTU	79.7 mV	8.57 ft	100.00 ml/min
3/16/2021 10:24 AM	40:00	6.12 pH	12.86 °C	119.09 μS/cm	1.85 mg/L	37.60 NTU	81.5 mV	8.95 ft	100.00 ml/min
3/16/2021 10:29 AM	45:00	6.13 pH	12.89 °C	119.84 μS/cm	1.81 mg/L	66.50 NTU	111.3 mV	9.22 ft	100.00 ml/min
3/16/2021 10:34 AM	50:00	6.14 pH	12.93 °C	120.59 μS/cm	1.80 mg/L	58.60 NTU	81.6 mV	9.50 ft	100.00 ml/min
3/16/2021 10:39 AM	55:00	6.16 pH	12.90 °C	120.70 μS/cm	1.78 mg/L	49.30 NTU	110.3 mV	9.71 ft	100.00 ml/min
3/16/2021 10:44 AM	01:00:00	6.13 pH	12.72 °C	120.82 μS/cm	1.79 mg/L	61.40 NTU	112.9 mV	9.97 ft	100.00 ml/min
3/16/2021 10:49 AM	01:05:00	6.13 pH	12.68 °C	121.28 μS/cm	1.80 mg/L	67.40 NTU	113.2 mV	10.22 ft	100.00 ml/min
3/16/2021 10:54 AM	01:10:00	6.15 pH	12.76 °C	121.30 μS/cm	1.79 mg/L	64.80 NTU	112.4 mV	10.47 ft	100.00 ml/min

3/16/2021 10:59 AM	01:15:00	6.16 pH	12.83 °C	121.41 µS/cm	1.80 mg/L	71.10 NTU	112.3 mV	10.67 ft	100.00 ml/min
3/16/2021 11:04 AM	01:20:00	6.14 pH	12.88 °C	121.51 μS/cm	1.79 mg/L	53.40 NTU	113.4 mV	10.92 ft	100.00 ml/min
3/16/2021 11:09 AM	01:25:00	6.15 pH	12.90 °C	121.72 μS/cm	1.79 mg/L	67.40 NTU	80.8 mV	11.12 ft	100.00 ml/min
3/16/2021	01:30:00	6.15 pH	12.99 °C	121.95 μS/cm	1.75 mg/L	77.00 NTU	80.3 mV	11.35 ft	100.00 ml/min
11:14 AM 3/16/2021	01:35:00	6.16 pH	13.13 °C	122.23 μS/cm	1.75 mg/L	66.40 NTU	80.5 mV	11.59 ft	100.00 ml/min
11:19 AM 3/16/2021	01:40:00	6.16 pH	13.18 °C	122.22 µS/cm	1.73 mg/L	76.10 NTU	79.8 mV	11.74 ft	100.00 ml/min
11:24 AM 3/16/2021		•							
11:29 AM 3/16/2021	01:45:00	6.15 pH	13.22 °C	122.11 μS/cm	1.73 mg/L	72.50 NTU	80.5 mV	11.92 ft	100.00 ml/min
11:34 AM	01:50:00	6.17 pH	13.18 °C	122.04 μS/cm	1.72 mg/L	63.70 NTU	78.1 mV	12.10 ft	100.00 ml/min
3/16/2021 11:39 AM	01:55:00	6.17 pH	13.22 °C	121.89 μS/cm	1.72 mg/L	20.00 NTU	80.0 mV	12.30 ft	100.00 ml/min
3/16/2021 11:44 AM	02:00:00	6.15 pH	13.23 °C	122.04 μS/cm	1.72 mg/L	10.00 NTU	80.3 mV	12.45 ft	100.00 ml/min
3/16/2021 11:49 AM	02:05:00	6.16 pH	13.23 °C	122.25 μS/cm	1.73 mg/L	87.00 NTU	79.8 mV	12.65 ft	100.00 ml/min
3/16/2021 11:54 AM	02:10:00	6.17 pH	13.25 °C	122.25 μS/cm	1.70 mg/L	74.20 NTU	78.5 mV	12.72 ft	100.00 ml/min
3/16/2021 11:59 AM	02:15:00	6.17 pH	13.27 °C	122.11 μS/cm	1.70 mg/L	58.40 NTU	80.0 mV	12.87 ft	100.00 ml/min
3/16/2021 12:04 PM	02:20:00	6.15 pH	13.32 °C	121.92 μS/cm	1.68 mg/L	49.30 NTU	80.3 mV	13.00 ft	100.00 ml/min
3/16/2021 12:09 PM	02:25:00	6.16 pH	13.31 °C	121.62 µS/cm	1.68 mg/L	63.40 NTU	79.8 mV	13.15 ft	100.00 ml/min
3/16/2021	02:30:00	6.16 pH	13.33 °C	121.33 μS/cm	1.69 mg/L	69.80 NTU	77.9 mV	13.25 ft	100.00 ml/min
12:14 PM 3/16/2021	02:35:00	6.17 pH	13.33 °C	121.11 μS/cm	1.71 mg/L	59.00 NTU	79.9 mV	13.40 ft	100.00 ml/min
12:19 PM 3/16/2021	02:40:00	6.15 pH	13.37 °C	120.78 µS/cm	1.70 mg/L	55.30 NTU	78.4 mV	13.50 ft	100.00 ml/min
12:24 PM 3/16/2021	02:45:00	6.16 pH	13.33 °C	120.40 μS/cm	1.73 mg/L	58.30 NTU	78.1 mV	13.60 ft	100.00 ml/min
12:29 PM 3/16/2021				-					
12:34 PM 3/16/2021	02:50:00	6.16 pH	13.30 °C	119.98 μS/cm	1.71 mg/L	50.20 NTU	77.9 mV	13.70 ft	100.00 ml/min
12:39 PM	02:55:00	6.17 pH	13.37 °C	119.81 μS/cm	1.73 mg/L	43.50 NTU	77.6 mV	13.80 ft	100.00 ml/min
3/16/2021 12:44 PM	03:00:00	6.14 pH	13.41 °C	119.38 μS/cm	1.72 mg/L	40.30 NTU	80.2 mV	13.90 ft	100.00 ml/min

Sample ID:	Description:
HGWA-113	Grab Sample.
HGWA-113 Filtered	Filtered Sample.

Test Date / Time: 3/17/2021 11:03:24 AM

Project: GP-Plant Hammond **Operator Name:** Chad Russo

Location Name: HGWC-101

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 27.94 ft Total Depth: 37.94 ft

Initial Depth to Water: 13.05 ft

Pump Type: Bladder

Tubing Type: Polyethylene
Pump Intake From TOC: 33 ft
Estimated Total Volume Pumped:

5.5 Liter

Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 2.28 ft Instrument Used: Aqua TROLL 400

Serial Number: 728550

Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/17/2021 11:03 AM	00:00	6.30 pH	14.90 °C	281.25 μS/cm	3.88 mg/L		83.8 mV	13.05 ft	200.00 ml/min
3/17/2021 11:08 AM	05:00	5.61 pH	16.67 °C	243.29 μS/cm	1.77 mg/L	3.56 NTU	107.1 mV	14.63 ft	200.00 ml/min
3/17/2021 11:13 AM	10:00	5.56 pH	16.76 °C	232.31 μS/cm	2.51 mg/L	1.85 NTU	156.1 mV	15.17 ft	200.00 ml/min
3/17/2021 11:18 AM	15:00	5.52 pH	16.29 °C	234.78 μS/cm	2.48 mg/L	1.32 NTU	113.3 mV	15.20 ft	100.00 ml/min
3/17/2021 11:23 AM	20:00	5.42 pH	15.93 °C	265.86 μS/cm	1.79 mg/L	0.98 NTU	160.0 mV	15.20 ft	100.00 ml/min
3/17/2021 11:28 AM	25:00	5.39 pH	15.94 °C	282.11 μS/cm	1.74 mg/L	0.72 NTU	112.1 mV	15.23 ft	100.00 ml/min
3/17/2021 11:33 AM	30:00	5.38 pH	15.94 °C	287.46 μS/cm	1.65 mg/L	0.77 NTU	142.1 mV	15.26 ft	100.00 ml/min
3/17/2021 11:38 AM	35:00	5.39 pH	16.00 °C	292.56 μS/cm	1.53 mg/L	0.62 NTU	101.2 mV	15.30 ft	100.00 ml/min
3/17/2021 11:43 AM	40:00	5.41 pH	15.99 °C	295.20 μS/cm	1.47 mg/L	0.52 NTU	96.8 mV	15.33 ft	100.00 ml/min

Sample ID:	Description:
HGWC-101	Grab Sample.

Test Date / Time: 3/17/2021 1:50:02 PM

Project: GP-Plant Hammond **Operator Name:** Chad Russo

Location Name: HGWC-102

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 27.43 ft Total Depth: 37.43 ft

Initial Depth to Water: 12.59 ft

Pump Type: Peri

Tubing Type: Polyethylene
Pump Intake From TOC: 32 ft
Estimated Total Volume Pumped:

6 Liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.16 ft Instrument Used: Aqua TROLL 400

Serial Number: 728550

Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/17/2021 1:50 PM	00:00	5.65 pH	16.88 °C	560.05 μS/cm	2.98 mg/L		101.2 mV	12.59 ft	200.00 ml/min
3/17/2021 1:55 PM	05:00	5.62 pH	16.70 °C	575.72 μS/cm	1.89 mg/L	6.30 NTU	149.9 mV	12.75 ft	200.00 ml/min
3/17/2021 2:00 PM	10:00	5.64 pH	16.86 °C	599.43 μS/cm	1.51 mg/L	5.26 NTU	99.5 mV	12.75 ft	200.00 ml/min
3/17/2021 2:05 PM	15:00	5.73 pH	16.92 °C	758.92 μS/cm	0.36 mg/L	4.28 NTU	121.2 mV	12.75 ft	200.00 ml/min
3/17/2021 2:10 PM	20:00	5.75 pH	16.92 °C	799.07 μS/cm	0.19 mg/L	3.72 NTU	79.3 mV	12.75 ft	200.00 ml/min
3/17/2021 2:15 PM	25:00	5.77 pH	16.96 °C	808.79 μS/cm	0.14 mg/L	3.43 NTU	100.9 mV	12.75 ft	200.00 ml/min
3/17/2021 2:20 PM	30:00	5.78 pH	16.88 °C	814.16 µS/cm	0.12 mg/L	2.42 NTU	77.2 mV	12.75 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-102	Grab Sample.

Test Date / Time: 3/18/2021 9:38:36 AM

Project: GP-Plant Hammond **Operator Name:** Vashish Taukoor

Location Name: HGWC-103

Well Diameter: 2 in Screen Length: 10 ft Top of Screen: 27.68 ft Total Depth: 37.68 ft

Initial Depth to Water: 12.75 ft

Pump Type: Bladder

Tubing Type: Polyethylene
Pump Intake From TOC: 33 ft
Estimated Total Volume Pumped:

28 Liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.2 ft Instrument Used: Aqua TROLL 400

Serial Number: 728563

Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium

Very turbid water

Turbidity less than 10 NTU after 3 hours. Collected sample without filter.

Weather Conditions:

Sunny 62 dg F

No wind

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/18/2021 9:38 AM	00:00	5.50 pH	17.50 °C	682.22 μS/cm	0.44 mg/L	58.30 NTU	101.9 mV	12.85 ft	100.00 ml/min
3/18/2021 9:43 AM	05:00	5.50 pH	17.59 °C	679.30 μS/cm	0.41 mg/L	53.50 NTU	96.5 mV	12.85 ft	100.00 ml/min
3/18/2021 9:48 AM	10:00	5.50 pH	17.65 °C	678.34 μS/cm	0.47 mg/L	48.60 NTU	128.3 mV	12.85 ft	100.00 ml/min
3/18/2021 9:53 AM	15:00	5.50 pH	17.73 °C	682.10 μS/cm	0.44 mg/L	43.80 NTU	97.8 mV	12.85 ft	100.00 ml/min
3/18/2021 9:58 AM	20:00	5.50 pH	17.72 °C	654.55 μS/cm	0.50 mg/L	39.00 NTU	130.8 mV	12.85 ft	100.00 ml/min
3/18/2021 10:03 AM	25:00	5.51 pH	17.76 °C	678.09 μS/cm	0.50 mg/L	37.70 NTU	131.6 mV	12.85 ft	100.00 ml/min
3/18/2021 10:08 AM	30:00	5.51 pH	17.59 °C	679.83 μS/cm	0.47 mg/L	34.80 NTU	99.1 mV	12.85 ft	100.00 ml/min
3/18/2021 10:13 AM	35:00	5.50 pH	17.90 °C	676.45 μS/cm	0.47 mg/L	30.70 NTU	133.3 mV	12.85 ft	100.00 ml/min
3/18/2021 10:18 AM	40:00	5.51 pH	17.88 °C	677.00 μS/cm	0.29 mg/L	29.70 NTU	134.4 mV	12.95 ft	200.00 ml/min
3/18/2021 10:23 AM	45:00	5.50 pH	17.95 °C	677.43 μS/cm	0.29 mg/L	24.90 NTU	134.5 mV	12.95 ft	200.00 ml/min

3/18/2021 10:28 AM	50:00	5.51 pH	17.92 °C	679.21 µS/cm	0.28 mg/L	20.00 NTU	99.8 mV	12.95 ft	200.00 ml/min
3/18/2021	55:00	5.51 pH	17.91 °C	679.46 μS/cm	0.28 mg/L	15.90 NTU	135.2 mV	12.95 ft	200.00 ml/min
10:33 AM 3/18/2021	01:00:00	5.51 pH	17.96 °C	679.09 µS/cm	0.30 mg/L	13.40 NTU	101.4 mV	12.95 ft	200.00 ml/min
10:38 AM 3/18/2021		•		·	-				
10:43 AM	01:05:00	5.51 pH	17.91 °C	681.58 μS/cm	0.34 mg/L	12.90 NTU	133.7 mV	12.95 ft	200.00 ml/min
3/18/2021 10:48 AM	01:10:00	5.51 pH	17.87 °C	679.53 μS/cm	0.31 mg/L	12.30 NTU	132.9 mV	12.95 ft	200.00 ml/min
3/18/2021 10:53 AM	01:15:00	5.52 pH	17.50 °C	683.64 μS/cm	0.33 mg/L	11.80 NTU	132.5 mV	12.95 ft	200.00 ml/min
3/18/2021 10:58 AM	01:20:00	5.52 pH	17.65 °C	681.88 μS/cm	0.31 mg/L	10.90 NTU	132.5 mV	12.95 ft	200.00 ml/min
3/18/2021 11:03 AM	01:25:00	5.51 pH	17.62 °C	683.03 μS/cm	0.35 mg/L	9.97 NTU	132.8 mV	12.95 ft	200.00 ml/min
3/18/2021 11:08 AM	01:30:00	5.51 pH	17.65 °C	682.60 μS/cm	0.32 mg/L	9.16 NTU	100.9 mV	12.95 ft	200.00 ml/min
3/18/2021 11:13 AM	01:35:00	5.52 pH	17.68 °C	684.24 μS/cm	0.32 mg/L	8.88 NTU	135.0 mV	12.95 ft	200.00 ml/min
3/18/2021 11:18 AM	01:40:00	5.52 pH	17.54 °C	686.09 μS/cm	0.34 mg/L	8.74 NTU	100.0 mV	12.95 ft	200.00 ml/min
3/18/2021 11:23 AM	01:45:00	5.52 pH	17.74 °C	684.71 μS/cm	0.33 mg/L	8.48 NTU	131.2 mV	12.95 ft	200.00 ml/min
3/18/2021 11:28 AM	01:50:00	5.51 pH	17.71 °C	686.16 μS/cm	0.31 mg/L	8.04 NTU	133.9 mV	12.95 ft	200.00 ml/min
3/18/2021 11:33 AM	01:55:00	5.51 pH	17.70 °C	692.80 μS/cm	0.31 mg/L	7.28 NTU	133.6 mV	12.95 ft	200.00 ml/min
3/18/2021 11:38 AM	02:00:00	5.52 pH	17.54 °C	686.93 μS/cm	0.31 mg/L	6.33 NTU	134.1 mV	12.95 ft	200.00 ml/min
3/18/2021 11:43 AM	02:05:00	5.52 pH	17.45 °C	687.57 μS/cm	0.32 mg/L	7.05 NTU	132.4 mV	12.95 ft	200.00 ml/min
3/18/2021 11:48 AM	02:10:00	5.52 pH	17.60 °C	687.53 μS/cm	0.30 mg/L	6.84 NTU	100.4 mV	12.95 ft	200.00 ml/min
3/18/2021 11:53 AM	02:15:00	5.51 pH	17.58 °C	688.39 μS/cm	0.31 mg/L	6.46 NTU	101.0 mV	12.95 ft	200.00 ml/min

Sample ID:	Description:
HGWC-103	Grab Sample.

Test Date / Time: 3/18/2021 11:46:33 AM

Project: GP-Plant Hammond **Operator Name:** Thomas Kessler

Location Name: HGWC-105

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 34.67 ft Total Depth: 44.67 ft

Initial Depth to Water: 15.79 ft

Pump Type: Bladder

Tubing Type: polyethylene
Pump Intake From TOC: 39.67 ft
Estimated Total Volume Pumped:

11 liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.29 ft Instrument Used: Aqua TROLL 400

Serial Number: 728566

Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Sunny, 65 degrees.

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/18/2021 11:46 AM	00:00	6.65 pH	18.08 °C	560.50 μS/cm	5.15 mg/L	11.90 NTU	70.2 mV	15.79 ft	200.00 ml/min
3/18/2021 11:51 AM	05:00	6.62 pH	17.63 °C	675.99 μS/cm	1.10 mg/L	69.50 NTU	24.4 mV	16.08 ft	200.00 ml/min
3/18/2021 11:56 AM	10:00	6.66 pH	17.67 °C	686.42 μS/cm	0.80 mg/L	21.80 NTU	22.5 mV	16.08 ft	200.00 ml/min
3/18/2021 12:01 PM	15:00	6.66 pH	17.74 °C	684.37 μS/cm	0.64 mg/L	12.14 NTU	18.1 mV	16.08 ft	200.00 ml/min
3/18/2021 12:06 PM	20:00	6.65 pH	17.61 °C	676.35 μS/cm	0.61 mg/L	12.82 NTU	11.0 mV	16.08 ft	200.00 ml/min
3/18/2021 12:11 PM	25:00	6.62 pH	17.54 °C	666.63 µS/cm	0.60 mg/L	9.93 NTU	-1.1 mV	16.08 ft	200.00 ml/min
3/18/2021 12:16 PM	30:00	6.61 pH	17.50 °C	657.34 μS/cm	0.52 mg/L	8.32 NTU	-8.7 mV	16.08 ft	200.00 ml/min
3/18/2021 12:21 PM	35:00	6.60 pH	17.37 °C	649.60 μS/cm	0.50 mg/L	7.65 NTU	-14.0 mV	16.08 ft	200.00 ml/min
3/18/2021 12:26 PM	40:00	6.59 pH	17.36 °C	642.21 μS/cm	0.49 mg/L	6.60 NTU	-8.4 mV	16.08 ft	200.00 ml/min
3/18/2021 12:31 PM	45:00	6.59 pH	17.36 °C	636.38 µS/cm	0.44 mg/L	5.62 NTU	-11.4 mV	16.08 ft	200.00 ml/min
3/18/2021 12:36 PM	50:00	6.58 pH	17.46 °C	631.55 μS/cm	0.41 mg/L	5.07 NTU	-25.3 mV	16.08 ft	200.00 ml/min
3/18/2021 12:41 PM	55:00	6.57 pH	17.61 °C	627.42 μS/cm	0.38 mg/L	4.52 NTU	-28.2 mV	16.08 ft	200.00 ml/min

Sample ID:	Description:
HGWC-105	Grab Sample.

Test Date / Time: 3/18/2021 3:53:48 PM

Project: GP-Plant Hammond **Operator Name:** Chad Russo

Location Name: HGWC-107

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 28.2 ft Total Depth: 38.2 ft

Initial Depth to Water: 13.88 ft

Pump Type: Bladder

Tubing Type: Polyethylene
Pump Intake From TOC: 33 ft
Estimated Total Volume Pumped:

24.473334 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

Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/18/2021 3:53 PM	00:00	6.69 pH	17.19 °C	400.61 μS/cm	4.12 mg/L		75.8 mV	13.88 ft	200.00 ml/min
3/18/2021 3:58 PM	05:00	6.33 pH	17.74 °C	403.84 μS/cm	2.12 mg/L	4.66 NTU	74.0 mV	13.90 ft	200.00 ml/min
3/18/2021 4:03 PM	10:00	6.26 pH	17.46 °C	407.70 μS/cm	1.24 mg/L	5.64 NTU	96.6 mV	13.90 ft	200.00 ml/min
3/18/2021 4:08 PM	15:00	6.24 pH	17.36 °C	408.57 μS/cm	0.76 mg/L	5.08 NTU	71.9 mV	13.90 ft	200.00 ml/min
3/18/2021 4:13 PM	20:00	6.24 pH	17.33 °C	409.84 μS/cm	0.52 mg/L	4.50 NTU	93.8 mV	13.90 ft	200.00 ml/min
3/18/2021 4:18 PM	25:00	6.23 pH	17.32 °C	408.88 μS/cm	0.41 mg/L	7.32 NTU	70.9 mV	13.90 ft	200.00 ml/min
3/18/2021 4:23 PM	30:00	6.21 pH	17.43 °C	409.49 μS/cm	0.36 mg/L	14.60 NTU	93.6 mV	13.90 ft	200.00 ml/min
3/18/2021 4:28 PM	35:00	6.22 pH	17.53 °C	407.92 μS/cm	0.33 mg/L	24.80 NTU	71.7 mV	13.90 ft	200.00 ml/min
3/18/2021 4:33 PM	40:00	6.22 pH	17.38 °C	407.85 μS/cm	0.32 mg/L	32.20 NTU	69.8 mV	13.90 ft	200.00 ml/min
3/18/2021 4:38 PM	45:00	6.22 pH	17.19 °C	408.38 μS/cm	0.32 mg/L	30.80 NTU	91.7 mV	13.90 ft	200.00 ml/min
3/18/2021 4:43 PM	50:00	6.20 pH	16.97 °C	407.69 μS/cm	0.32 mg/L	29.30 NTU	71.1 mV	13.90 ft	200.00 ml/min
3/18/2021 4:48 PM	55:00	6.21 pH	16.92 °C	408.55 μS/cm	0.31 mg/L	21.50 NTU	69.4 mV	13.90 ft	200.00 ml/min
3/18/2021 4:53 PM	01:00:00	6.21 pH	16.87 °C	408.04 μS/cm	0.30 mg/L	19.10 NTU	91.2 mV	13.85 ft	200.00 ml/min
3/18/2021 4:58 PM	01:05:00	6.21 pH	16.92 °C	407.34 μS/cm	0.29 mg/L	18.10 NTU	69.9 mV	13.85 ft	200.00 ml/min
3/18/2021 5:03 PM	01:10:00	6.20 pH	16.86 °C	407.69 μS/cm	0.30 mg/L	14.70 NTU	69.4 mV	13.85 ft	200.00 ml/min

3/18/2021	01:15:00	6.20 pH	16.85 °C	407.06 μS/cm	0.29 mg/L	12.10 NTU	91.0 mV	13.85 ft	200.00 ml/min
5:08 PM				·					
3/18/2021	01:20:00	6.20 pH	16.82 °C	407.00 μS/cm	0.29 mg/L	11.43 NTU	69.7 mV	13.85 ft	200.00 ml/min
5:13 PM	01.20.00	0.20 pm	10.02 0	407.00 μ0/0π	0.23 mg/L	11.431110	05.7 111	15.55 10	200.00 1111/111111
3/18/2021	01:25:00	6 20 vH	16.83 °C	407.42 uS/om	0.20 mg/l	10.56 NTU	90.8 mV	13.85 ft	200.00 ml/min
5:18 PM	01.25.00	6.20 pH	16.65 C	407.42 μS/cm	0.29 mg/L	10.56 N10	90.6 1117	13.65 11	200.00 111/111111
3/18/2021	04.20.00	0.40 -11	40.00.00	400 400/	0.00/	40.00 NTU	70.0\/	40.05.4	200 001/
5:23 PM	01:30:00	6.19 pH	16.92 °C	406.16 μS/cm	0.29 mg/L	10.03 NTU	70.2 mV	13.85 ft	200.00 ml/min
3/18/2021	04.05.00	0.00 -11	40.00.00	400 040/===	0.00/	O FC NTU	04.0\/	40.05.4	200 001/
5:28 PM	01:35:00	6.20 pH	16.83 °C	406.64 μS/cm	0.29 mg/L	9.56 NTU	91.0 mV	13.85 ft	200.00 ml/min
3/18/2021	04.40.00	0.00 -11	40.05.00	405.070/	0.00/	0.45 NTU	CO 7\/	40.05.4	200 001/
5:33 PM	01:40:00	6.20 pH	16.85 °C	405.97 μS/cm	0.29 mg/L	8.15 NTU	69.7 mV	13.85 ft	200.00 ml/min
3/18/2021	04.40.00	0.04 -11	40.00.00	400.050/	0.00/		67.7\/	40.05.4	200 001/
5:36 PM	01:42:22	6.21 pH	16.83 °C	402.25 μS/cm	0.29 mg/L		67.7 mV	13.85 ft	200.00 ml/min
3/18/2021	04.47.00	6.24 -11	46.70 °C	406 24 uS/om	0.20 ma/l	C O4 NTU	90.0\/	42.0F.#	200 00 ml/min
5:41 PM	01:47:22	6.21 pH	16.79 °C	406.31 μS/cm	0.30 mg/L	6.91 NTU	89.0 mV	13.85 ft	200.00 ml/min
3/18/2021	04.50.00	0.00 -11	40.74.00	405 400/	0.00/	C 70 NTU	CO 4 \/	40.05.4	200 001/
5:46 PM	01:52:22	6.20 pH	16.74 °C	405.19 μS/cm	0.30 mg/L	6.79 NTU	69.1 mV	13.85 ft	200.00 ml/min
3/18/2021	04.57.00	6 20 511	16.00 °C	40F 06 US/5	0.20 ma/l	5 00 NTU	00.4 m)/	12.05 ft	200 00 ml/min
5:51 PM	01:57:22	6.20 pH	16.80 °C	405.96 μS/cm	0.30 mg/L	5.90 NTU	90.1 mV	13.85 ft	200.00 ml/min
3/18/2021	02.02.22	6 20 511	16.00 °C	404 F0 UC/	0.20 ma/l	4 C2 NTU	60.2 m\/	12.0F #	200 00 ml/min
5:56 PM	02:02:22	6.20 pH	16.90 °C	404.58 μS/cm	0.30 mg/L	4.63 NTU	69.2 mV	13.85 ft	200.00 ml/min

Sample ID:	Description:
HGWC-107	Grab Sample.

Test Date / Time: 3/17/2021 11:52:22 AM

Project: GP-Plant Hammond **Operator Name:** Vashish Taukoor

Location Name: HGWC-109

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 21.36 ft Total Depth: 31.36 ft

Initial Depth to Water: 7.35 ft

Pump Type: Bladder

Tubing Type: Polyethylene
Pump Intake From TOC: 26 ft
Estimated Total Volume Pumped:

18 Liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.07 ft Instrument Used: Aqua TROLL 400

Serial Number: 728563

Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium

Very turbid water, no odor

Weather Conditions:

Cloudy No wind 57 deg F

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/17/2021 11:52 AM	00:00	6.37 pH	16.38 °C	282.84 μS/cm	0.71 mg/L	23.70 NTU	12.3 mV	7.42 ft	200.00 ml/min
3/17/2021 11:57 AM	05:00	6.42 pH	16.38 °C	290.16 μS/cm	0.74 mg/L	20.50 NTU	9.0 mV	7.42 ft	200.00 ml/min
3/17/2021 12:02 PM	10:00	6.45 pH	16.38 °C	296.72 μS/cm	0.72 mg/L	17.30 NTU	-5.8 mV	7.42 ft	200.00 ml/min
3/17/2021 12:07 PM	15:00	6.45 pH	16.39 °C	301.73 μS/cm	0.75 mg/L	15.10 NTU	-7.9 mV	7.42 ft	200.00 ml/min
3/17/2021 12:12 PM	20:00	6.49 pH	16.43 °C	188.83 μS/cm	0.75 mg/L	12.80 NTU	-8.3 mV	7.42 ft	200.00 ml/min
3/17/2021 12:17 PM	25:00	6.50 pH	16.47 °C	303.05 μS/cm	0.70 mg/L	10.60 NTU	-8.1 mV	7.42 ft	200.00 ml/min
3/17/2021 12:22 PM	30:00	6.52 pH	16.44 °C	308.64 μS/cm	0.73 mg/L	8.41 NTU	-11.7 mV	7.42 ft	200.00 ml/min
3/17/2021 12:27 PM	35:00	6.53 pH	16.51 °C	309.53 μS/cm	0.72 mg/L	7.52 NTU	-11.7 mV	7.42 ft	200.00 ml/min
3/17/2021 12:32 PM	40:00	6.52 pH	16.52 °C	312.07 μS/cm	0.74 mg/L	6.70 NTU	-12.0 mV	7.42 ft	200.00 ml/min
3/17/2021 12:37 PM	45:00	6.54 pH	16.52 °C	298.00 μS/cm	0.77 mg/L	6.23 NTU	-12.6 mV	7.42 ft	200.00 ml/min
3/17/2021 12:42 PM	50:00	6.56 pH	16.56 °C	318.93 μS/cm	0.82 mg/L	5.77 NTU	-17.3 mV	7.42 ft	200.00 ml/min
3/17/2021 12:47 PM	55:00	6.58 pH	16.66 °C	318.33 µS/cm	0.77 mg/L	5.20 NTU	-18.2 mV	7.42 ft	200.00 ml/min

3/17/2021	04.00.00	0.55 -11	40.00.00	245 75 0/2	0.70/	4.00 NITU	445 \/	7 40 #	200 001/
12:52 PM	01:00:00	6.55 pH	16.69 °C	315.75 µS/cm	0.73 mg/L	4.89 NTU	-14.5 mV	7.42 ft	200.00 ml/min

Sample ID:	Description:
HGWC-109	Grab Sample.

Test Date / Time: 3/19/2021 8:35:06 AM

Project: GP-Plant Hammond **Operator Name:** Thomas Kessler

Location Name: HGWC-117

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 30.62 m Total Depth: 40.62 ft

Initial Depth to Water: 13.97 ft

Pump Type: Bladder

Tubing Type: polyethylene
Pump Intake From TOC: 35.62 ft
Estimated Total Volume Pumped:

37 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

Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Cloudy, 45 degrees.

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/19/2021 8:35 AM	00:00	6.25 pH	14.42 °C	451.84 μS/cm	4.64 mg/L	14.60 NTU	44.3 mV	13.97 ft	200.00 ml/min
3/19/2021 8:40 AM	05:00	5.71 pH	15.53 °C	426.39 μS/cm	0.34 mg/L	18.80 NTU	90.1 mV	13.97 ft	200.00 ml/min
3/19/2021 8:45 AM	10:00	5.78 pH	15.81 °C	459.73 μS/cm	0.15 mg/L	47.60 NTU	81.3 mV	13.97 ft	200.00 ml/min
3/19/2021 8:50 AM	15:00	5.87 pH	15.77 °C	492.33 μS/cm	0.12 mg/L	56.30 NTU	73.2 mV	13.97 ft	200.00 ml/min
3/19/2021 8:55 AM	20:00	5.95 pH	15.83 °C	530.45 μS/cm	0.10 mg/L	45.80 NTU	66.4 mV	13.97 ft	200.00 ml/min
3/19/2021 9:00 AM	25:00	6.00 pH	15.98 °C	558.77 μS/cm	0.10 mg/L	44.20 NTU	63.9 mV	13.97 ft	200.00 ml/min
3/19/2021 9:05 AM	30:00	6.04 pH	15.85 °C	574.06 μS/cm	0.09 mg/L	41.20 NTU	61.5 mV	13.97 ft	200.00 ml/min
3/19/2021 9:10 AM	35:00	6.06 pH	16.00 °C	580.13 μS/cm	0.09 mg/L	39.30 NTU	59.9 mV	13.97 ft	200.00 ml/min
3/19/2021 9:15 AM	40:00	6.08 pH	16.05 °C	583.72 μS/cm	0.08 mg/L	39.40 NTU	58.6 mV	13.97 ft	200.00 ml/min
3/19/2021 9:20 AM	45:00	6.08 pH	16.07 °C	587.37 μS/cm	0.08 mg/L	34.10 NTU	85.8 mV	13.97 ft	200.00 ml/min
3/19/2021 9:25 AM	50:00	6.10 pH	16.20 °C	587.83 μS/cm	0.07 mg/L	30.20 NTU	58.0 mV	13.97 ft	200.00 ml/min
3/19/2021 9:30 AM	55:00	6.09 pH	16.20 °C	588.44 μS/cm	0.08 mg/L	31.40 NTU	56.7 mV	13.97 ft	200.00 ml/mir
3/19/2021 9:35 AM	01:00:00	6.10 pH	16.25 °C	591.55 μS/cm	0.06 mg/L	27.40 NTU	55.6 mV	13.97 ft	200.00 ml/min

3/19/2021 9:40 AM	01:05:00	6.11 pH	16.35 °C	592.65 μS/cm	0.06 mg/L	29.70 NTU	54.7 mV	13.97 ft	200.00 ml/min
3/19/2021 9:45 AM	01:10:00	6.12 pH	16.47 °C	593.18 μS/cm	0.07 mg/L	23.50 NTU	54.2 mV	13.97 ft	200.00 ml/min
3/19/2021 9:50 AM	01:15:00	6.12 pH	16.38 °C	593.39 μS/cm	0.07 mg/L	23.80 NTU	53.7 mV	13.97 ft	200.00 ml/min
3/19/2021 9:55 AM	01:20:00	6.12 pH	16.39 °C	593.91 μS/cm	0.06 mg/L	22.40 NTU	53.2 mV	13.97 ft	200.00 ml/min
3/19/2021 10:00 AM	01:25:00	6.11 pH	16.44 °C	595.20 μS/cm	0.06 mg/L	22.10 NTU	53.5 mV	13.97 ft	200.00 ml/min
3/19/2021 10:05 AM	01:30:00	6.12 pH	16.53 °C	593.88 μS/cm	0.06 mg/L	20.40 NTU	52.7 mV	13.97 ft	200.00 ml/min
3/19/2021 10:10 AM	01:35:00	6.13 pH	16.65 °C	596.39 μS/cm	0.05 mg/L	20.30 NTU	52.2 mV	13.97 ft	200.00 ml/min
3/19/2021 10:15 AM	01:40:00	6.13 pH	16.65 °C	595.64 μS/cm	0.06 mg/L	18.10 NTU	52.1 mV	13.97 ft	200.00 ml/min
3/19/2021 10:20 AM	01:45:00	6.13 pH	16.63 °C	593.67 μS/cm	0.06 mg/L	15.84 NTU	51.9 mV	13.97 ft	200.00 ml/min
3/19/2021 10:25 AM	01:50:00	6.14 pH	16.73 °C	595.97 μS/cm	0.06 mg/L	13.80 NTU	51.4 mV	13.97 ft	200.00 ml/min
3/19/2021 10:30 AM	01:55:00	6.13 pH	16.75 °C	595.14 μS/cm	0.06 mg/L	14.30 NTU	51.8 mV	13.97 ft	200.00 ml/min
3/19/2021 10:35 AM	02:00:00	6.13 pH	16.69 °C	596.19 μS/cm	0.05 mg/L	13.00 NTU	51.3 mV	13.97 ft	200.00 ml/min
3/19/2021 10:40 AM	02:05:00	6.13 pH	16.65 °C	597.82 μS/cm	0.06 mg/L	13.30 NTU	75.2 mV	13.97 ft	200.00 ml/min
3/19/2021 10:45 AM	02:10:00	6.13 pH	16.62 °C	592.84 μS/cm	0.06 mg/L	12.50 NTU	52.0 mV	13.97 ft	200.00 ml/min
3/19/2021 10:50 AM	02:15:00	6.14 pH	16.74 °C	596.37 μS/cm	0.05 mg/L	11.20 NTU	50.7 mV	13.97 ft	200.00 ml/min
3/19/2021 10:55 AM	02:20:00	6.14 pH	16.74 °C	598.40 μS/cm	0.06 mg/L	11.60 NTU	74.1 mV	13.97 ft	200.00 ml/min
3/19/2021 11:00 AM	02:25:00	6.12 pH	16.61 °C	595.59 μS/cm	0.07 mg/L	11.40 NTU	52.2 mV	13.97 ft	200.00 ml/min
3/19/2021 11:05 AM	02:30:00	6.13 pH	16.74 °C	596.08 μS/cm	0.07 mg/L	12.82 NTU	50.8 mV	13.97 ft	200.00 ml/min
3/19/2021 11:10 AM	02:35:00	6.14 pH	16.82 °C	595.00 μS/cm	0.06 mg/L	11.77 NTU	50.2 mV	13.97 ft	200.00 ml/min
3/19/2021 11:15 AM	02:40:00	6.14 pH	16.69 °C	596.97 μS/cm	0.07 mg/L	11.96 NTU	49.9 mV	13.97 ft	200.00 ml/min
3/19/2021 11:20 AM	02:45:00	6.14 pH	16.65 °C	597.48 μS/cm	0.08 mg/L	11.19 NTU	49.4 mV	13.97 ft	200.00 ml/min
3/19/2021 11:25 AM	02:50:00	6.14 pH	16.60 °C	596.18 μS/cm	0.07 mg/L	10.77 NTU	49.6 mV	13.97 ft	200.00 ml/min
3/19/2021 11:30 AM	02:55:00	6.13 pH	16.65 °C	595.30 μS/cm	0.05 mg/L	10.17 NTU	49.5 mV	13.97 ft	200.00 ml/min
3/19/2021 11:35 AM	03:00:00	6.13 pH	16.93 °C	597.80 μS/cm	0.06 mg/L	9.71 NTU	49.5 mV	13.97 ft	200.00 ml/min
3/19/2021 11:40 AM	03:05:00	6.14 pH	16.87 °C	595.81 μS/cm	0.07 mg/L	9.46 NTU	49.1 mV	13.97 ft	200.00 ml/min

Sample ID:	Description:
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HGWC-117 Grab Sample.

Test Date / Time: 3/18/2021 2:09:07 PM Project: GP-Plant Hammond Operator

Name: Thomas Kessler

Location Name: HGWC-118

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 30.9 ft Total Depth: 40.9 ft

Initial Depth to Water: 11.8 ft

Pump Type: Bladder

Tubing Type: polyethylene
Pump Intake From TOC: 35.9 ft
Estimated Total Volume Pumped:

36 liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.1 ft Instrument Used: Aqua TROLL 400

Serial Number: 728566

Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Sunny, 65 degrees.

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/18/2021 2:09 PM	00:00	7.07 pH	19.29 °C	509.78 μS/cm	3.20 mg/L	4.58 NTU	-24.5 mV	11.80 ft	200.00 ml/min
3/18/2021 2:14 PM	05:00	6.97 pH	18.58 °C	520.32 μS/cm	1.32 mg/L	34.30 NTU	35.3 mV	11.90 ft	200.00 ml/min
3/18/2021 2:19 PM	10:00	7.00 pH	18.75 °C	522.73 μS/cm	1.14 mg/L	58.80 NTU	46.9 mV	11.90 ft	200.00 ml/min
3/18/2021 2:24 PM	15:00	7.02 pH	18.84 °C	525.53 μS/cm	0.92 mg/L	63.50 NTU	39.8 mV	11.90 ft	200.00 ml/min
3/18/2021 2:29 PM	20:00	7.04 pH	18.61 °C	526.35 μS/cm	0.81 mg/L	62.80 NTU	37.7 mV	11.90 ft	200.00 ml/min
3/18/2021 2:34 PM	25:00	7.03 pH	18.58 °C	525.12 μS/cm	0.74 mg/L	59.20 NTU	38.1 mV	11.90 ft	200.00 ml/min
3/18/2021 2:39 PM	30:00	7.05 pH	18.26 °C	526.65 μS/cm	0.70 mg/L	53.50 NTU	36.3 mV	11.90 ft	200.00 ml/min
3/18/2021 2:44 PM	35:00	7.06 pH	18.03 °C	526.36 μS/cm	0.65 mg/L	46.50 NTU	35.5 mV	11.90 ft	200.00 ml/min
3/18/2021 2:49 PM	40:00	7.07 pH	18.03 °C	527.82 μS/cm	0.59 mg/L	48.50 NTU	35.9 mV	11.90 ft	200.00 ml/min
3/18/2021 2:54 PM	45:00	7.08 pH	18.08 °C	528.41 μS/cm	0.54 mg/L	49.10 NTU	37.1 mV	11.90 ft	200.00 ml/min
3/18/2021 2:59 PM	50:00	7.08 pH	18.21 °C	529.09 μS/cm	0.49 mg/L	44.00 NTU	38.3 mV	11.90 ft	200.00 ml/min
3/18/2021 3:04 PM	55:00	7.08 pH	18.00 °C	529.00 μS/cm	0.45 mg/L	41.60 NTU	31.8 mV	11.90 ft	200.00 ml/min
3/18/2021 3:09 PM	01:00:00	7.07 pH	17.74 °C	529.72 μS/cm	0.44 mg/L	47.20 NTU	39.5 mV	11.90 ft	200.00 ml/min

3/18/2021 3:14 PM	01:05:00	7.08 pH	17.59 °C	528.83 μS/cm	0.41 mg/L	39.30 NTU	32.3 mV	11.90 ft	200.00 ml/min
3/18/2021 3:19 PM	01:10:00	7.09 pH	17.57 °C	530.60 μS/cm	0.37 mg/L	36.50 NTU	39.6 mV	11.90 ft	200.00 ml/min
3/18/2021 3:24 PM	01:15:00	7.09 pH	17.68 °C	530.95 μS/cm	0.34 mg/L	34.90 NTU	39.9 mV	11.90 ft	200.00 ml/min
3/18/2021 3:29 PM	01:20:00	7.09 pH	17.90 °C	528.26 μS/cm	0.32 mg/L	33.10 NTU	32.7 mV	11.90 ft	200.00 ml/min
3/18/2021 3:34 PM	01:25:00	7.09 pH	17.86 °C	529.33 μS/cm	0.30 mg/L	33.60 NTU	32.6 mV	11.90 ft	200.00 ml/min
3/18/2021 3:39 PM	01:30:00	7.08 pH	17.81 °C	529.78 μS/cm	0.28 mg/L	32.80 NTU	32.8 mV	11.90 ft	200.00 ml/min
3/18/2021 3:44 PM	01:35:00	7.09 pH	17.85 °C	530.64 μS/cm	0.26 mg/L	30.10 NTU	40.0 mV	11.90 ft	200.00 ml/min
3/18/2021 3:49 PM	01:40:00	7.09 pH	17.88 °C	529.24 μS/cm	0.26 mg/L	31.80 NTU	33.0 mV	11.90 ft	200.00 ml/min
3/18/2021 3:54 PM	01:45:00	7.09 pH	17.86 °C	531.22 μS/cm	0.24 mg/L	30.50 NTU	39.9 mV	11.90 ft	200.00 ml/min
3/18/2021 3:59 PM	01:50:00	7.09 pH	17.85 °C	529.26 μS/cm	0.23 mg/L	30.30 NTU	33.0 mV	11.90 ft	200.00 ml/min
3/18/2021 4:04 PM	01:55:00	7.10 pH	17.72 °C	531.28 μS/cm	0.22 mg/L	29.30 NTU	39.9 mV	11.90 ft	200.00 ml/min
3/18/2021 4:09 PM	02:00:00	7.10 pH	17.63 °C	530.05 μS/cm	0.21 mg/L	28.90 NTU	32.7 mV	11.90 ft	200.00 ml/min
3/18/2021 4:14 PM	02:05:00	7.10 pH	17.63 °C	530.09 μS/cm	0.20 mg/L	27.10 NTU	32.3 mV	11.90 ft	200.00 ml/min
3/18/2021 4:19 PM	02:10:00	7.10 pH	17.62 °C	530.50 μS/cm	0.19 mg/L	27.50 NTU	32.2 mV	11.90 ft	200.00 ml/min
3/18/2021 4:24 PM	02:15:00	7.11 pH	17.68 °C	531.72 μS/cm	0.18 mg/L	28.00 NTU	31.8 mV	11.90 ft	200.00 ml/min
3/18/2021 4:29 PM	02:20:00	7.10 pH	17.68 °C	532.25 μS/cm	0.18 mg/L	32.60 NTU	39.1 mV	11.90 ft	200.00 ml/min
3/18/2021 4:34 PM	02:25:00	7.10 pH	17.63 °C	530.03 μS/cm	0.17 mg/L	26.40 NTU	32.2 mV	11.90 ft	200.00 ml/min
3/18/2021 4:39 PM	02:30:00	7.10 pH	17.49 °C	530.76 μS/cm	0.17 mg/L	25.20 NTU	32.4 mV	11.90 ft	200.00 ml/min
3/18/2021 4:44 PM	02:35:00	7.11 pH	17.40 °C	532.58 μS/cm	0.16 mg/L	21.70 NTU	38.8 mV	11.90 ft	200.00 ml/min
3/18/2021 4:49 PM	02:40:00	7.11 pH	17.32 °C	532.56 μS/cm	0.16 mg/L	23.00 NTU	39.3 mV	11.90 ft	200.00 ml/min
3/18/2021 4:54 PM	02:45:00	7.11 pH	17.36 °C	530.32 μS/cm	0.15 mg/L	26.60 NTU	33.2 mV	11.90 ft	200.00 ml/min
3/18/2021 4:59 PM	02:50:00	7.11 pH	17.28 °C	532.82 μS/cm	0.15 mg/L	29.00 NTU	38.9 mV	11.90 ft	200.00 ml/min
3/18/2021 5:04 PM	02:55:00	7.11 pH	17.36 °C	531.51 μS/cm	0.14 mg/L	28.50 NTU	31.8 mV	11.90 ft	200.00 ml/min
3/18/2021 5:09 PM	03:00:00	7.11 pH	17.32 °C	532.77 μS/cm	0.13 mg/L	28.40 NTU	38.6 mV	11.90 ft	200.00 ml/min

Sample ID:	Description:
HGWC-118	Grab Sample.
HGWC-118 Filtered	Filtered Sample.

June 2021

Low-Flow Test Report:

Test Date / Time: 6/23/2021 11:24:09 AM

Project: GP-Plant Hammond **Operator Name:** Thomas Kessler

Location Name: HGWC-117

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 30.62 ft Total Depth: 40.62 ft

Initial Depth to Water: 15.4 ft

Pump Type: Peristaltic Tubing Type: Poly

Estimated Total Volume Pumped:

15.5 liter

Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 400

Serial Number: 728634

Test Notes:

Pre purged for 10 minutes to establish flow.

Weather Conditions:

Sunny, 80 degrees

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
6/23/2021 11:24 AM	00:00	5.22 pH	20.29 °C	245.90 μS/cm	2.21 mg/L	2.16 NTU	122.5 mV	15.40 ft	200.00 ml/min
6/23/2021 11:26 AM	02:25	5.30 pH	20.28 °C	273.39 μS/cm	1.96 mg/L	2.16 NTU	167.4 mV	15.40 ft	200.00 ml/min
6/23/2021 11:31 AM	07:25	5.43 pH	20.38 °C	337.75 μS/cm	1.30 mg/L	2.66 NTU	149.7 mV	15.40 ft	200.00 ml/min
6/23/2021 11:36 AM	12:25	5.51 pH	20.40 °C	373.76 μS/cm	0.78 mg/L	2.93 NTU	163.8 mV	15.40 ft	200.00 ml/min
6/23/2021 11:41 AM	17:25	5.52 pH	20.65 °C	383.31 μS/cm	0.63 mg/L	2.46 NTU	168.5 mV	15.40 ft	200.00 ml/min
6/23/2021 11:46 AM	22:25	5.53 pH	20.68 °C	387.49 μS/cm	0.61 mg/L	2.16 NTU	247.4 mV	15.40 ft	200.00 ml/min
6/23/2021 11:51 AM	27:25	5.55 pH	20.65 °C	396.53 μS/cm	0.49 mg/L	2.38 NTU	188.9 mV	15.40 ft	200.00 ml/min
6/23/2021 11:56 AM	32:25	5.56 pH	20.70 °C	404.40 μS/cm	0.38 mg/L	1.50 NTU	254.8 mV	15.40 ft	200.00 ml/min
6/23/2021 12:01 PM	37:25	5.58 pH	20.65 °C	410.32 μS/cm	0.34 mg/L	1.64 NTU	253.5 mV	15.40 ft	200.00 ml/min
6/23/2021 12:06 PM	42:25	5.59 pH	20.69 °C	407.37 μS/cm	0.43 mg/L	1.91 NTU	238.6 mV	15.40 ft	200.00 ml/min
6/23/2021 12:11 PM	47:25	5.63 pH	20.78 °C	433.00 μS/cm	0.26 mg/L	1.32 NTU	236.3 mV	15.40 ft	200.00 ml/min
6/23/2021 12:16 PM	52:25	5.66 pH	20.74 °C	437.20 μS/cm	0.31 mg/L	1.16 NTU	233.6 mV	15.40 ft	200.00 ml/min
6/23/2021 12:21 PM	57:25	5.69 pH	20.87 °C	440.45 μS/cm	0.28 mg/L	1.15 NTU	227.2 mV	15.40 ft	200.00 ml/min
6/23/2021 12:26 PM	01:02:25	5.70 pH	20.83 °C	446.40 μS/cm	0.32 mg/L	0.91 NTU	218.6 mV	15.40 ft	200.00 ml/min

6/23/2021	04.07.05	F 70 -11	20.02.00	454 040/2.22	0.20/	0.00 NTU	447.5>/	45.40.5	200 001/
12:31 PM	01:07:25	5.72 pH	20.83 °C	451.84 µS/cm	0.36 mg/L	0.98 NTU	147.5 mV	15.40 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-117	Grab Sample.

Created using VuSitu from In-Situ, Inc.

WELL DEVELOPMENT REPORTS

June 2021

Pa cf3 Geosyntec^D WELL DEVELOPMENT LOG SHEET consultants Green Sel 065 Client: Project No.: Development Date: 6 /15 /71 Plant Hemmond Site: 112-4 Location: Field Personnel Name: HGWC-117 Well ID: Pump Type/Model: MENSCOM 3995 Total Depth (ft) (after purge): Tubing Material: DOL 39 Depth to Water (ft) 16.44 Pump Intake Depth (ft): Z 0909 Well Diameter (in): Start/Stop Purge Time: 1620 3.85 1000 Well Volume (gal) = 0.041d h: Purge Rate (mL/min): 1860 Well Volume (L) = gal * 3 785: 14.57 Total Purge Volume (L): d = well diameter (inches); h = length of water column (feet)Well Type: Flush Stick Up Well Lock: Yes Good Well Cap Condition: Replace Well Tag Present: Yes Spec. Cond. Purged Volume Notes (Purge method, water clarity, odor, purge DO Purge Rate pH (SU) Time ORP (mV) Turbidity (NTUs) DTW (ft btoc) Temp. (°C) (µS/cm) rate, issues with pump/well/weather/etc.) (mg/L) (mL/min) (L) 1909 10,90 114.7 6.99 16.93 2.03 78.55 over runoz 4000 Grand material on in skeet 99.6 12,00 6.00 COC. 33 0.07 19.15 40 66- 378 0919 Over range 4crocs 3.91 -90 Liters 86.5 22.43 4000 CCON 559.50 (1.01 19.02 Cover ranke 0939 410.15 88.8 1.28 18.97 954 19.23 4000 127 130 Dump clog - Dane tocleci 0949 5.45 583.06 80.3 -0.01 18.75 14.20 4000 164 170 OVER RUGE 5.88 0959 634 70.07 4000 3410-15 84.6 -0.01 18.77 ZOCIZIO 82.6 \$ 1009 5.92 545.36 20.00 18.75 2016 22.30 4000 237 200 46 575.18 83 22.70 5.95 86.0 00100 croll DO sube 1019 18.70 41000 774290 272.45 0.98 21.90 4000 1029 9.91 84.8 18.87 1446 3/1 330 , lete well: hown 1039 5.94 22.30 56326 80.3 18.70 89.3 4000 34837 -0.01 400 410 19.82 1051 6.00 515.03 53.1 0,06 69.7 24.30 4000 Druse recording, secc 1 DO

- continue Dumping adjusting Domet 40.3 1115 6.02 572.45 51,0 0.23 19.46 2215 4000 500 5.94 -0.01 18.74 22.90 gardeste well: how. 1175 554.70 67.8 786L 4000 537540 (D) agiliaril mulling love DUNSP PPECK 583.29 970 14.95 27.8 2785 4000 1152 5.98 0 FEBRURE MELSUREMENTS 660 0 2 mg/L or 10% for

23.20

(T)

5.47

Stabilizing Criteria +/- 0.1 SU

575.44

+/- 5%

653

-0.01

DO > 0.5 mg/L

whichever is greater

18.69

76.5

< 5 NTUs

1101

437450

meter

prince del lo fixomesu

4000

pg 7 633

Geosyntec -consultants					WE	LL DEVELOPMEN	T LOG SHEET			r. 3 - 5 -		
Client		SCS				Project No.:	GWGSE	اء		Development Date: G/15/71		
Site:		Plant H	commone			Location:	AP-4	AP-4 Field Personnel Name:				
Well ID:		HGLEX				Pump Type/Model:	MACONSCY	monscon				
Total Depth (ft) (after	nurge).	39.93				Tubing Material:		761				
2512	purgo).				-66				_			
Depth to Water (ft)		16.40	(ımp Intake Depth (ft):			-			
Well Diameter (in):					tart/Stop Purge Time:	4	09/1620	_				
Well Volume (gal) = 0	Well Volume (gal) = 0 041d ₂ h: 3.85				Purge Rate (mL/min):							
Well Volume (L) = ga	1 * 3.785:	2 (4.57		To	otal Purge Volume (L)	: <u>18</u>	60				
d = well diameter (inc.	hes); h = lens	gth of water colu	ımn (feet)									
Well Type:	Elush	Stick Up										
Well Lock:	10	No										
	SON .											
Well Cap Condition	100	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.)		
1202	5.94	557.42	89.1	0.01	18.75	12.1	22.15	4000d	700			
1212	561	330.52	86.3	0.56	19.15	821	20.40	4000	740	exitate well		
1222	5.66	342.56	87.9	210	18.97	1964	22.15	4000	780	cont. colletion		
1232	5.97	572.23	80,9	0	18.79	768	51.80	4000	820	1		
1242	5.93	5541.39	74.0	0	18.82	1165	73.52	4000	860	1		
1252	5.95	567.04	78.1	0	18.79	142	24.18	4500	905	1		
1302	5.95	561.67	90,4	٥	18.84	2062	32.00	4500	950			
						2062	->6.00	6000	1100	a China maker		
1330										pump feilure, replace		
1370	5.95	964.05	95.5	0	188884	665	19.10	6600	iics	cuite le cuell		
1330	5.84	493.64	81.8	0.48	18.83	2459	33.85	6000	1160	0 4		
1340	6.60	1,79	121.2	663	19.95	1081	37.36	6000	1720	~		
1350	5.83	491.75	94.5	1.63	18.73	116	32.80	4000	1260	Drimo melfunction (PUC showing)		
1400	5.85	510.45	101.1	0.62	18.72	20.6	33.54	4000	1300	acisula well		
1410	5.94	555.59	93.6	0.17	18,75	71.6	30.26	4000	1340			
1470	3.97	574.83	87.2	0.11	18.81	986	75,95	4000	1360	Sump befores		
1430	6.00	587.27	82.0	0.16	18.98	119	24,90	'looc\	1400	-		
1440	5,95	555.51	92.3	Oais	19.06	63	23.20	4000	1440			
Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0 2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs						

	129	3	25	3
-				_

Geosyntec consultants					WE	LL DEVELOPMEN	T LOG SHEET			
Client:		SCS				Project No :	GWES	81		Development Date: 6/15/71
Site		Dlynt	Hemma	nel		Location:			-	Field Personnel Name:
Well ID:			C-117			Pump Type/Model:		on	_	
Total Depth (ft) (after	purge):		95			Tubing Material:	Doly		-	
Depth to Water (ft):		10.0			Pı	imp Intake Depth (ft):	1	5.39	-	
Well Diameter (in):		2			Pump Intake Depth (ft): 385-39 Start/Stop Purge Time: 0909/1620				_	
Well Volume (gal) = 0	041d h:	3.85	,		Purge Rate (mL/min):					
Well Volume (L) = gal	2 '	14.5		Total Purge Volume (L):				_		
		-			10	nai i uige voiume (L)	1016	0	-	
d = well diameter (inci			ımrı (Jeei)							
Well Type:	Flush	Stick Tib								
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.)
1450	5.96	559.43	82.9	0019	19.04	133	22.83	4000	14180	captete well
1500	6.02	578.27	78.4	0.06	19.01	623	21.05	4000	19200	
	6.37	53650	80	6.21	19.72	99.5	20.95	4000	1560	Jucp bedtern
1526	6.04	54531	78.7	0.03	18092	91.0	17.81	4000	1600	begin was no primp though
1530	5.96	565 39	77.1	0.08	18.95	7958	18.15	4000	1640	A TOPONEONE , JE UST RUE TO
1540	5.97	564.44	74.6	0.10	14.01	1443	18.85	4000	1680	eknty
1550	5.86	555.18	79.6	0.20	14.68	2076	18.83	4000	1720	
156-1600	294	529.16	84.7	0.32	19.18	90	19.15	Licos	1760	
610	5.46	564070	83.1	0.04	1898	122	78.25	5000	1810	anterel punge & surge
1620	5.96	563.64	79.7	0.01	19.05	769	27.75	5000	1860	
						50.7	23,10			
										resume Jammorrow with
		Transport of the State of the S								You Claw frest
				Control of the Contro			The same of the sa			
					A CONTRACTOR OF THE PARTY OF TH	17/	1		1	
		-								
						1				
									-02300000000000000000000000000000000000	
Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0 2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs				

Low flow Simulation

Geosyntec ^D					WE	LL DEVELOPMEN	T LOG SHEET			
Client:		SCS				Project No:	Colles	&1		Development Date: 6/16/71
Site:		Plant	CHIMON	.1		Location:	17-4			Field Personnel Name:
Well ID:			C-117		Pump Type/Model: WONSOUM					-0
Total Depth (ft) (after	nurge).	39.0				Tubing Material:		-		
					D.	· ·	Pay.	7		
	Depth to Water (ft):			4		amp Intake Depth (ft):			-	
Well Diameter (in):				S	tart/Stop Purge Time:			-0		
Well Volume (gal) = 0	041d ₂ h:	3.8	34			Purge Rate (mL/min):			-0	
Well Volume (L) = ga.	I * 3.785	14	.55		To	otal Purge Volume (L)	35			
d = well diameter (inc	hes); h = lens	gth of water colu	ımn (feet)							
Well Type:	Nustry	Stick Up								
Well Lock:	X	No								
	X									
Well Cap Condition:	YO.	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.)
0835	5.64	५७५.६५	125.1	1.01	15:05	30	1650	25000	0	under is slightly by it with uschie
0840	5,72	40377	117.9	1.89	71.00	36,4	1056	200	1	mac/reflective particulate
0845	5.58	401.92	140.6	0.68	20.26	32.7	16.50	400	3	sump unecstanable under 400
0850	5.54	411.63	i35.0	0.51	20,30	25.5	16.50	400	5	
0855	5.59	414.30	131.6	0.41	20.34	20.5	16.50	400	7	
0900	5.61	415.96	160.9	0.36	50.48	17-5	16.50	400	9	reClorinemeterial no langer
10050905	5.64	428.81	124.0	95.0	26,35	14.5	16.50	4100	11	is schle
1010090	5.68	441.74	120.4	0.26	70.53	11.9	16.50	400	13	
idis ous	5.69	441.71	118.6	0.26	20,49		16.50	400	15	1
1026 0410	5.70	447.80	116.0	12.0	20,44	6.80	ic so	400	19	
10 45 0925	5.73	458.75	1.511	0.19	20.39	6.72	16.50	900	21	
1030 0920	5.75	5/8,75 474.60	108.6	0.18	20,75	5.48		4,00	22	
1040 0940	5.76	464 467.0		0.19	20.98	5.18	16.50	400	75	
16 45 0445	5.75	464.89	103.3	0.20	21.49	4.91	(6.50)	400	27	cett works simple here
1050 0940	5.71	4164.89	103.2	0.77	7.0.93	4.34	16.50	400	79	weight turb cal hocker
1056 9358	5.73	467 26	102.6	O.ix	20,43	4.04	16.50	400	31	Warted Hing & Call Received
40 1100 100	5 77	477.70	101.3	0.15	20.77	3.23	16.50	1000	33	
	5.78	\$ 4183.58		0.13	20.56	3.68	16.50	460	35	
Stabilizing Criteria		+/- 5%		0 2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs	ال ال ال			

0 0									100	104 C
Geosyntec					WE	CLL DEVELOPMEN	T LOG SHEET		1 0	
Client:		525				Project No	Guy	6581		Development Date: 5(\6/7)
Site:		Plant 1	Lumma	n. S		Location: AP-4			_	Field Personnel Name:
Well ID		+1Coco	UC - 11/8	4		Pump Type/Model		D 14	_	- 0
Total Depth (ft) (after	nurge):	1100	- C					3 00	_	
			-		Tubing Material			-		
Depth to Water (ft): 12.78			-	Pi	ump Intake Depth (ft)	-		_		
Well Diameter (in)			-	S	Start/Stop Purge Time	1225	11740			
Well Volume (gal) = 0 041d ₂ h		٠١.٢	۵			Purge Rate (mL/min)	700	00		
Well Volume (L) = gal * 3.785:		17.0	17		Т	otal Purge Volume (L)): 6.			
d = well diameter (inc	ches): h = len								_	
Well Type:	,	Suck Up	0/							
	/									
Well Lock:	Yes	No								
Well Cap Condition:	Good	Replace								
Well Tag Present:	Yes	No								
T:	II (CII)	Spec. Cond.	ODD (II)	DO	T (0.0)	T. 1111 (31771)	DETERMINE S	Purge Rate	Purged Volume	Notes (Purge method, water clarity, odor, purge
Time	pH (SU)	(µS/cm)	ORP (mV)	(mg/L)	Temp. (°C)	Turbidity (NTUs)	DTW (ft btoc)	(mL/min)	(L)	rate, issues with pump/well/weather/etc.)
122S	6.50	51466	34.0	0.47	23.22	Overve not	12.95	760		pre sured to fall flowers!
1235	0.91	541.53	43.8	0.33	18,75	Querrante	3770	-400e	41	purposte too bush, lower
1245	6.95	5411.38	47.5	0.54	18.42	3762	32.50	5000	61	lower purgerate to prevent
#3124	6.93	545-03	45.8	1.01	18.88	851	31.40	2000	81	dry During Smar Lourge well
1257	694	350.40	45.2	1.04	18.88	gsi	31.40	2000	28	connected error resume@ 125;
1307	6.94	550.26	4305	00-21	18.92	1345	31.45	2000	102	cont. surgelpance i
1317	6.93	550,34	47.1	55.0	1901	1263	31.6	coec	122	, , ,
1377	6.43	547.68	41.1	6.49	18.91	3593	30.87	Zueau	142	~
1337	6.93	18.95	464	469037		8905	30.46	resse	162	Spec. Courd = 548.69
1347	6.93	547.83	43.7	0.411	1893	2808	30.60	20000	187	· j
1357	6.93	548,50	44.1	0.33	18,97	983	30.77	7000	202	Let young Du34 Lesse turb.
1400	6.43	554.21	37.9	069	13.91	983	30.77	70000	212	declease + connection ever
1410	6.93	549.80	34.6	0.63	18.47	58.9	36.60	2000	232	resum L@ 1400, resume
1410	6.47	54727	36.7	0.6	19.02	1951	31 30	2600	267	surve / gune a Sman merch &
1430	6.94	552.82	36-1	0.72	18.83	1808	37.60	3000	777	1410 Sest pine to dry reper
1440	6.94	547.44	36.3	0.71	1972534	1912	31.30	2000	292	to never \
1450	6.43	344.00	36.5	0.43	18,88	930	31.45	Zoce	312	m 30 sec Douse to submorge serve
1466 isca	6.05	591,65	35.4	0.47	18.97	2472	79.10	7900 O	337	7
1500° 1510	689	5541.41	36.3	2.48	18.83	688	35.5	2000	352	P
Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0 2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs				

129	>	2,2	5	
+ 0		10000		

										129 (62)
Geosyntec D					WE	LL DEVELOPMEN	T LOG SHEET			
Client:		SC	S			Project No:	GWG	.581		Development Date: SliG/71
Site:		Plant	Hamme	one		Location:	AP.L	1		Field Personnel Name:
Well ID:		liaux				Pump Type/Model:	MONSUON		_	
Total Depth (ft) (after	nuroe):	40.						-		
Depth to Water (ft):	puigo).	17.7			D.	S	10014		-	
		2				ump Intake Depth (ft):	-	4.1	-	
Well Diameter (in):						Start/Stop Purge Time:		11746	_	
Well Volume (gal) = 0	= 0 041d ₂ h: Purge Rate (mL/min): 7 GG 0		00	_						
Well Volume (L) = ga	1 * 3 785:	17.4	17		To	otal Purge Volume (L)	64	7		
d = well diameter (inc	hes); h = len	gth of water colu	ımn (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)		DTW (ft btoc)	Purge Rate (mL/min)	Purged Volume (L)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1500	6.8948	554.41	36.3	2.48	18.83	85,	79.03	2000	372	pause pumping le. 5 to reset pung
1530	6.98	558.08	36.2	1.27	18.27	35	29.60	70000	392	resimesing ladge
1540	6.94	549 65	441.0	1.14	18.88	3073	2965	7000	3 400	
15 30	6.95	511.00	39.9	1.30	18.93	over range	29,25	Zovene	Lizz	ussable Ego sedement
1600 60-	6.95	4961.29	426	0.77	18.91	35741	29.25	2000	492	meth relleptope perticulity
16 16	6.95	545.99	366	0.76	18.91	2343	29.85	2000 2000	485	in pury buckers
1630	6.95	536,77	3802	1,36	18-88	2776	29.45	Zecco	\$ 50°C	
16 40	4.94	561.70	37.8	0.63	18.83	2770	29.45	Tooc	527	
16 50	C. 95	500,95	36.3	0.5/	18.92	3883	19.45	2000	542	
1700	6.94	50408	36.41	1.15	18.97	Overvance	19,95	700100	562	DUEST SUKUNG 1
1710	6.43	494.89	336	0.94	1893	96 0	30.25	7000	587	
1720	6.94	551.78	79.1	1500	14.88	37.6	30.42	Z000	602	3
1730	6.95	551.42	78.5	0.12	18.92	14.9	79.33	780	222	se re punjel dune,
17.40	695	555.77	33. 2	0.27	18.80	2378	29,93	200	642	end purise resume
							31		V	lomenous
			-							may sofil sectements on
								Agentino .		piemo mesor
Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs		And the second s		

Geosyntec[▷] WELL DEVELOPMENT LOG SHEET consultants Client: Project No... BUTIZI Development Date: AP-4 Site: Location: Field Personnel Name Well ID: Pump Type/Model: manson Dely Total Depth (ft) (after purge): Tubing Material: 35' Depth to Water (ft): Pump Intake Depth (ft): Well Diameter (in): 1100 Start/Stop Purge Time: Well Volume (gal) = 0 041d h: 4.50 Purge Rate (mL/min): 7050 Well Volume (L) = gal * 3.785 17.34 Total Purge Volume (L): d = well diameter (inches); h = length of water column (feet) Well Type: Stick Up Flush Well Lock: No Well Cap Condition: Replace

Well Tag Present:

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.)
1100	6.95	568.01	101.7	0.62	0515	608	79.51	200	0	
1105	6,94	554.78	105.2	0.46	70.91	67	13.01	200	1	suspect has be turb. due to
1110	6,99	551 49	83.9	0.47	20.57	78	13.00	500	3	Dumis installation
1115	6.99	554.44	99.1	0.32	20.34	47	13.01	2005	3	
1170	6.99	551.44	74.8	0.77	25.05	87.5	13.01	200	4	
1125	7.00	551.47	67.6	0.18	70.04	54,CI	13.01	2005	S	
1130	7.00	550.84	79.3	0.15	19.85	29.9	13.01	205	6	
1135	6.99	5541.22	62.6	0.14	40.05	24.3	13.01	200	7	es weter cleurs sediment posible
11 40	7.00	548.12	59.7	0.12	19.95	19.5	13.01	200	4	IN LINES
11 45	6.99	548 66	69.3	0.10	20.66	13.5	13.02	200	9	
1130	6.99	549.40	56.4	0,10	19.64	12.5	125 1302	200	10	V
1/ 55	C. 94	551.70	65.2	0.09	19.6-1	16.83	13.62	ZOCO	11	
1260	6.99	549.71	53.6	0008	19.68	20.7	13.02	200	51	
1205	6.49	549.36	5105	0.67	19.68	9,85	13.02	200	13	
1210	6.98	552.83	59.7	0.07	14.57	8 39	13,62	205	14	
12.15	6.99	548,56	49.9	0.06	19.59	7.18	13.02	200	15	
12 30	6.98	550.65	48.8	0-00	19.71	6-11	13.08	2005	160	
1225	6.99	51.80	55.1	0.06	20.13	5.68	13.02	700	17	
12-30	6.99	347.73	55.C	0.00	70.78	314	13.07	200	18	
Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0 2 mg/L or 10% for DO > 0 5 mg/L (whichever is greater)		< 5 NTUs			=	

Congretage										py Zofz			
Geosyntec Consultants					WE	LL DEVELOPMEN	T LOG SHEET			0			
Client:		SCS				Project No.:	_C1065	V		Development Date: 2/2017/8			
Site:	Plant hammend					Location:	1 -		-	Field Personnel Name			
Well ID:		Have	PILE PRIPE	SICO		Pump Type/Model:			_	1			
Total Depth (ft) (afte	r purge):	40.85	- 1.21	•		Tubing Material:			_				
Depth to Water (ft):				•	Pı	imp Intake Depth (ft):	-		_				
Vell Diameter (in):				-		tart/Stop Purge Time:		11305	15				
Well Volume (gal) = 0 041d h:					Purge Rate (mL/min):		30	_					
	Well Volume (L) = gal * 3.785: 17.3 -1		•		otal Purge Volume (L)	4_		_					
d = well diameter (in		-		•		(2)			_				
Well Type:	Flush	Rtick Up	0 /										
Well Lock:	(Yes	No											
Well Cap Condition:	(Good)	Replace											
Well Tag Present:	(Yes)	No											
Time	pH (SU)	Spec. Cond.	ORP (mV)	DO (mg/L)	Temp. (°C)	Turbidity (NTUs)	DTW (ft btoc)	Purge Rate (mL/min)	Purged Volume	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)			
1740	6.99	545.55	46.9	0.06	70.28	4.23	13.02	760	19	132 recolung be low 5			
1245	6,99	\$46.35	53.3	0.07	20.40	3.48	13.02	700	70	and alle			
1230	6.99	353.68	45.7	0.07	20.52	3.72	13.07	Zoci	اخ				
1555	6.99	547.79	57.0	0.07	21.32	4.08	13.02	DOS	22				
1300	7.00	541.71	45.8	0.08	20.25	4.90	13.07	200	23	3			
1305	6.99	548.82	51.6	80.0	4.93	4.85	13.02	200	24				
1316	6.99	15.875	51.7	0.08	19.95	4.27	13.07	1005	25				

Time	pH (SU)	(µS/cm)	ORP (mV)	(mg/L)	Temp. (°C)	Turbidity (NTUs)	DTW (ft btoc)	(mL/min)	(L)	rate, issues with pump/well/weather/etc.)
1740	6.99	545.55	46.9	0.06	25.05	4.23	13.02	७७०	19	1st seeding below 5
1245	6,99	546.35	53.3	0.07	20.40	3.48	13.62	200	70	and all the second
	6.99	553.68	45.7	0.07	20.53	3.92	13.07	Zou	ا خ	
1555	6.99	547.79	57.0	0.07	21.32	4.08	13.02	700	25	
1300	7.00	541.71	45.8	0.08	20.25	4.90	13.07	200	23	
1305	6.99	548.82	51.6	80.0	4.95	4.85	13.02	200	29	
1316	6.99	548.21	51.7	0.08	19.95	4.27	13.62	2001	25	
										cere purces : bellow Sufe
										1 0
	1						-1			11
						a copy of a name of the last				
							X			
								>		
Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs				

33.60 tubing

Geosyntec considerates				1	WE	LL DEVELOPMEN	T LOG SHEET			
Client:		505				Project No :	GWCS	281	_	Development Date: 6/17/21
Site:		Plant	Hammo	nes		Location:	AP-	Ч		Field Personnel Name:
Well ID:		Hawa		1.50		Pump Type/Model:	monso	ou	_	
Total Depth (ft) (after	nurge):	43.2				Tubing Material:		2019	-	
Depth to Water (ft):	puigo).	11.68			p	ump Intake Depth (ft):			-5	
		2				Start/Stop Purge Time:		117/5		
Well Diameter (in):		5.1	7							
Well Volume (gal) = 0	2	_				Purge Rate (mL/min):	-		-,	
Well Volume (L) = gal	l * 3_785:	19.	57		Te	otal Purge Volume (L)	:>	,()		
d = well diameter (incl	, ·		ımn (feet)							
Well Type:	Flush	Stick Up								
Well Lock:	Yes	No								
Well Cap Condition:	Good	Replace								
Well Tag Present:	(>	No								
Time	pH (SU)	Spec. Cond.	ORP (mV)	DO	Temp. (°C)	Turbidity (NTUs)	DTW (ft btoc)	Purge Rate	Purged Volume	Notes (Purge method, water clarity, odor, purge
		(μS/cm)		(mg/L)		21.7		(mL/min)	(L)	rate, issues with pump/well/weather/etc.)
12134	6.87	303.54	74.5 90.2	3.66	21.35		11.68	3600	30	purye surge well &
1444	715	345.08	68.0	3.33	18.92	3319	24.38	30000	60	
1564	7.73	363.94	66.6	3.46	18.94	GuerRunge	24,55	3000	90	turbed to some higher with
1514	7.21	343.86	64.1	3.53	18.88	Overone ?	24.95	3600	120	desta surge surge bottom
1524	7.25	361.33	63.4	3,04	18.92	3 932	24.85	3600	150	Sor ereinen
1334	7.27	361.61		3.12	18.94	Overchese.	75.55	3000	180 -	Dans purya / surge 3re is
1544	7.75	364.57	61.9	3.04	1900	719 0	25.86	3000	\$210	terburil derveese
1517 ISS4	7.25	396,65	61.8	3.08	18.97	a2	25.90	3000	025	DAME COO 2-
15+71617	7.07	354,80	73.5	3.30	14.01	Guerkinge	36,25	4000	350	Jump fixed
1677	7.72	35826	64.2	3.09	18-88	overconde	36.25	1000	390	pure Surge resumes
المنتخفار	7.34	373.73	60.2	7.77	18.92	341130	34.23	3060	4120	sochement oleaned sump
16-15	7.77	364,41	61.0	3.09	18.47	dueranne	33.84	3600	450	pump stuck 50 16000
1705	7.21	305.45	60.1		1895	consulter	34.68	3000	480	reaching @ 1645
1715	7.16	347.53	61.3	3.34	1XXX	Oversunde	35.66	3600	510	en purge resume
1						0				G[180
								-		
Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs				

S 1 / L ... Or 1 /

+/- 5%

0 2 mg/L or 10% for DO > 0 5 mg/L (whichever is greater)

Stabilizing Criteria +/- 0.1 SU

						Develoi	sment	109 100	u + low te	24
Geosyntec Consultants					-GR	OUNDWATER SAM				
Client:		55		.0		Project No.:	GWGS	81		Develop-Sampling Date: 2/18/71
Site:		Plant 1	Hammer	1		Location:	AD-4	<u> </u>		
Well ID:		LIGWA				Pump Type/Model:		M	- 1	Sample Collection Time:
Total Depth (ft):		43.27				Tubing Material:				imple Purge Rate (ml/min):
Depth to Water (ft):		10.43			D.		10014		_	
` '			-			ump Intake Depth (ft):	38		-0	Sample ID:
Well Diameter (in):	2		E va		S	Start/Stop Purge Time:	09171	1047	-	Laboratory Analyses:
Well Volume (gal) = ().041d ² h:		5.37			Purge Rate (mL/min):	<u> 400</u>			
Well Volume (L) = ga	1 * 3.785:	7	0.34		То	tal Purge Volume (L):	36			
d = well diameter (inc	ches); h = len	gth of water colu	ımn (feet)			Purge Method:	Low-Flow W	ell Volume Other:		QA/QC Collected?
Well Type:	Flush	Stick Up				Sampling Method:	Pump Disehar	ge Other:		QA/QC LD.
Well Lock:	Nos	No						9		
Well Cap Condition	Good	Replace			All sample co	ontainers requiring c	hemical preserva	tion properly prese	rved prior to demo	b from well? Yes No
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.)
0917	7.20	333.99	166.9	4.06	20.76	28	1246	250 ECC	2	Die purge to fil Klaurell
0922	7.21	336.06	158.9	3.92	20.64	56	12.46	200	3	7 1 3
0927	7.23	3411.79	170.7	3.78	78 05	5.8	17.46	200	4	
0932	7.25	34502		3.65	21.12	63.9	17.46	20€	5	purge unstable, incoesse
0937	7.27	3411.81	156-5	3.97	77.75	624	12.60	400	7	flow
09 42	7.28	346.87	129.6	3.65	20.62		12.73	400	9	
09 47	7.30	352.93	1461	3.51	>0.75	44,2	17.75	400	(5)	
09 32	7.32	3541.32	118.1	3.38	21.05	1.85	17.75	400	14	
09 57	7.34	357.88	134.9	3.30	20.94	23.2	12.65	400	16	
10 02	7.35	35650	136.1	3.22	26.97	17.8	12.65	400	18	
10 07	7.34	357.71	1.25.1	3.22	20.95	ાં છે. ા	17.65	409	20	
1012	7.35	359.28	98.6	3.16	20,02	12.3	17.65	400	25	
(0 17	7.36	360.36	114.8	3.08	12.15	7.41	12.70	460	24	temp= >1.15
10 22	7.36	357.77	89.8	3.09	21.02	562	17.70	100	26	1
10 27	735	35862	105.7	3.05	70.93	4.95	12.70	616 U	28	
10 32	7.35	353,48		3.07	21.15	4.13	17.80	400	₹30	
(0 37	7.36	357.70	79.1	3.03	20.98	7.73	12.80	400	38	
(0 42	7.36	358.99	93.8	3.60	76.84		17.80		30,	
10 47	7.34	356.16	74.2	3,00	20.34	7.60	17.40	400	36	end pure Inhabite

< 9.5 ft

< 5 NTUs

> 100 mL 250 mL

>36

Below SUM

well development

Geosyntec Consultants					-GR	OUNDWATER SAM	IPLING LOG SI	неет		
Client:		505				Project No.:	Gwa	581		Sampling Date: 6/18/21
Site:			Hamu	- (-)		Location:	1 1		-	Sampler's Name:
Well ID:		HGWH	-113	erc .		Pump Type/Model:	-		-	Sample Collection Time:
Total Depth (ft):		3650				Tubing Material:	- 1011-	2011	_	
		9.07			D	,				ample Purge Rate (mL/min):
Depth to Water (ft):		7		-		ump Intake Depth (ft):		f a	-	Sample ID:
Well Diameter (in):	2					Start/Stop Purge Time:		11034	_	Laboratory Analyses
Well Volume (gal) = 0	.041d ² h:	<u> </u>	50			Purge Rate (mL/min):			-0	
Well Volume (L) = gal	1 * 3 785:	17.6	35		To	otal Purge Volume (L):	4	.CJ	_	
d = well diameter (inc	hes); h = len	gth of water colu	ımn (feet)			- Purge Method	Low-Flow W	Vell Volume Other:		QA/QC Cotteeted?
Well Type:	Flush	Stick Up				Sampling Method:	Pump Dischar	ge Other:		QA/QCLD.
Well Lock:	(Ves	No								
Well Cap Condition:	Good	Replace			All sample c	ontainers requiring c	hemical preserva	ation properly prese	rved prior to demo	b from well? Yes No
Well Tag Present:	Yes	No =								
Well rag rresent.				DO.				D D . 4.	Purged Volume	Notes (Purge method, water clarity, odor, purge
Time	pH (SU)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Temp. (°C)	Turbidity (NTUs)	DTW (ft btoc)	Purge Rate (mL/min)	(L)	rate, issues with pump/well/weather/etc.)
Szoi SZCII	6.28	11565	63.8	6-04	23.40	overchae	9.02	3000	0	4
1034	6,19	123.47	86.7	7.06	19.48	overcine	37.30	7000	40	connerver purgodin
1130						overenge				pure dry
1230						overenge				purge dry
The same of the sa	ingregation of the same									well abes not keep
										upwith pump
			The state of the s							recharge (274 milmin)
										teres steres de leve lup
	-									afford fow Plow condition
					-	-				
						1				
					4					
							2			
Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs	< 0.3 ft	> 100 mL 250 mL	>51	

Geosyntec consultants					WE	LL DEVELOPMEN	T LOG SHEET			
Client:		>C5				Project No.	Colox	581		Development Date: 6/17/71
Site:		Plant	Hamme	and		Location:	1-P-4			Field Personnel Name
Well ID		HGW-	4-113			Pump Type/Model:	monso	٥٨	_	
Total Depth (ft) (after	purge):	36.				Tubing Material:				
Depth to Water (ft):		7.80			Pı	ump Intake Depth (ft):			_	
Well Diameter (in)		2				Start/Stop Purge Time:		16945		
Well Volume (gal) = 0	0.041d h:	4.69				Purge Rate (mL/min):				
Well Volume (L) = ga	2	17.				otal Purge Volume (L)				
d = well diameter (inc						(–)				
Well Type:		Stick Up)	0-29							
Well Lock:	-	No								
Well Cap Condition:	1	Replace								
Well Tag Present:	Yes									
Time	pH (SU)	Spec. Cond.	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.)
10990935	6.22	0.14	92.9	3.28	20.44	2348	7.48	- 2000	d	
0945	6.12	6.69	123.3	2.60	19.84	25 05	32.30	2000	50	due to well purguing dry
										hurket.
	Ų I									
						1	- Company		+	
						2	4			
Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0,2 mg/L or 10% for DO > 0,5 mg/L (whichever is greater)		< 5 NTUs				

Geosyntec ^D					GR	OUNDWATER SAM	IPLING LOG SI	IEET		
Client:		509	,			Project No.:	Gle GS	81		Sampling Date: 8/23/2021
Site:		Plant	VC-11	byo		Location:	/ .			
Well ID:		Ha	UC-11	7		Pump Type/Model:	- 1			Sampler's Name: Sample Collection Time: 173C
Total Depth (ft):		40.6	2			Tubing Material:			- Sa	mple Purge Rate (mL/min):
Depth to Water (ft):		15.40			D	ump Intake Depth (ft):	120		-	Sample ID: HGW -117
Well Diameter (in):	9	73.10					-	11741-	-	
` ′	0.4.7.12.		1 1-2			Start/Stop Purge Time:	200	1124/15	র	Laboratory Analyses:
Well Volume (gal) = 0.			1.13			Purge Rate (mL/min):		100 KG	=	
Well Volume (L) = gal			5.655		To	tal Purge Volume (L):		15.5	- 1	
d = well diameter (inc)	$hes); h = length{e}$	gth of water colu	ımn (feet)			Purge Method:	Low-Flow W	ell Volume Other:		QA/QC Collected?
Well Type:	Flush	Stick Up				Sampling Method:	Pump Dischar	ge Other:		QA/QC I D.
Well Lock:	(Yes)	No								
Well Cap Condition:	Good)	Replace			All sample co	ontainers requiring c	hemical preserva	tion properly preser	ved prior to demok	o from well? Yes No
Well Tag Present:	Ces	No								
Time	pH (SU)	Spec. Cond.	ORP (mV)	DO (mg/L)	Temp. (°C)	Turbidity (NTUs)	DTW (ft btoc)	Purge Rate (mL/min)	Purged Volume	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1124	5.22	245.90	122.5	2,21	20.29	216	15.40	700	5	water clear, no octor
1176	9.30	273.39	167.4	1.96	20.28	2.16	15.40	500	2.5	
1131	5.43	337,75	149.7	1.30	20.38	2.66	19.40	760	3,5	
1136	9.51	373.76		0.78	20.40	2,93	15.40	200	4.5	
ilul	5.52	363.31	168.5	0.63	20.65	2.46	15.40	200	5.5	
1146	5.53	387.49	247.4	0.61	70.68	2.16	15.40	200	6.65	
list	5 55	396.53	188.9	0.49	26.65	238	15.40	200	7.65	
1156	5.46	404.4	254.8	0.38	20.70	(.50	15.40	700	8.65	
1201	5.58	410.32	253.5	0.34	20.65	1.64	15.40	COS	9.5	
1206	5.59	407.37	238.6	0.43	70.69	1.91	15.40	८००	10.5	
1211	563	433.60	2366	0.26	70.78	1.32	15.40	200	11.5	
1216	5.66	4137.20	7336	0.31	20.74	1.16	15.40	200	12.5	
1221	5.69	440.45	2.7.2	0.28	20.87	1.65	13.40	200	13.5	
1276	5.70	446.40	2186	0.32	20.63	0.91	15.40	200	14.5	
1231	5.72	4151.84	147.5	0.36	20.83	0.98	15.40	260	15.5	
1736							11			grub Sennock
							1	7		U
							(0)			
Stabilizing Criteria	+/- 0.1 SU	+/- 5%		0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)		< 5 NTUs	< 0.3 ft	> 100 mL < 250 mL	>3L	

									pg I of 2	
Geosyntec consultants					GR	OUNDWATER SAM	MPLING LOG SI	неет		19 000
Client:		SCS				Project No.:	Grus .	581		Sampling Date:
Site:		Plant	Hemme	incl		Location:	10		_	Sampler's Name:
Well ID:		HGW A				Pump Type/Model:			-	Sample Collection Time:
Total Depth (ft):		36.5		3		Tubing Material:			_	
Depth to Water (ft):		6.34				· ·		4	- 58	ample Purge Rate (mL/min):
		6.51				ump Intake Depth (ft):		T 31.53	-	Sample ID:
Well Diameter (in):				- 1	S	Start/Stop Purge Time:	1431/	1705		Laboratory Analyses:
Well Volume (gal) = () 041d ² h:	4.95				Purge Rate (mL/min):			- 1	,
Well Volume (L) = ga	1 * 3.785:	18.73			Тс	tal Purge Volume (L):	6.5	5		
d = well diameter (inc	ches); h = lei	ngth of water colu	ımn (feet)			Purge Method:	Low-Flow W	/ell Volume Other:		QA/QC Collected?
Well Type:	Flush	Stick Up				Sampling Method:				QA/QC I D.
Well Lock:	Ves	No				, ,				
Well Cap Condition:	Good	Replace			All sample co	ontainers requiring c	hemical preserva	tion properly prese	rved prior to demo	b from well? Yes No
Well Tag Present:	(Ves	No				1 0				
well rag rieselli.	Cita							v		
Time	pH (SU)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Temp. (°C)	Turbidity (NTUs)		Purge Rate (mL/min)	Purged Volume (L)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1431	6.09	125.60	[21.7	5-61	23.01	11.36	7.37	160	1	presure iomen to
W 111.7 m	6.0		3 - 0%		1 - 2					establishflow/ setup
6,1433	6.09	126.941	9.2.8	5.50	23.09					comm. ellor
1435	6.08	123.67	84.0	5.43	23.18	1387	8.20	160	1.5	comm error
	6.08	176.42	79.3	5.51	27.74	13.57	8.50	100	0,5	
1445	6.09	177.97	78.4	9.35	22,94	14.60	9.35	100	2.5	
1420	6.0%	128.51	76.8	5.30	22.92	05.01	9.80	160	3	
LSOO ILISS	6.08	174.61	76.6	5,31	2210	9.31	10.40	160	3.5	
1500	6.10	124.65	76.1	5.28	22.70	9.34	10.97	100	4.0	
1503	6.68	136.27	101.1	3.25	27.97	8.99	11.36	ioo	4.5	
1510				0		8.6	11.84	WU	5	I ped overheat, resumme
1515						8.46	17.37	160	5,5	veledings when coop
15/4 1526	6.10	136.53	59.3	5.14	18.55	7.98	17.70	100	6.67	
1525	6.10	136.51	71.4	5.08	23.01	7.58	12,95	100	6.5	
1530	6.11	136.78	71.7	8.05	22.89	7.52	13.79	100	7.0	
1535	6.08	135.28	72.0	4.97	23.24	7,46	13.51	106	7.5	
1440	6.09	136.79	12.4	5.06	23.28	7.20	13.80	100	8.00	
1545	6.09	136.90	71.5	4.46	23.15	7.28	14.00	(OO)	3.5	

100

> 100 mL

< 250 mL

9

> 3L

141.25

< 0.3 ft

73.70

7.28

< 5 NTUs

1550

Stabilizing Criteria +/- 0.1 SU

6.09

139.26

+/- 5%

71.4

5.17

0.2 mg/L or 10% for DO > 0.5 mg/L (whichever is greater)

CALIBRATION REPORTS

July 2020

Geosyntec D	4 1 5 1		E	QUIPMENT CA	LIBRATION LO	OG		
Field Technician Chad	0550			Date: 7/21/12	26		Time (start) 13	145 Time (finish)
smarTroll SN: 6/3229				Turbidity Meter Type:	Note 20	lave	sn 2283	-2612
Weather Conditions:	znux			Facility and Unit _ H		_	Project No.	N (2818
				Calibra	ation 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	_	4118	4418	4436	+/- 5 %	Yes No	
pH (4)	8/2021	24.6	4	4.39	4	+/- 0.1 SU	Yes No	
pH (7)	1934007	27.1	7	7.22	7	+/- 0.1 SU	Yes No	
pH (10)	19320102	27.1	10	10.08	10	+/- 0.1 SU	(res) No	
ORP (mV)	1940067	39	228	191	228	+/- 20mV	(cs) No	
DO (%) (1pt, 100% water saturated air cal)			100	964	96.4	+/- 6 % saturation	No No	
Turbidity 0 NTU			0	0.57	0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			-	_		+/- 0.5 NTU	Yes No	no starland
Turbidity 10 NTU			10	(0.0)	10,63	+/-0.5 NTU	Yes No	

August 2020

Geosyntec Consultanus			E	QUIPMENT CA	ALIBRATION L	OG		et i e	
Field Technician A. Rez	der			Date : 08/2	5/2020		Time (start):	715	Time (finish): 0745
smarTroll SN 597514	9			Turbidity Meter Type:	amote 2	820Vz	SN: 2279	}	
Weather Conditions: _Cloud-	1	_		Facility and Unit:	ind Hennor	12	Project No.: 60	16581	
				Calibi	ration 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	25.7	4490	4451	4440	+/- 5 %	Yes No		
pH (4)	1907	25.6	4.00	4.53	4.00	+/- 0 ₋ 1 SU	Yes No		
pH (7)	08/2021 19340057	25.8	7.00	7.54	7.00	+/- 0 1 SU	Yes No		
pH (10)	08/2021	36.0	10.00	10.42	10.00	+/- 0_1 SU	Yes No		
ORP (mV)	19460167	26.1	+228	190.8	328-0	+/- 20mV	Yes No		
DO (%) (1pt, 100% water saturated air cal)			100 %	45.4	10090	+/- 6 % saturation	Yes No		
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	Yes No		
Turbidity 1 NTU			l	1.65	1.00	+/- 0.5 NTU	Yes No		
Turbidity 10 NTU			10	9.64	10.00	+/- 0.5 NTU	Yes No		

Geosyntec Consultants			E	QUIPMENT CA	LIBRATION LO	OG			
Field Technician:	s Kessul			Date _ 8/25	120		Time (start):	- <u>30</u>	Time (finish): 815
smarTroll SN: 6438		_		Turbidity Meter Type:	a Nelle ?	1000m	SN. Zeco	1-1916	
Weather Conditions: 75°F	overcust	_		Facility and Unit: Pla	at Hammon	7	Project No : CU	U6581	
				Calibr	ration 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	24.4	4-490	4444	4474	+/- 5 %	(Yes) No		
pH (4)			4.00	41.35	4.0	+/- 0 1 SU	Yes No		
рН (7)	14340057	24.8	7.00	7.29	7,0	+/- 0 1 SU	(Yes No		
pH (10)	19320102	24.7	10.00	10.14	10.21	+/- 0 1 SU	Yes No		
ORP (mV)	19460167	24.9	+228mv	209.6	209.4	+/- 20mV	(Yes) No		
DO (%) (1pt, 100% water saturated air cal)			100%	96.2	968	+/- 6 % saturation	(Ýes) No		
Turbidity 0 NTU			0	03/0	0	+/- 0.5 NTU	(Yes) No		

.67

10

10.00

10

+/- 0 5 NTU

+/- 0.5 NTU

No

No

Yos

Fes

Turbidity 1 NTU

Turbidity 10 NTU

Geosyntec Consultants			E	QUIPMENT CA	LIBRATION L	OG		444	
Field Technician: Aaron	Reeder			Date: 8-26-	2020		Time (start):	310	Time (finish). 900
smarTroll SN: 5475 1	9	=		Turbidity Meter Type:	1279 202	40°C	SN: 227	9	
Weather Conditions: Cloudy	•			Facility and Unit: Pla	nt Hamnon	4	Project No.: 61	16581	
				Calibr	ation 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	24.2	4490	4348	4490	+/- 5 %	Yes No		
pH (4)	08/21	97.4	4.0	4.56	4.0	+/- 0.1 SU	Yes No		
pH (7)	19340057	24.3	7.0	7.53	7.0	+/- 0,1 SU	Yes No		
рН (10)	19320102	24.4	10.0	10.37	10.0	+/- 0 ₋ 1 SU	(Yes) No		
ORP (mV)	08/2021	34.6	+228	215	228	+/- 20mV	(Fes No		
DO (%) (1pt, 100% water saturated air cal)			100%	946%	1000/0	+/- 6 % saturation	(Yes) No		
Turbidity 0 NTU			0	0	0	+/- 0,5 NTU	Yes No		

1,25

\$ 9.58

10

1.0

Turbidity 1 NTU

Turbidity 10 NTU

Yes

Yes

No

No

+/- 0_5 NTU

+/- 0.5 NTU

Geosyntec consultants			E	QUIPMENT CA	LIBRATION LO	OG					
Field Technician: Thomas	3 theselver			Date 217	6120		Time (start) 11:15 Time (finish) 11:50				
smarTroll SN: 6 4/3	119 1100st, 80	_		Turbidity Meter Type:	La matte	SN: 2000=1916					
Weather Conditions:	reast, 80	o F		Facility and Unit: 4	ammond		SN: 2009-1916 Project No.: GW 658)				
				Calibr	ation 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)	रक्ता क्ताइ	75.2	4490	4480	unge	+/- 5 %	Ces) No				
рН (4)	(08/2021	-	4.00	4.40	440	+/- 0 1 SU	Yes No				
рН (7)	19340057	25.8	7.0	7.29	7.30	+/- 0_1 SU	(Yes) No				
рН (10)	19320102	760	10.00	10.19	10.26	+/- 0 I SU	Yes No				
ORP (mV)	19460167	76.1	+228	201.2	203.7	+/- 20mV	Yes No				
DO (%) (1pt, 100% water saturated air cal)			100	97.5	98.2	+7-6% saturation	Yes No				

+/- 0.5 NTU

+/- 0 5 NTU

+/- 0.5 NTU

No

No

No

Yes

0.97

3.33

9.39

0,78

10.25

90

10

Turbidity 0 NTU

Turbidity 1 NTU

Turbidity 10 NTU

Geosyntec Consultants consultants EQUIPMENT CALIBRATION LOG											
Field Technician: Thomas	Kessler			Date: 8/27	112020		Time (start):	Time (finish):			
smarTroll SN: 5975	9	_		Turbidity Meter Type:	Mothe 28	bowe	SN: 2279				
Weather Conditions:	,80°F	_		Facility and Unit:	lemmond	→ :	Project No :	wGS&1			
Calibration log											
	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments			
Specific Conductance (μS/cm)	2001002	24.1	4490	4447	4418	+/- 5 %	(Yes) No				
pH (4)	8/21		4.0	4.60	4.60	+/- 0 ₋ 1 SU	Yes No				
рН (7)	14340057	24.8	7.0	7.52	7.52	+/- 0 ₋ 1 SU	Yes No				
pH (10)	19 320102	25.1	10.0	10.35	10.0	+/- 0 ₊ 1 SU	(Yes No				
ORP (mV)	19460167	75.1	778	148.8	189.2	+/- 20mV	No No				
DO (%) (1pt, 100% water saturated air cal)	10 10 10		100	83.9	100.1	+/- 6 % saturation	Yes No				
Turbidity 0 NTU			0	0	O	+/- 0,5 NTU	€ No				
Turbidity 1 NTU			([.81	1.31	+/- 0_5 NTU	No No				
Turbidity 10 NTU	1 Tt.		0	7.7.8	10	+/- 0,5 NTU	Yes No				

Geosyntec consultants			E	QUIPMENT CA	LIBRATION LO	OG			
ield Technician: Chad Ro	USSO			Date 8/27/2			Time (start): 6830 Time (finish): 6845		
narTroll SN: 443819				Turbidity Meter Type:	SN: 7009 - 1416 Project No: 6W6581				
				Calibr	ation log				
	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments	
Specific Conductance (μS/cm)	26010025	20 47	4490	44/3	4404	+/- 5 %	Yes No		
рН (4)	8/2021	25.8	Ц	4.39	4	+/- 0 ₋ 1 SU	Yes No		
pH (7)	8/2021	25,9	フ	7.27	7	+/- 0 1 SU	Yes No		
рН (10)	19320187 8/2011	26,1	10	10,2	70	+/- 0.1 SU	Yes No		
ORP (mV)	19460167	26,1	228	201.6	228	+/- 20mV	Yes No		

100

0

10

DO (%)

(1pt, 100% water saturated air cal)

Turbidity 0 NTU

Turbidity 1 NTU

Turbidity 10 NTU

95,6

1.41

10.43

93.1

0.5

1.41

1043

Yes

Yes

Yes

Yes No

No

No

+/-6%

saturation

+/- 0 5 NTU

+/- 0 5 NTU

+/- 0 5 NTU

September 2020

Geosyntec Consultants	EQUIPMENT CALIBRATION LOG											
Field Technician: Thomas	Vessler			Date 9/18/7	'el		Time (start): 0719		Time (finish):			
smarTroll SN: 64677	3	_		Turbidity Meter Type:	temette V	ere _	SN: 100	se _e				
Weather Conditions:	y 70°	-		Facility and Unit:	umnend	<u></u>	Project No.: 40)65 <u>8</u> 4				
Calibration log												
	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?		Comments			
Specific Conductance (μS/cm)	20010025		4490	4386	4490	+/- 5 %	(Yes) No					
pH (4)	08/21	220	4.0	4.80	4.0	+/- 0 I SU	Yes No					
pH (7)	14340057	22.3	7.00	7.63	7.00	+/- 0 ₋ 1 SU	Yes No					
pH (10)	1932002	72.4	10.00	10,44	10.00	+/- 0 I SU	(Yes No					
ORP (mV)	1466167	27.5	228	193.4	228	+/- 20mV	Yes No					
DO (%) (1pt, 100% water saturated air cal)			100	Q6.i	100	+/- 6 % saturation	es No					
Turbidity 0 NTU					\bigcirc	+/- 0.5 NTU	Yes No					
Turbidity 1 NTU			1	0.56	0.88	+/- 0.5 NTU	Yes No					
Turbidity 10 NTU			10	15.00	w	+/- 0.5 NTU	Ves No					

Geosyntec Consultants			E	QUIPMENT CA	ALIBRATION LO	OG				
Field Technician:	TAUKOR			Date 9-18-	20		Time (start): 07-42			
smarTroll SN: 512 72	3			Turbidity Meter Type:	anotte 2012	ONE	sn: 2949-0	43		
Weather Conditions: 704.	OVERCATI	=		Facility and Unit:				Project No: 6W 881		
				Calibr	ation 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)	250 10025	21.1	4420	4387	4490	+/- 5 %	Yes No			
рН (4)	88/2021		4	4,26	4.00	+/- 0 1 SU	Yes No			
рН (7)	19340057	21.9	7	7.08	7.00	+/- 0 I SU	Yes No			
рН (10)	19320102		10	10.02	10.00	+/- 0 1 SU	Yes No			
ORP (mV)	19460187	22.3	228	223	228	+/- 20mV	Nes No			
DO (%) (1pt, 100% water saturated air cal)			[00	91.3	100	+/- 6 % saturation	Yes No			
Turbidity 0 NTU			0	0.00	0	+/- 0_5 NTU	Cycs No			
Turbidity 1 NTU				1.00	1.00	+/- 0.5 NTU	Yes No			
Turbidity 10 NTU			19.	10.09	10.00	+/- 0.5 NTU	Yes No			

Geosyntec consultants			E	QUIPMENT CA	ALIBRATION L	OG		
Field Technician: Chad	Russi			Date 9/18/201	0'		Time (start): 07	55 Time (finish): <u>682</u> 0
smarTioll SN:	19					Nowe		
Weather Conditions:	F Cloudy			Facility and Unit:	La MoHe 21	_	SN: 1310 Project No.: GN	16581
				Calibr	ration 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	22.9	4496	4413	4490	+/- 5 %	Yes No	
pH (4)	8/2021	20.1	LJ	4.30	4	+/- 0 1 SU	Yes No	
рН (7)	19340057 812021	23.1	7	7.11	7	+/- 0 1 SU	No No	
pH (10)	19320162	23.3	16	9.88	110	+/- 0 1 SU	(es) No	
ORP (mV)	1946767 Blood	233	228	205	236.3	+/- 20mV	See No	
DO (%) (1pt, 100% water saturated air cal)			100	90.9	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1	(,4	1.4	+/- 0.5 NTU	View No	
Turbidity 10 NTU			10	12,52	10.11	+/- 0.5 NTU	(Yes) No	

Geosyntec consultants												
Field Technician: The me	+ Kessle.			Date : <u>ペ</u> / とて/	ζ ₀		Time (start):	75 Time (finish): <u>0915</u>				
smarTroll SN: 6467)		_		Turbidity Meter Type:	Lamotte ?	2020	sn 70c	9				
Weather Conditions:	ny 52°	_		Facility and Unit: Himmond				065\$1				
Calibration log												
	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments				
Specific Conductance (µS/cm)	20010025	13.4	1,440	4375	4440	+/- 5 %	Yes No					
рН (4)	08/71		4.00	4.95	4.00	+/- 0.1 SU	Yes No					
рН (7)	14340057	14.4	7,00	7.60	7.60	+/- 0_1 SU	Yes No					
рН (10)	14320107	14.9	10.0	10.30	10.0	+/- 0.1 SU	Yes No					
ORP (mV)	14460167	15.0	228	205	228	+/- 20mV	(Yes) No					
DO (%) (1pt, 100% water saturated air cal)			100	92	100	+/- 6 % saturation	Yes No					
Turbidity 0 NTU			C	\cup	\mathcal{C}	+/- 0 5 NTU	Yes No					
Turbidity 1 NTU			1	.56	1	+/- 0.5 NTU	Yes No					
Turbidity 10 NTU			10	G	10	+/- 0 ₁ 5 NTU	(Yes No					

Geosyntec consultants			E	QUIPMENT CA	ALIBRATION LO	OG						
Field Technician: Chald K				Date: 4/12/20) } }		Time (start):		Time (finish):			
smarTroll SN: 597516 Weather Conditions: 60°F	1				-a Motte 20	<u> </u>	sn: 1510 - 4111					
Weather Conditions: 60°	sunny	_		Facility and Unit:	amnord	_	Project No : 6	16581				
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)	26016025	\(\lambda \)	4490	4264	4490	+/- 5 %	Yes No					
рН (4)	Bhai	19.2	Ц	4.44	4	+/- 0.1 SU	Yes No					
рН (7)	19346057	18'4	7	7.13	フ	+/- 0 1 SU	Yes No					
pH (10)	1932010 2 8/2021	18.3	10	9.85	(0	+/- 0 1 SU	Yes No					
ORP (mV)	19466167 8/201	18.2	228	256.9	Z32.7	+/- 20mV	Yes No					
DO (%) (1pt, 100% water saturated air cal)			100	91.4	100.6	+/- 6 % saturation	Yes No					
Turbidity 0 NTU			0	٥	0	+/- 0.5 NTU	Yes No					
Turbidity 1 NTU			1	0.88	0.88	+/- 0.5 NTU	Yes No					
Turbidity 10 NTU			10	8.98	10.15	+/- 0.5 NTU	Yes No					

Geosyntec consultants			E	QUIPMENT CA	LIBRATION LO	OG						
Field Technician:	TAUKOUR			Date: 1-22-20			Time (start):		Time (finish): 093 p			
smarTioll SN: 512 7		_		Turbidity Meter Type:	one	sn: 2949-0413						
Weather Conditions: 570F,	SUNNY	-		Facility and Unit:	-	Project No.: CW0781						
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 010025	17.0	4490	4276	4490	+/- 5 %	Yes No					
рН (4)	8/21		4	4.37	4.00	+/- 0 ₋ 1 SU	Ves) No					
рН (7)	1934057	17.1	7	7.17	7.00	+/- 0 1 SU	(Ye) No					
рН (10)	193 20102 8/24	17.2	(0	9.96	10.00	+/- 0 1 SU	Yes No					
ORP (mV)	194601678121	17.3	228	22315	218	+/- 20mV	(Ve) No					
DO (%) (1pt, 100% water saturated air cal)			100%	90.9%	100%	+/- 6 % saturation	(Yes) No					
Turbidity 0 NTU			0	0.01	0.00	+/- 0,5 NTU	Yes No					
Turbidity 1 NTU				1.01	1.00	+/- 0.5 NTU	Yes No					
Turbidity 10 NTU			10	9.78	(0·W	+/- 0.5 NTU	(Yes) No					

Geosyntec consultants			E	QUIPMENT CA	LIBRATION L	OG					
Field Technician: Tramers	thesslar			Date : 9/24/20			Time (start): <u>C770</u> Time (finish): <u>C890</u>				
smarTroll SN: 6467				Turbidity Meter Type:	unotte 20	20we	sn. 700	્વ			
Weather Conditions: RCV	nrng S8°	-		Facility and Unit:	immo vel	_	Project No :	UGS81			
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	M.9	4440	1385	4490	+/- 5 %	(Yes) No				
pH (4)	08/21		4.0	4.94	4.0	+/- 0 I SU	Yes No				
рН (7)	19840057 08121	1877	7.0	7.63	7.0	+/- 0 1 SU	Yes No				
рН (10)	14320102	18.9	10.0	10.37	10.0	+/- 0 1 SU	Yes No				
ORP (mV)	19460167	14.0	778	197,2	855	+/- 20mV	Yes No				
DO (%) (1pt, 100% water saturated air cal)			100%	94.0%	loo°r	+/- 6 % saturation	Yes No				
Turbidity 0 NTU			0	2.00	004	+/- 0,5 NTU	(Yes No				
Turbidity 1 NTU			1	0.28	1.08	+/- 0,5 NTU	Yes No				
Turbidity 10 NTU			10	14.02	9.71	+/- 0,5 NTU	Yes No				

Geosyntec consultants			E	QUIPMENT CA	ALIBRATION L	OG		
Field Technician:	Russo			Date: 9/24/20	20		Time (start):	320 Time (finish): 0967
smarTroll SN:	1519	_	Turbidity Meter Type: La Motte 200 we					
Weather Conditions:	raining	=		Facility and Unit:	1	_	SN: 1510- Project No.:	W6581
				Calibr	ration 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	20.5	4490	4400	4490	+/- 5 %	(Fes) No	
pH (4)	0125		4	4.5	4	+/- 0,1 SU	es No	
pH (7)	19340057 8/2021	10.5	7	6.92	7	+/- 0 ₋ 1 SU	Yes No	
pH (10)	19320102	20.8	10	9.71	10	+/- 0 1 SU	No No	
ORP (mV)	8/2021	21	228	207	234.8	+/- 20mV	es No	
DO (%) (1pt, 100% water saturated air cal)			106	89.1	180	+/- 6 % saturation	No No	
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			ſ	1.32	(.31	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			16	10.71	16.34	+/- 0,5 NTU	Yes No	

Geosyntec consultants			E	QUIPMENT CA	ALIBRATION LO	OG				
Field Technician:	Thokair			Date: 3-74-20	20		Time (start): _074	Time (finish): 08/5		
marTroll SN: 512733	LANN	_		Turbidity Meter Type:	AMOTTE 2020W	<u>.</u>	SN: 2949-6413 Project No: GW 6581			
				Calibr	ration 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)	200/0025	7.5	4490	4450	4490	+/- 5 %	Yes No			
pH (4)	8/21		4	4.36	4.00	+/- 0 ₋ 1 SU	Yes No			
рН (7)	19340057 8/24	18,3	7	7.16	7.00	+/- 0.1 SU	Yes No			
рН (10)	1320102 g/21	i 9. L	10	4.99	10:00	+/- 0.1 SU	Yes No			
ORP (mV)	19460167 2121	19.4	US	193.9	228	+/- 20mV	Yes No			
DO (%) (1pt, 100% water saturated air cal)			lw	93.6	100	+/- 6 % saturation	(Yes) No			
Turbidity 0 NTU			0	0.02	0	+/- 0.5 NTU	ys No			
Turbidity 1 NTU				1.23		+/- 0 5 NTU	(Ve) No			
Turbidity 10 NTU			10	10.27	10	+/- 0 5 NTU	Yes No			

Geosyntec consultants			E	QUIPMENT CA	ALIBRATION L	OG	-		
ield Technician: \\\ \TSHISH	TAUKOUR			Date : 1-25-7	20		Time (start): 09 00 Time (finish): 09		
mar Troll SN: 512733		_		Turbidity Meter Type:_	LAMOTTE 120	SN: 2949-6413			
Veather Conditions: 65F, D	MEY	-		Facility and Unit:	andria	_	Project No.: GW (18)		
				Calib	ration 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	19.3	4490	4321	4490	+/- 5 %	Yes No		
pH (4)	8121		4	4.36	4.00	+/- 0 I SU	Yes No		
pH (7)	19340057	19.3	7	7.10	7.00	+/- 0.1 SU	(res) No		
pH (10)	195 20102	19-4	10	9.97	(0.00	+/- 0 I SU	Yes No		
ORP (mV)	9460167 8/2c		US	207.6	228	+/- 20mV	(Yes) No		
DO (%) 1pt, 100% water saturated air cal)			100	94.1	100	+/- 6 % saturation	Yes No		
Turbidity 0 NTU			0	0.0	0.0	+/- 0.5 NTU	Ses No		
Turbidity 1 NTU			1	1.26	(.0)	+/- 0.5 NTU	No No		
Turbidity 10 NTU			(0	1.77	10.00	+/- 0 5 NTU	Yes No		

Geosyntec consultants			E	QUIPMENT CA	LIBRATION LO	OG					
Field Technician: Tuginus	hessler	_		Date: 9/25/	20_		Time (start):	Time (finish): <u>0930</u>			
smarTroll SN:GUG7		_		Turbidity Meter Type:	lamotte	ZCZC	sn 7009				
Weather Conditions: Rang.	650	_		Facility and Unit:	rumond	_	Project No.	wGS&			
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)	70010675		4440	4304	4492	+/- 5 %	Yes No				
рН (4)	15/80	18.9	4.0	4,92	4.0	+/- 0 1 SU	Yes No				
pH (7)	19340054	5.191	7.0	7.59	7.0	+/- 0.1 SU	(Yes No				
p H (10)	19320102	19,4	10.00	10.39	10.00	+/- 0.1 SU	Yes No				
ORP (mV)	1946167	14.7	778	197,0	228	+/- 20mV	Ces No				
DO (%) (1pt, 100% water saturated air cal)			(00)	93.1	100	+/- 6 % saturation	Yes No				
Turbidity 0 NTU			0	0.92	0	+/- 0.5 NTU	Yes				
Turbidity 1 NTU			1	0.44	1.04	+/- 0.5 NTU	(Yes No				
Turbidity 10 NTU			to	9.82	10.37	+/- 0.5 NTU	Yes No				

Geosyntec consultants			E	QUIPMENT CA	OG				
Field Technician: Chad	Russo			Date 9/25/2	2026		Time (start): 69	10	Time (finish): 594)
smarTroll SN:S47	519							4111	
Weather Conditions: 65°F	519 overcast		Facility and Unit:					N P2B)	
				Calibr	ation 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 %	No No		
pH (4)	8/2021	21.0	–	4.51	4	+/- 0 1 SU	Yes No		
pH (7)	(43 4005)	21.0	7	6.86	7	+/- 0 1 SU	es No		
pH (10)	620162	21.2	10	6.55	16	+/- 0.1 SU	Yes No		
ORP (mV)	19460167 8/2011	213	778	243.5	275.3	+/- 20mV	Yes No		
DO (%) (1pt, 100% water saturated air cal)			100	90.3	100.3	+/- 6 % saturation	Yes No		
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	Yes No		
Turbidity 1 NTU			1	1.08	1.08	+/- 0.5 NTU	Yes No		
Turbidity 10 NTU			10	7.62	10.06	+/- 0,5 NTU	Yes No		

Geosyntec consultants			E	QUIPMENT CA	ALIBRATION L	OG		
ield Technician: Thoma	s thessler			Date : 4178	720	Time (start): 081	5 Time (finish); 0848	
marTroll SN: <u>646775</u>		_		Turbidity Meter Type:	Lamoth 202	ರ್∞<	sn:_ 700	9
/eather Conditions:Sun1	ny 68°			Facility and Unit:	ammund	_	Project No : (alo)	<u>GS8(</u>
				Calibi	ration 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)	zoulouzs	22.1	4490	44148	4490	+/- 5 %	Yes No	
рН (4)	08/21	CLIT	4.00	4.87	4.0	+/- 0_1 SU	Yes No	
рН (7)	19340054	2.7.8	7.00	7.58	7.0	+/- 0_1 SU	Yes No	
рН (10)	1932007 08/21	23.1	10.00	10.42	10.00	+/- 0.1 SU	Yes) No	
ORP (mV)	1946067	23.3	528	189.2	228	+/- 20mV	Yes No	
DO (%) lpt, 100% water saturated air cal)			160	95,9	99.8	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU			B	0.01	0,0	+/- 0,5 NTU	Yes No	
Turbidity 1 NTU			ı	1.29	1.28	+/- 0 5 NTU	(res) No	
Turbidity 10 NTU			10	6.73	9.85	+/- 0.5 NTU	(Yes) No	

Geosyntec consultants			E	QUIPMENT CA	LIBRATION LO	OG						
Field Technician: Aaron	Recder			Date: 9 - 28	-2020		Time (start): 1330 Time (finish): 1405					
smarTroll SN: 512 73	33	-		Turbidity Meter Type:	amotte	_	SN: 2949					
Weather Conditions: Sunny	H182/10	271		Facility and Unit: Har	nmond	_	Project No.:	16581				
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	27.5	4440	4341	4490	+/- 5 %	Yes No					
pH (4)	00/2001	27.6	4.00	4.25	4.00	+/- 0,1 SU	(Yes) No					
рН (7)		26.7	7.00	7.11	7.00	+/- 0_1 SU	Yes No					
рН (10)	19320102	26-2	10-00	10.08	10.00	+/- 0.1 SU	(Yes) No					
ORP (mV)	19460167	26.6	228.0	197.4	2280	+/- 20mV	Yes No					
DO (%) (1pt, 190% water saturated air cal)			100%0	97.7	100%	+/- 6 % saturation	Yes No					
Turbidity 0 NTU			0	0		+/- 0.5 NTU	Yes No					
Turbidity 1 NTU			1.00	0.49	1.00	+/- 0.5 NTU	Yes No					
Turbidity 10 NTU			10	10	10	+/- 0.5 NTU	(Ves) No					

November 2020

Geosyntec Consultants		EQUIPMENT CALIBRATION LOG										
Field Technician: 1100005	hessle/		9	Date : 11/101	7070		Time (start):	738 Time (finish): 0808				
smarTroll SN: 72855	0	=		Turbidity Meter Type:	cMotte	<u>2020we</u>	SN: 1859-0417					
Weather Conditions: OVEVCCS	t, 70°	_		Facility and Unit:	nt Hemmon		Project No.: 60	06581				
				Calibr	ation log							
	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	/ Comments				
Specific Conductance (µS/cm)	20010025		4490	360	4440	+/- 5 %	Yes No	Aquetroll 400				
pH (4)	08/21	25°	4.00	3.81	4.00	+/- 0 1 SU	Yes No					
рН (7)	19340057	20.61°	7.00	7.12	7.02	+/- 0 1 SU	Yes No					
pH (10)	19320102	20.66	10	10.15	10.04	+/- 0 1 SU	Yes\ No					
ORP (mV)	19460167 08121	70.79	228	276.8	ててw	+/- 20mV	Yes No					
DO (%) (1pt, 100% water saturated air cal)			100%	99.93%	100%	+/- 6 % saturation	Yes No	1				
Turbidity 0 NTU			0	0.54	0,38	+/- 0,5 NTU	(Yes) No					
Turbidity 1 NTU			1.00	1.60	1.60	+/- 0.5 NTU	(Yes) No					
Turbidity 10 NTU			10.00	7.67	9.93	+/- 0.5 NTU	Yes No					

Geosyntec consultants			E	QUIPMENT CA	LIBRATION LO	OG			
Field Technician: Shawn	LTY			Date: 11/10/2	070		Time (start):	:55	Time (finish): (2; 15
smarTroll SN: 728 63	34			Turbidity Meter Type:	laMotte	2020 Wel	sn: 295	3	-4
Weather Conditions:	y dy	N658]							
				Calibr	ation 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)	20005	22.29	4490	4568.3	4322. 14	77 +/- 5%	(es) No		
pH (4)	98/2021	22.7	4.00	4.03	4.00	+/- 0.1 SU	Yes No		
рН (7)	19340057	22.04	7.00	7.5	7.00	+/- 0,1 SU	es No		
pH (10)	19329102	22.04	10.00	9.97	10.00	+/- 0,1 SU	Yes No		
ORP (mV)	19460167	22.14	228	240.7	227-6	+/- 20mV	No No		
DO (%) (1pt, 100% water saturated air cal)			100	10 .3	99.83	+/- 6 % saturation	Yes No		
Turbidity 0 NTU			O	0	0	+/- 0.5 NTU	No No		
Turbidity 1 NTU				6.92	0.97	+/- 0.5 NTU	Ves No		
Turbidity 10 NTU			10	81.11	7.85	+/- 0.5 NTU	Ye No		

Geosyntec consultants		EQUIPMENT CALIBRATION LOG										
Field Technician: Shaw	h UIN			Date : 11/11/7-	020		Time (start):	30 Time (finish): 7:45				
smarTroll SN: 728	b34	-		Turbidity Meter Type: Laft of the 2020Wel				53				
Weather Conditions:	<i>ady</i>	_		Facility and Unit:	lanmond		Project No. G	1658)				
				Calibra	ation log		lt e					
	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)	200 0025	22.84	4490	4574.0	4508.	+/- 5 %	Yes No					
pH (4)	08/2021	32.0	4.00	4.51	4.00	+/- 0 1 SU	Wes No					
рН (7)	19340057	اه. در	7.00	6.99	7.00	+/- 0 ₋ 1 SU	res No					
p H (10)	19320 02	22.52	10.00	10-0	10.00	+/- 0 ₊ 1 SU	Mo No					
ORP (mV)	19460167	22.36	228	226.9	228.0	+/- 20mV	Yes No					
DO (%) (1pt, 100% water saturated air cal)			סטן	98.59	99.95	+/- 6 % saturation	Yes No					
Turbidity 0 NTU			0	0	D	+/- 0.5 NTU	Wes No					
Turbidity 1 NTU				0.98	0.99	+/- 0.5 NTU	Yes No					
Turbidity 10 NTU			15	10.99	10.03	+/- 0.5 NTU	Yes No					

Geosyntec consultants			E	QUIPMENT CA	LIBRATION LO	OG			
Field Technician: Thomas	Kussler			Date	20_		Time (start): 745 Time (finish): USIS		
smarTroll SN: 77855	50	-		SN: 1859	-6412				
Weather Conditions:	st,70°	-		morel	Project No.:	WGSSI			
				Calibr	ation 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	70,0	4490	4495.4	4490	+/- 5 %	Pes No		
pH (4)	08/21		4.0	4.15	4.00	+/- 0,1 SU	(eg) No		
pH (7)	19346657 08/21	20.90	7.6	7.67	1.02	+/- 0,1 SU	O No		
p H (10)	1932002	71.03	10.0	10.68	10.04	+/- 0.1 SU	(Veg No		
ORP (mV)	19466167	21.14	778	225.9	278	+/- 20mV	Yes No		
DO (%) (1pt, 100% water saturated air cal)			1661.	99.157.	100%	+/- 6 % saturation	Yes No		
Turbidity 0 NTU			0	0.79	0.01	+/- 0.5 NTU	(Pes) No		
Turbidity 1 NTU			100	0.52	0.78	+/- 0.5 NTU	Yes No		
Turbidity 10 NTU			OJ. OJ	10.91	10.68	+/- 0.5 NTU	(Yes) No		

December 2020

Geosyntec Consultants			E	QUIPMENT CA	LIBRATION LO	OG			Y
Field Technician: 5000	h Lin			Date: 12/15/2	ofo		Time (start):		Time (finish):
smarTroll SN: 72854	8	_		Turbidity Meter Type:	20/Ne	Time (start): 130 Time (finish): 155 SN: 1859 - 0412 Project No.: GW 558			
Weather Conditions: 3MM	1320 =			Facility and Unit:		_	Project No : 61	N 658	
				Calibr	ation 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)	#200 0025	8.35	4490	4774.8	4469.6	+/- 5 %	Yes No		
p H (4)	08/2021	0.25	4.000	4.00	12020 00	+/- 0 1 SU	Yes No		
рН (7)	194057	8.48	7.00	7 9	7.00	+/- 0 ₋ 1 SU	Yes No		
рН (10)	#19320102 08/2021	8.35	10.00	10.25	10.10	+/- 0.1 SU	(Ves No		
ORP (mV)	#19410167	821	228	247.3	227.9	+/- 20mV	Yes No		
DO (%) (1pt, 100% water saturated air cal)			100	99-87	100.54	+/- 6 % saturation	es No		
Turbidity 0 NTU			0	D	0	+/- 0.5 NTU	Yes No		
Turbidity 1 NTU			2.446	0.87	1.00	+/- 0.5 NTU	(Yes) No		
Turbidity 10 NTU			10	10.37	9.98	+/- 0 5 NTU	Yes No		

January 2021

Calibration Report

Instrument Aqua TROLL 400

Serial Number 728634 Created 1/19/2021

Sensor RDO

Serial Number 728749 Last Calibrated 1/19/2021

Calibration Details

Slope 1.080667 Offset 0.00 mg/L

Calibration point 100%

Concentration 10.62 mg/L
Temperature 9.08 °C
Barometric Pressure 1,007.7 mbar

Sensor Conductivity

Serial Number 728634 Last Calibrated 1/19/2021

Calibration Details

Cell Constant 0.997
Reference Temperature 25.00 °C
TDS Conversion Factor (ppm) 0.65

Sensor Level
Serial Number 72833

Serial Number 728331 Last Calibrated Factory Defaults

Sensor pH/ORP

Serial Number 20797 Last Calibrated 1/19/2021

Calibration Details

Total Calibration Points 3

Calibration Point 1

pH of Buffer 4.00 pH pH mV 165.3 mV Temperature 9.33 °C

Calibration Point 2

pH of Buffer 7.06 pH pH mV -3.6 mV Temperature 9.31 °C

Calibration Point 3

pH of Buffer 10.12 pH pH mV -171.6 mV Temperature 9.22 °C

Slope and Offset 1

Slope -55.21 mV/pH

Offset -0.3 mV

Slope and Offset 2

Slope -54.89 mV/pH Offset -0.3 mV

ORP

ORP Solution ZoBell's
Offset -1.2 mV
Temperature 8.94 °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 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 March 2021

Geosyntec Consultants			E	QUIPMENT CA	LIBRATION L	OG	100	
Field Technician: YASHISH	THUROUR			Date 3-10-2	д		Time (start): D7 40)Tune (finish): 0749
smarTroll SN 7-28 5	563			Turbidity Meter Type	LaMote 2020we		SN: 710-0711	
Weather Conditions:	40°F			Facility and Unit: Plant			Project NoGW6581	
			1	Calibr	ration log			
	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (μS/cm)	2061 0025		4490	4366.2	4490	+/- 5 %	Yes No	
pH (4)	08/24	21.06	4.00	3.93	4.00	+/- 0 I SU	Yes No	
Mid-Day pH (4) check	(I		4.00		•	+/- 0 I SU	Yes No	
рН (7)	19340057	19.38	7.00	6.92	7.00	+/- 0.1 SU	(Yes) No	
Mid-Day pH (7) check	11		7.00		4.0	+/- 0 I SU	Yes No	
рН (10)	19320102	18.70	10.00	88,6	10.00	+/- 0 I SU	Yes No	
Mid-Day pH (10) check	"		10.00			+/- 0 I SU	Yes No	
ORP (mV)	194 60167	18.74	228	238.0	220	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	95.71	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.00	0-00	+/- 0 5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.96	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10:39	10, W	+/- 0.5 NTU	Yes No	

Geosyntec	D
consultants	

EQUIPMENT CALIBRATION LOG

Weather Conditions:

728568 Sunny, 70°

3/11/21

Time (start): 0740

Time (finish): 0810

Turbidity Meter Type. ____LaMote 2020we

SN: 2289-2612

Facility and Unit: Plant Hammond AP-1/2

Project No : GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (μS/cm)	76616025		4490	4332,5	4490	11/- 5 %	Yes No	
pH (4)	08121	IS	4.00	3.98	4.00	+/- 0,1 SU	Yes No	_
Mid-Day pH (4) check			4.00	398409		+/- 0_1 SU	Yes No	within renge
pH (7)	19340057	15	7.00	7.04	7.04	+/- 0.1 SU	Ves No	
Mid-Day pH (7) check			7.00	6.98		+/- 0.1 SU	Yes No	within Range
pH (10)	1932907	15	10.00	10.17	10.00	+/- 0 ₌ 1 SU	(Yes) No	4
Mid-Day pH (10) check			10.00	9.92		1/- 0_1 SU	Yes No	within Range
ORP (mV)	14460167	13	228	237.6	228	+/- 20mV	Yes No	, (4) 9
DO (%) lpt, 100% water saturated air cal)			100	93.67	(00	+/- 6 % saturation	(cs) No	
Turbidity 0 NTU			0	0.19	0.60	+/- 0,5 NTU	es No	
Turbidity I NTU			1.00	0.43	1.00	+/- 0.5 NTU	No No	
Turbidity 10 NTU			10.00	10.45	10-00	+/- 0_5 NTU	(Ye) No	

Geosyntec Consultants			E	QUIPMENT CA	ALIBRATION L	OG						
	RUSSO			Date 3/11/20			Time (start):	130	Time (finish): 6755			
smarTroll SN:	esso clear	_		SN: 6411-	1416							
Weather Conditions:	clear	_		Project NoGW6	5581							
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	aG	4490	4582.2	4490	+/- 5 %	Yes No					
p H (4)	812521	14.96	4.00	4.63	4	+/- 0 SU	Ces No					
Mid-Day DH (3) check	19340057 \$1204	15,C9	4.00	7.03	7	+/- 0 SU	Yes No					
(A) Hd	20160-5	25.97	7.00	4.05	4.05	+/- 0 _* 1 SU	(Yes No					
Mid-Day pH (7) check	(वड्र४०५५७	26.07	7.00	6.95	6.95	+/- 0 ₋ 1 SU	Tes No					
рН (10)	012	15.96	10.00	10.04	10	+/- 0 ₌ 1 SU	No No					
Mid-Day pH (10) check	(4320162	25.6	10.00	9.95	9.95	1/- 0 SU	(cs) No					
ORP (mV)	19460167	16.07	228	231.4	220	÷/- 20mV	(Yes) No					
DO (%) (1pt, 100% water saturated air cal)			100	92.09	(00	+/- 6 % saturation	Yes No					
Turbidity 0 NTU			0	0	0	⊦/- 0,5 NTU	No No					
Turbidity I NTU			1.00	0.58	0.58	+/- 0.5 NTU	G No					
Turbidity 10 NTU			10.00	10.68	9.75	+/- 0_5 NTU	Yes No					

				10.000					
Geosyntec Consultants			E	QUIPMENT CA	ALIBRATION L	OG			
Field Technician: VASHISH T	AUKOOR			Date 3-11-2	'ÛZI		Time (start): 08 04 Time (finish); 08 19		
smarTroll SN:		_		Turbidity Meter Type: _	LaMote 2020we	_	SN: 710-0711		
Weather Conditions:	,49°F			Facility and Unit:	Hammond AP-1/2		Project No.1 GW6581		
				Calib	ration 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)	206/0025	14.88	4490	4437	4490	1/- 5 %	Yes No		
pH (4)	08/2021		4.00	4.01	4.00	+/- 0_1 SU	Yes No		
Mid-Day pH (4) check	lc	24.19	4.00	4.05	4.00	+/- 0_1 SU	Yes No		
pH (7)	19340057	15.50	7.00	6.88	7.00	+/- 0.1 SU	(Ye) No		
Mid-Day pH (7) check	11	23.10	7.00	7.03	7.00	+/- 0,1 SU	(Pes) No		
p H (10)	19320/02	15-31	10.00	10.06	10.00	+/- 0,1 SU	Ves No		
Mid-Day pH (10) check	ų	21.96	10.00	9.98	10.00	+/- 0 _* 1 SU	Yes No		
ORP (mV)	19460167 08/2021	14.94	228	240.8	228	+/- 20mV	(Yes) No		
DO (%) (1pt, 100% water saturated air cal)			100	91.19	lub	+/= 6 % saturation	Yes No		
Turbidity 0 NTU			0	0,00	0	+/- 0 5 NTU	(Yes) No		
Turbidity 1 NTU			1.00	1.17	1.00	+/- 0_5 NTU	Yes No		
Turbidity 10 NTU			10.00	10.45	10.00	+/- 0 5 NTU	Yes No		

Geosyntec Consultants	EQUIPMENT CALIBRATION LOG		
field Technician; Chad RUSSO	Date: 3/12/12/	Time (start): 0835	Time (finish):
marTroll SN: 72º 550	Turbidity Meter Type LaMote 2020we	SN: 6411-1416	
Venther Conditions: 50°F Partly Cloudy	Facility and Unit: Plant Hammond AP-1/2	Project No.: GW6581	

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	19.51	4490	4520	4490	1/- 5 %	es No	
pH (4)	8/2021		4.00	4.02	4	+/- 0.1 SU	No No	
Mid-Day pH (4) check	20010025	25,4	4.00	3.96	3.96	⊦/- 0 _∗ 1 SU	(Yes) No	
pH (7)	193 40057 8/2021	19.55	7.00	6.95	7	+/- 0 ₋ 1 SU	No No	
Mid-Day pH (7) check	1934057 8/2021	24.87	7.00	7.02	7.02	+/- 0,1 SU	OSS No	
pH (10)	19320102 872521	19,49	10.00	9.98	10	+/- 0 _* 1 SU	Ces No	
Mid-Day pH (10) check	19320102	25.18	10.00	10.04	10.04	+/- 0 ₌ 1 SU	Yes No	
ORP (mV)	19460167	19.29	228	255'3	228	+/- 20mV	Yes No	
DO (%) pt, 100% water saturated air cal)			100	99.82	100	+/- 6 % saturation	(Yes) No	
Turbidity 0 NTU	N 10		0	0	0	+/- 0.5 NTU	(Yes) No	
Turbidity 1 NTU			1.00	1.03	1.03	+/- 0,5 NTU	No No	
Turbidity 10 NTU			10.00	9.62	9.62	+/- 0_5 NTU	(ves) No	

Geosyntec Consultants			E	QUIPMENT CA	ALIBRATION L	OG						
Field Technician: Thoma	s hessle			Date: 3112	121		Time (start): C7B Time (finish): C90C					
smarTroll SN:77&50		Turbidity Meter Type: _	LaMote 2020we		sn: 12289-262							
smarTroll SN: 77650	m, 70°			Facility and Unit: Plant			Project No : GW6					
Calibration log												
	Standard Lot # / Date o Expiration	f Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments				
Specific Conductance (μS/cm)	406160 B	13.18	4490	4471.9	4490	+/- 5 %	Yes No					
рН (4)	OSIZI	1,,,,,	4.00	4.05	4.00	1/- 0.1 SU	Yes No					
Mid-Day pH (4) check			4.00	4.07	/	F/- 0.1 SU	Yes No	within Kenge				
pH (7)	08171 14340057	13.10	7.00	6.99	7.00	+/- 0.1 SU	Yes No					
Mid-Day pH (7) check			7.00	7.02		+/- 0 1 SU	Yes No	within Range				
pH (1 0)	1432902 08/71	13.09	10.00	9.98	10.00	+/- 0 ₈ 1 SU	(Yes No					
Mid-Day pH (10) check			10.00	10.01	_	+/- 0,1 SU	Yes No	within Range				
ORP (mV)	19460167 08/21	13.33	228	243.5	228	+/- 20mV	(Yes) No	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
DO (%) (1pt, 100% water saturated air cal)			100	96.39		+/- 6 % saturation	Yes No					
Turbidity 0 NTU			0	0.89	0.00	+/- 0.5 NTU	Ves No					
Turbidity 1 NTU			1.00	1.31	1.05	+/- 0.5 NTU	No No					
Turbidity 10 NTU			10.00	7.99	10.00	⊦/- 0 5 NTU	Yes No					

Yes No

Geosyntec Consultants			E	QUIPMENT CA	LIBRATION L	OG				
Field Technician NASHISH -	TAUKOUR			Date: 3-12-	2021		Time (start): 08	23	Time (finish); 6837	
smarTroll SN: <u>728 563</u>		_		Turbidity Meter Type:	LaMote 2020we		sn: 710-07	-11		
Weather Conditions: COMNY	,50°F	_		Facility and Unit: Plant		Project No.: GW65				
				Calibra	ation log			1		
	Standard Lot # / Date of Expiration	f Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?		Comments	
Specific Conductance (μS/cm)	20610025	20.57	4490	4392.6	4490	1/- 5 %	Yes No			
рН (4)	08/204		4.00	3.97	4.00	1/- 0_1 SU	(Yes) No			
Mid-Day pH (4) check	u	23,92	4.00	4.04	4 ·00	+/- 0.1 SU	Yes No			
рН (7)	19340057	19.53	7.00	7.01	7.00	+/- 0.1 SU	Yes No			
Mid-Day pH (7) check	9	22.74	7.00	7.06	7.00	+/- 0.1 SU	Yes No			Ī
pH (10)	19370102	18.78	10.00	10.05	10.00	+/- 0 1 SU	(Yes) No			
Mid-Day pH (10) check	U	21.91	10.00	9.98	10.00	+/- 0 1 SU	(Yes) No			
ORP (mV)	19460167	18.26	228	238.2	228	+/- 20mV	Ves No			
DO (%) (1pt, 100% water saturated air cal)			100	96.86	100	+/- 6 % saturation	No No			
Turbidity 0 NTU			0	-0.01	0	⊧/- 0.5 NTU	(Ves) No			
Turbidity 1 NTU			1.00	1,11	1.00	+/- 0.5 NTU	Yes No			

10.00

+/- 0.5 NTU

(Ries)

No

1.11

10.45

10.00

Turbidity 10 NTU

V 2.

C 1 D											
Geosyntec Consultants			E	QUIPMENT CA	ALIBRATION L	OG					
	Russo			3/15/26	21		Time (start):	746	Time (finish). OBOO		
smarTroll SN: 72855	50			Turbidity Meter Type: _	LaMote 2020we		Time (start): 0746 Time (finish): 0800 SN: 411-1416				
	cloudy			Facility and Unit: Plant			Project No.: GW6				
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)	2 0016625	19,11	4490	4576	4490	+/- 5 %	Ces No				
pH (4)	8/2.621		4.00	4.03	4	+/- 0_1 SU	(Yes) No				
Mid-Day pH (4) check	20010025 812021	20.16	4.00	4.19	4	+/- 0.1 SU	Ves No				
pH (7)	(1340057		7.00	7.00	7	9/- 0.1 SU	Ves No				
Mid-Day pH (7) check	11340057	26,37	7.00	7.11	7	+/- 0.1 SU	No No				
pH (10)	10320102	(4.77	10.00	\$0.03	10	+/- 0 ₋ 1 SU	es No				
Mid-Day pH (10) check	19320102	20,16	10.00	10.04	10	+/- 0.1 SU	You No				
ORP (mV)	19460167	19.77	228	225.2	228	1/- 20mV	(Yes) No				
DO (%) (1pt, 100% water saturated air cal)			100	85.39	100	+/- 6 % saturation	Yes No				
Turbidity 0 NTU			0	0.03	0.63	+/- 0.5 NTU	(Yes) No				
Turbidity 1 NTU			1.00	0.69	0.69	+/- 0.5 NTU	Yes No				

+/- 0.5 NTU

0

No

10.00

7.89

Geosyntec Consultants			E	QUIPMENT CA	ALIBRATION L	OG						
Field Technician: VASHISH T	Aukour			Date: 3-15-2	orl		Time (start): 08	13 Time (finish): 0824				
smarTroll SN: 728 563		_		Turbidity Meter Type:	LaMote 2020we		SN: 710-0711					
Weather Conditions	1,60'}			Facility and Unit: Plant	Hammond AP-1/2		Project No : GW65	81				
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	15.74	4490	4662.8	4490	+/- 5 %	(Yes) No					
pH (4)	08/4		4.00	3.96	4.00	+/- 0_1 SU	Yes No					
Mid-Day pH (4) check	11	18.52	4.00	4.05	4.00	+/- 0 1 SU	Yes No					
pH (7)	19394057	16.72	7.00	€.99	7.00	+/- 0 ₋ 1 SU	Ves No					
Mid-Day pH (7) check	11	18.26	7.00	7.07	7.00	+/- 0.1 SU	Yes No					
рН (10)	193 20102	16.87	10.00	10.08	NW	-+/- 0.1 SU	Yes No					
Mid-Day pH (10) check	ıı	17.86	10.00	10.02	(0.00	+/- 0 I SU	Yes No					
ORP (mV)	1946167	16.87	228	238.8	228	⊬/- 20mV	Yes No					
DO (%) (1pt, 100% water saturated air cal)			100	93.38	100	+/- 6 % saturation	Yes No					
Turbidity 0 NTU			0	-0.02	9 :00	+/- 0 5 NTU	Yes No					
Turbidity 1 NTU			1.00	1.24	1.00	+/- 0.5 NTU	Yes No					
Turbidity 10 NTU			10.00	9.54	10.00	1/- 0,5 NTU	Yey No					

Geosyntec ^D	
consultants	

EQUIPMENT CALIBRATION LOG

Field Technician:

Weather Conditions:

Ched Russo

Date 3/16/2021

Time (start): 0745

Time (finish): 0815

smarTroll SN:

728550 50°F raining

Turbidity Meter Type: LaMote 2020we

SN: 6411 - 1416

Facility and Unit: Plant Hammond AP-1/2

Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2010025		4490	4405	4490	1/- 5 %	(Yes No	
pH (4)	8/2021	18.21	4.00	3.92	4	+/- 0.1 SU	Yes No	
Mid Day pH (f) check	1934057	18	4.00	6.45	7	1/- 0.1 SU	Yes No	
pH (/)	Brown	1977	7.00	4.02	648,02	+/- 0 ₋ 1 SU	Yes No	
Mid-Day pH (7) check	19340057 8 NOW	19.21	7.00	6.98	6.98	+/- 0 ₋ 1 SU	Yes No	
pH (10)	19320102	12.99	10.00	9.99	10	+/- 0_1 SU	Čes No	
Mid-Day pH (10) check	15]Zdo-	1834	10.00	10.63	10,03	+/- 0_1 SU	(Yes) No	
ORP (mV)	19460167 8/201	1581	228	236,8	228	+/- 20mV	(Ves) No	
DO (%) (1pt, 100% water saturated air cal)			100	94.10	100	1/- 6 % saturation	(Yes) No	.₩.
Turbidity 0 NTU			0	0	0	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.22	6.71	+/- 0.5 NTU	Ves No	
Turbidity 10 NTU			10.00	7.85	10.25	+/- 0.5 NTU	Yes No	

Geosyntec Consultants			E	QUIPMENT CA	LIBRATION L	OG				
Field Technician: VASHISH	TAUKOUR			Date: 3-16-7	624		Time (start):	750 Time (finish): 08/10		
smarTroll SN728 563			Turbidity Meter Type:	LaMote 2020we	_	sn: 710-0711				
Weather Conditions: RAIN,	50°F	_		Facility and Unit: Plant Hammond AP-1/2			Project No.: GW6581			
Calibration log										
	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments		
Specific Conductance (μS/cm)	20610025	16.97	4490	439F.7	4490	+/- 5 %	Yes No			
рН (4)	08/4		4.00	3.99	4,00	+/- 0_1 SU	Yes No			
Mid-Day pH (4) check	h	15-21	4.00	4.08	4:00	+/- 0 ₋ 1 SU	Yes No			
рН (7)	19340057	17·01	7.00	6.95	7 100	+/- 0.1 SU	Yes No			
Mid-Day pH (7) check	h	15.93	7.00	7.05	7.00	+/- 0.1 SU	(Yes) No			
pH (10)	19320102	17.01	10.00	2,38	(0,0)	+/- 0.1 SU	Yes No			
Mid-Day pH (10) check	11	16.28	10.00	10.04	10.00	1/- 0.1 SU	Yes No			
ORP (mV)	19460167	16.93	228	238.7	228	+/- 20mV	Yes No			
DO (%) (1pt, 100% water saturated air cal)			100	99.79	100	+/- 6 % saturation	Res No			
Turbidity 0 NTU			0	0,03	0	⊦/- 0.5 NTU	Ves No			
Turbidity 1 NTU			1.00	1.67	1,00	+/- 0.5 NTU	Ye No			
Turbidity 10 NTU			10.00	9.62	10.00	+/- 0.5 NTU	Res No			

(2,)										
Geosyntec Consultants	EQUIPMENT CALIBRATION LOG									
Field Technician: Thomas	es husden			Date: 3161	12(Time (start):	730	Time (finish):	
		Turbidity Meter Type:	LaMote 2020we	_	SN: 17789-7612					
Weather Conditions:	Hoge Korv	ny		Facility and Unit: Plant	Hammond AP-1/2		Project No.: GW6581			
Calibration log										
	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?		Comments	
Specific Conductance (μS/cm)	260100a	12.99	4490	4 5 73.2	4490	1/- 5 %	(Yes) No			
pH (4)	08/71	12.11	4.00	3.99		+/- 0_1 SU	(Ves No			
Mid-Day pH (4) check		KALISKY	4.00	4.07	4.00	+/- 0 1 SU	Ves No			
рН (7)	19316057	13.73	7.00	7.04	7.60	F/- 0.1 SU	(Yas)No			
Mid-Day pH (7) check			7.00	7.01		+/- 0.1 SU	Yes No			
pH (10)	1913290°C	13.46	10.00	10.06	10.00	+/- 0 _e 1 SU	(cs) No			
Mid-Day pH (10) check			10.00	9.97		+/- 0 SU	Yes No			
ORP (mV)	19460167 0814	1335	228	230,9	228	+/- 20mV	(es No			
DO (%) (1pt, 100% water saturated air cal)			100	9 5.73	w	+/- 6 % saturation	Yes No			
Turbidity 0 NTU			0	0.00	0.00	+/- 0_5 NTU	Q No			

1.00 10.00

Oes

(Yes/

No

No

+/- 0_5 NTU

1/- 0.5 NTU

0.27

11.29

1.00

10.00

Turbidity 1 NTU

Geosyntec Consultants			E	QUIPMENT CA	ALIBRATION L	OG			
Field Technician YASHSA	HAUKOOR			021	Time (start): 07	3 0	Time (finish): 0739		
smarTroll SN:728563				LaMote 2020we	SN: 710-07	<u></u>			
Weather Conditions:	THUNDERSTOR	m, 50°F		Hammond AP-1/2	Project No.: GW6581				
				Calibr	ration log			1	
	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	N	Comments
Specific Conductance (µS/cm)	20610025	F6.91	4490	4469.2	4490	+/- 5 %	(Yes) No		
pH (4)	08/21		4.00	3.95	4.00	+/- 0_1 SU	(Pak) No		
Mid-Day pH (4) check	11	18-91	4.00	4.07	4.00	+/- 0_1 SU	Yes No		
рН (7)	19340057	16:02	7.00	7.60	7.00	1/- 0.1 SU	(Pes) No		
Mid-Day pH (7) check	ч	12.50	7.00	6. 99	7.00	+/- 0 1 SU	(Yes) No		
pH (10)	1932010Z 08/21	15-76	10.00	10:09	10.00	1/- 0.1 SU	Ves No		
Mid-Day pH (10) check	li .	19.28	10.00	10.01	10.00	+/- 0.1 SU	Yes No		
ORP (mV)	19460167	15-06	228	240-2	228	+/- 20mV	(Yes) No		
DO (%) (1pt, 100% water saturated air cal)			100	95.73	100	+/- 6 % saturation	Yes No		
Turbidity 0 NTU			0	-0.01	D	F/- 0.5 NTU	(Yes) No		
Turbidity 1 NTU			1.00	1.10	1.00	+/- 0_5 NTU	Yes No		
							7		

1007

10.00

+/- 0.5 NTU

10.00

Geosyntec Consultants	ultants EQUIPMENT CALIBRATION LOG									
	Mossin		Date : 3117				Time (start): 7: 201 Time (finish): 0800			
smarTroll SN: 7788	wey/remy!	_		Turbidity Meter Type:LaMote 2020we				SN: 1258-98551 :NR		
Weather Conditions:	uely/verny?	So°		Facility and Unit: Plant Hammond AP-1/2				Project No.: GW6581		
Calibration log										
	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments		
Specific Conductance (μS/cm)	70010025	15.71	4490	4435.6	4490	1/- 5 %	No No			
pH (4)	08/71	11.00	4.00	3.99	4.00	+/- 0 ₋ 1 SU	(es) No			
Mid-Day pH (4) check			4.00	4.00		+/- 0_1 StJ	Yes No	within Renye		
pH (7)	19 340087 csfri	11.23	7.00	7.05	7.00	+/- 0_1 SU	Yes No	o		
Mid-Day pH (7) check			7.00	7.02		+/- 0 SU	(Yes) No			
рН (10)	1937402	Mass.	10.00	10.02		+/- 0 1 SU	Yes No			
Mid-Day pH (10) check	V	11.29	10.00	10.06	10.00	+/- 0.1 SU	(Yes) No			
ORP (mV)	191160161 08171	11.34	228	247.8	528	+/- 20mV	(Yes) No			
DO (%) (1pt, 100% water saturated air cal)			100	95.72	100	+/- 6 % saturation	(Yes) No			
Turbidity 0 NTU			0	1.10	0.00	1/- 0.5 NTU	Ces) No			
Turbidity 1 NTU			1.00	0.27	1.00)		Yes No			
Turbidity 10 NTU			10.00	9.02	[0	+/- 0_5 NTU	Yes No			

Geosyntec Consultants	1	V	E	QUIPMENT CA	LIBRATION L	OG				
Field Technician: Chad	Russ6			Date 3/11/202)					Time (finish): 6735	
smarTroll SN: 7289	of cloud	_		LaMote 2020we	SN: 6411-1416					
Weather Conditions:	the cloud	7_		Hammond AP-1/2	Project No : GW6	581				
			Man III	Calibr	ation 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)	2001015	7	4490	4506.5	4490	+/- 5 %	es No			
pH (4)	GLON	15.15	4.00	4	4	1/- 0.1 SU	Yes No			
Mid-Day pH (4) check	2001005	16,5	4.00	4.01	4,01	+/- 0.1 SU	(Yes) No			
pH (7)	19340052	15.73	7.00	ר׳	7	+/- 0.1 SU	No No			
Mid-Day pH (7) check	19340057	16.21	7.00	6.93	6.93	+/- 0.1 SU	Yes No			
p H (10)	19320102	15.65	10.00	10.02	10	+/- 0 SU	es No			
Mid-Day pH (10) check	19320102	16.64	10.00	16.65	16,05	+/- 0.1 SU	(es) No			
ORP (mV)	19466167 BAO21	15.59	228	Z)(3	278	+/- 20mV	Ves No			
DO (%) (1pt, 100% water saturated air cal)			100	88.06	100	+/- 6 % saturation	YGS No			
Turbidity 0 NTU			0	O	0	+/- 0.5 NTU (Yes No)		
Turbidity 1 NTU			1.00	0.94	0.94	H- 0.5 NTU	Yes No			
Turbidity 10 NTU			10.00	9.61	9,64	+/- 0_5 NTU	Yes No			

Geosyntec Consultants			E	QUIPMENT CA	ALIBRATION L	OG	My				
Field Technician: Thermus	Messon			Date: 3/18	151:		Fime (start)	573eS Time (finish): 8+W			
Field Technician: Phornus SmarTroll SN: Cloud	Ch			Turbidity Meter Type: _	LaMote 2020wc	SN: 275	39-2012				
Weather Conditions:	4 60°			Facility and Unit:	Hammond AP-1/2	Project No.: GW6	5581				
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		4490	44175.5	4490	+/- 5 %	(Ves No				
рН (4)	08121	12051	4.00	400	4.00	+/- 0 1 SU	Yes No				
Mid-Day pH (4) check			4.00	4.01		+/- 0.1 SU	Yes No				
pH (7)	14346057	14.99	7.00	7,02	7.00	-+/- 0_1 SU	(es) No				
Mid-Day pH (7) check			7.00	7.06		+/- 0_1 SU	Yes No				
p11 (10)	1932902	1494	10.00	10.06	[0.00]	-1/- 0 _e 1 SU	Yes No				
Mid-Day pH (10) check			10.00	10.00		+/- 0_1 SU	Yes No				
ORP (mV)	19460167 03721	14.89	228	222.5	228	+/- 20mV	Yes No				
DO (%) (1pt, 100% water saturated air cal)			100	100.48	10000	+/- 6 % saturation	(res) No				
Turbidity 0 NTU		- 1	0	00.0	0.00	+/- 0.5 NTU	(Ves No				
Turbidity 1 NTU			1.00	0.10	1.08	+/- 0.5 NTU	Ves/ No				
Turbidity 10 NTU			10.00	wan	9.54	⊣/- 0.5 NTU	(cs) No				

Geosyntec Consultants			E	QUIPMENT CA	ALIBRATION L	OG				
Gold Tochnicion Chad R.	02 <i>2</i> u			Date 3/18/2	021		Time (start): 6750 Time (finish): 0810			
marTroll SN:	SO			Turbidity Meter Type: _	LaMote 2020we		SN: 6411-1496			
marTroll SN:	cloudy			Facility and Unit: Plant		Project No. GW6581				
				Calib	ration 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	17.38	4490	4511.6	4490	1/- 5 %	No No			
pH (4)	8/2021	11.30	4.00	3.99	4	+/- 0_I SU	Ves No			
Mid-Day pH (4) check	20010025 3nort	19.76	4.00	4.14	4	+/- 0_1 SU	(es) No			
pH (7)	19140057	17,52	7.00	7.0	.7.0	+/- 0.1 SU	Yes No			
Mid-Day pH (7) check	19340057	20.22	7.00	7.4	7	+/- 0 1 SU	CYS No			
pH (10)	19320102 9,2021	12.54	10.00	10.62	10	1/- 0 ₋ 1 SU	(Yes) No			
Mid-Day pH (10) check	19320102	20,13	10.00	9.98	10	+/- 0 _* 1 SU	No No			
ORP (mV)	B/2021	17,54	228	223,4	228	+/- 20mV	-Yes No			
DO (%) 1pt, 100% water saturated air cal)			100	7147	100	+/- 6 % saturation	Yes No			
Turbidity 0 NTU	1		0	0	0	+/- 0.5 NTU	Yes No			
Turbidity 1 NTU			1.00	1.18	1.18	+/- 0 ₋ 5 NTU	Yes No			

10.00

10.42

(ves) No

+/- 0_5 NTU

100

Geosyntec consultants EQUIPMENT CALIBRATION LOG											
Field Technician VASHISH 7	FAUKOR			Date: 3-17	-wel		Time (start)	306 Time (finish): 08 (6			
smarTroll SN: 728 56	33		sn:_710-0] ()							
Weather Conditions: SHOWERS, STURMS, 50°F Facility and Unit: Plant Hammond AP-1/2								581			
Calibration log											
	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments			
Specific Conductance (μS/cm)	20610025	16.52	4490	4532.6	4420	1/- 5 %	(Yes No				
pH (4)	08/4		4.00	3.95	4.00	+/- 0_1 SU	Yes No				
Mid-Day pH (4) check	И	19.31	4.00	4.05	4.00	1/- 0_1 SU	(Yes) No				
pH (7)	19340057	17-33	7.00	6.99	7.00	+/- 0.1 SU	(Yes) No				
Mid-Day pH (7) check	ы	19.74	7.00	7.01	7.00	+/- 0.1 SU	res No				
pH (10)	193 24102	17:10	10.00	10.04	10.00	+/- 0 SU	Pes No				
Mid-Day pH (10) check	(1	19.55	10.00	2.99	10.00	+/- 0.1 SU	Yes No				
ORP (mV)	1946/167	17.05	228	238.1	218	+/- 20mV	Yes No				
DO (%) (1pt, 100% water saturated air cal)			100	99.19	100	+/- 6 % saturation	Yes No				
Turbidity 0 NTU			0	0,00	ે	-I/- 0.5 NTU	(Pes) No				
Turbidity 1 NTU			1.00	1.06	1.00	1/- 0.5 NTU	Yes No				
Turbidity 10 NTU			10.00	10.45	10.00	+/- 0_5 NTU	Yes No				

Geosyntec Consultants			E	QUIPMENT CA	ALIBRATION L	OG					
Field Technician:	Russo			Date: 3/19/20	21		Time (start):	756	Time (finish): <u>○ 含ァ</u> し		
smarTroll SN:	550			Turbidity Meter Type:	LaMote 2020we		SN: 6411-1416				
Weather Conditions:		Facility and Unit: Plant	Hammond AP-1/2		Project No.: GW6	5581					
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	14.87	4490	44597	4490	1/- 5 %	No No				
рН (4)	8/2021	17.67	4.00	3,47	4	+/- 0.1 SU	Yes No				
Mid-Day pH (4) check			4.00			+/- 0.1 SU	Yes No				
pH (7)	1434057 812021	14.97	7.00	6.97	7	+/- 0.1 SU	Yes No				
Mid-Day pH (7) check			7.00			+/- 0_1 SU	Yes No				
pH (10)	19320102 BROW	1506	10.00	9.98	10	+/- 0 _* 1 SU	(Yes No				
Mid-Day pH (10) check			10.00			+/- 0,1 SU	Yes No				
ORP (mV)	19460167	15.13	228	230,G	229	+/- 20mV	(es) No				
DO (%) (1pt, 100% water saturated air cal)			100	104.34	100	+/- 6 % saturation	Yes No				
Turbidity 0 NTU			0	0	0	+/- 0_5 NTU	€ No				
Turbidity 1 NTU			1.00	.93	.93	÷/- 0,5 NTU	(Yes) No				

10.00

Turbidity 10 NTU

9.76

Yes No

+/- 0_5 NTU

Geosyntec Consultants		- 1	E	QUIPMENT CA	ALIBRATION L	OG					
Field Technician: Thomes	heest			Date 3/13/2	<u>-1</u>		Time (start): 7:	IS Time (finish): 748			
smarTroll SN 77856	20			Turbidity Meter Type:	LaMote 2020we	_	51 27 282 51 NR				
Weather Conditions:		=		Facility and Unit:	t Hammond AP-1/2		Project No.: GW6	581			
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)	25 001000	15.35	4490	4530.3	4490	+/- 5 %	(Yes No				
pH (4)	<i>ઉ</i> ક્ષય		4.00	3.99	4.00	+/- 0_1 SU	(Yes) No				
Mid-Day pH (4) check			4.00	41.02		+/- 0.1 SU	Yes No	within range			
рН (7)	143400 \$7 OSIZI	15.71	7.00	7.04	7.00	+/- 0_1 SU	Yes No				
Mid-Day pH (7) check			7.00	6.99	/	F/- 0,1 SU	Yes No	within range			
pH (10)	१५५५०ट <i>ज्या</i> प	15.84	10.00	10.01	10.00	+/- 0,1 SU	(ves) No				
Mid-Day pH (10) check			10.00	10.00		+/- 0,1 SU	Yes No	withour range			
ORP (mV)	ાવપ <i>6વાહરા</i> ઇક્ષારી	15.80	228	227.22	228	+/- 20mV	Cs No				
DO (%) (1pt, 100% water saturated air cal)			100	3 95,71	(00)	+/- 6 % saturation	(Yes) No				
Turbidity 0 NTU			0	0.00	0.00	+/- 0.5 NTU	No No				
Turbidity I NTU			1.00	0.17	105	+/- 0,5 NTU	(Yes) No				

10.00

+/- 0.5 NTU

No

10.00

Geosyntec Consultants	115		E	QUIPMENT CA	LIBRATION L	OG	7 100	59TT 1	
material (A second I because)	new phis	sh		Date 3/1912	1		Time (start): 073	Time (finish): <u>Ö</u> 8 5	
smar Troll SN				Turbidity Meter Type:	LaMote 2020we	_	SN 6411-1416		
Weather Conditions:				Facility and Unit:		Project No. GW6581			
				Calibr	ration log			North Control	
	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments	
Specific Conductance (µS/cm)	20010025		4490	4547.1	4490	+/- 5 %	Yes No		
pH (4)	8/21	9.99	4.00	4.04	4-0	+/- 0 I SU	Yes No		
Mid-Day pH (4) check			4.00	4.02		+/- 0 1 SU	Yes No		
pH (7)	17340057	10.13	7.00	7.10	7.00	+/- 0 I SU	Yes No		
Mid-Day pH (7) check			7.00	7.00		+/- 0 I SU	Yes No		
рН (10)	19376102		10.00	10.01		+/- 0 1 SU	Yes No		
Mid-Day pH (10) check		1030	10.00	10.05	10.00	+/- 0 1 SU	Yes No		
ORP (mV)	14440167 12/4	10.32	228	234.1	778	+/- 20ınV	Yes No		
DO (%) (1pt, 100% water saturated air cal)			100	98.16	100	+/- 6 % saturation	Yes No		
Turbidity 0 NTU			0	0	0	+/- 0 5 NTU	Yes No		
Turbidity 1 NTU			1.00	1.65	1.05	+/- 0 ₋ 5 NTU	No No	×	
Turbidity 10 NTU		ì	10.00	9.78	9.78	+/- 0.5 NTU	€ No		

June 2021

Geosyntec [©]			E	QUIPMENT CA	LIBRATION L	OG			
Field Technician: Thome	s Kessler			Date 6/16/	TOD!		Time (start):	770	
smarTroll SN 7 Z & G	てろ			Turbidity Meter Type:	LaMote 2020we	SN_977-2111			
Weather Conditions: Sunn	1.700	_		Facility and Unit: Plant	Hammond AP-1/2	Project No GW6:	581		
				Calibr	ration 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)	रङ्कारक		4490	44-11.2	4140	+/- 5 %	(es) No		
pH (4)	15180	22.80	4.00	3,96	4.60	+/- 0.1 SU	(Yes) No		
Mid-Day pH (4) check			4.00			+/- 0 1 SU	Yes No		
рН (7)	19340057	23.48	7.00	7.01	7.60	+/- 0,1 SU	Yes No		
Mid-Day pH (7) check			7.00			+/- 0 1 SU	Yes No		
рН (10)	19370102	2357	10.00	10,02	10.60	+/- 0 1 SU	(Yes) No		
Mid-Day pH (10) check			10.00			+/- 0 1 SU	Yes No		
ORP (mV)	19460167	23.08	228	229.5	228	+/- 20mV	Yes No		
DO (%) (1pt, 100% water saturated air cal)			100	92.38	10U	+/- 6 % saturation	Yes No		
Turbidity 0 NTU			0	0.66	0.02	+/- 0 5 NTU	(Yes) No		
Turbidity 1 NTU			1.00	1.13	1.04	+/- 0 5 NTU	Yes No		

8.87

10.00

Turbidity 10 NTU

Yes

No

+/- 0.5 NTU

Geosyntec ^D			E	QUIPMENT CA	LIBRATION LO	OG		
Field Technician: Tuch	es Ges.	slor		Date	121		Time (start):	735 Time (finish): 800
				Turbidity Meter Type:	_aMote 2020we		sn 47	7-2111
smarTroll SN 7 7 9	14, warm			Facility and Unit:	Hammond AP-1/2		Project No : GW6	581
				Calibra	ation 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)	70010025		4490	4465,0	4490	+/- 5 %	Yés No	
рН (4)	०४/८।	23.66	4.00	4.01	4.00	+/- 0 1 SU	Yes No	thad to restort placet
Mid-Day pH (4) check			4.00			+/- 0 1 SU	Yes No	
рН (7)	19340657	23.40	7.00	6.99	7.≪	+/- 0 1 SU	Yes No	
Mid-Day pH (7) check			7.00			+/- 0 1 SU	Yes No	
рН (10)	19320102	23.91	10.00	9.94	10.00	+/- 0 1 SU	Yes No	
Mid-Day pH (10) check			10.00			+/- 0 1 SU	Yes No	
ORP (mV)	19460167	ZY. 18	228	2.76.3	822	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	97.49	ioU	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	116	0	+/- 0 5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.49	1.00	+/- 0 5 NTU	(Yes) No	
Turbidity 10 NTU			10.00	8.64	0,41	+/- 0 5 NTU	Yes No	

Geosyntec consultants			E	QUIPMENT CA	LIBRATION L	OG					
Field Technician: Thomas	sheest			Date C/18/	2021		Time (start):	975 Time (finish): <u>0 63 0</u>			
smarTroll SN	8623	_		Turbidity Meter Type:	LaMote 2020we		SN977-Z111				
Weather Conditions: SINX	ny, 650	_		Facility and Unit: Plant	Hammond AP-1/2	-	Project No. GW6.	581			
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	20.99	4490	4575.0	44900	+/- 5 %	Yes No				
pH (4)	०४।८(4.00	3.99	4.6	+/- 0 1 SU	Yes No				
Mid-Day pH (4) check			4.00			+/- 0 1 SU	Yes No				
рН (7)	19340057	21.96	7.00	6.97	7.00	+/- 0 1 SU	Yes No				
Mid-Day pH (7) check			7.00			+/- 0 1 SU	Yes No				
рН (10)	1432007	22.4>	10.00	9.96	10.00	+/- 0 1 SU	Yes No				
Mid-Day pH (10) check			10.00			+/- 0.1 SU	Yes No				
ORP (mV)	19460167	22.35	228	230.4	228	+/- 20mV	Yes No				
DO (%) (1pt, 100% water saturated air cal			100	101.47	100.00	+/- 6 % saturation	Yes No				
Turbidity 0 NTU			0	51.1	0.60	+/- 0 5 NTU	Yes No				
Turbidity 1 NTU			1.00	9.43	9,97	+/- 0 5 NTU	Yes No				
Turbidity 10 NTU			10.00	1.93	443	+/- 0 5 NTU	Yes No				

Geosyntec consultants			E	QUIPMENT CA	LIBRATION L	OG	19,5	
Field Technician 146mC3		Date 6/15/20	150		Time (start): 0727 Time (finish) 0750			
smarTroll SN 778C		Turbidity Meter Type:	LaMote 2020we	_				
Weather Conditions: 70°	_		Facility and Unit:	Hammond AP-1/2 A	12-4	Project NoGW6581		
				Calibi	ration 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)	२००००४	×2 201	4490	41773.9	4440	+/- 5 %	(Yes No	
рН (4)	८८ । ८०८	23.30		4.23	4.00	+/- 0.1 SU	Yes No	
MILE WALL			4.00			./ 0.1 GH	V N-	

Specific Conductance (μS/cm)	र्य ०।००४	a 2 201	4490	41773.9	4440	+/- 5 %	(Yes No	
рН (4)	08/2021	23.3°	4.00	4.23	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (4) check			4.00			+/- 0 1 SU	Yes No	
pH (7)	19346657 08/21	23.50	7.00	7.45	7.00	+/- 0 1 SU	Yes No	
Mid-Day pH (7) check			7.00			+/- 0 1 SU	Yes No	
рН (10)	19320102	24.12	10.00	10,40	10.00	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check			10.00			+/- 0 1 SU	Yes No	
ORP (mV)	14460161	24.417	228	218.5	118	+/- 20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	102.61	100	+/- 6 % saturation	Yes No	
Turbidity 0 NTU			0	0.58	0.01	+/- 0 5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.11	0.48	+/- 0 5 NTU	(es) No	
Turbidity 10 NTU			10.00	963		+/- 0 5 NTU	Yes No	

Geosyntec[▷] **EQUIPMENT CALIBRATION LOG** consultants

	44	11
Field Technician	Thomes	16 028 m

6/15/2021

Time (start) 1040

Time (finish) 1058

smarTroll SN

Turbidity Meter Type: LaMote 2020we

977-211

778623 70° Sunny Weather Conditions

Facility and Unit: Plant Hammond AP-1/2

Project No __GW6581

Calibration log

	Standard Lot #/ Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)			4490			+/- 5 %	Yes No	
pH (4)			4.00			+/- 0 1 SU	Yes No	
Mid-Day pH (4) check			4.00			+/- 0 1 SU	Yes No	
pH (7)			7.00			+/- 0.1 SU	Yes No	
Mid-Day pH (7) check			7.00			+/- 0.1 SU	Yes No	
рН (10)			10.00			+/- 0 1 SU	Yes No	
Mid-Day pH (10) check			10.00			+/- 0 1 SU	Yes No	
ORP (mV)			228			+/- 20mV	Yes No	
DO (%) pt, 100% water saturated air cal)			100	108.64	100	+/- 6 % saturation	Yes No	10:34
Turbidity 0 NTU,			i0 0	97.02	100	1+1-05 NTU	Yes No	16-11-13 11:13 post fectory o
Turbidity 1 NTU			1.00			+/- 0 5 NTU	Yes No	
Turbidity 10 NTU			10.00			+/- 0 5 NTU	Yes No	

Geosyntec Consultants EQUIPMENT CALIBRATION LOG											
Field Technician Monc	s Kessle	_		Date 0617	23121		Time (start): 10	Time (finish): 1033			
smarTroll SN: 7283		-		Turbidity Meter Type:	LaMote 2020we	SN: <u>6411-1416</u> Project No.: GW6581					
				Calibr	ration 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)	1000000	21.72	4490	4835.0	4490.0	+/- 5 %	Yes No				
рН (4)	08/21		4.00	4.09	4.00	+/- 0 I SU	Yes No				
Mid-Day pH (4) check	19346057	2763	4.00	7.16 5	7.00	+/- 0 SU	Yes No				
G 1		•	7.00	4	· ·	+/- 0.1 SU	Yes No				
Mid-Day pH (7) check			7.00			+/- 0 ₋ 1 SU	Yes No				
pH (10)	1432002	2207	10.00	10.60	10.00	+/- 0.1 SU	(Yes No				
Mid-Day pH (10) check			10.00			+/- 0.1 SU	Yes No				
ORP (mV)	19466167	21.94	228	240.6	855	+/- 20mV	Yes No				
DO (%) (1pt, 100% water saturated air cal)			100	101.83	(00)	+/- 6 % saturation	Yes No				
Turbidity 0 NTU			0	0.36	0.01	+/- 0 5 NTU	(Yes No				
Turbidity 1 NTU			1.00	0.38	0.88	+/- 0 5 NTU	Pes No				
Turbidity 10 NTU			10.00	13.24	9.94	+/- 0 5 NTU	Yes No				

APPENDIX D

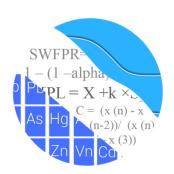
Statistical Analysis Reports

September 2020

GROUNDWATER STATS CONSULTING

February 23, 2021

Southern Company Services Attn: Ms. Kristen Jurinko 241 Ralph McGill Blvd. NE, Bin 10160 Atlanta, Georgia 30308



Re: Plant Hammond Ash Pond 4 (AP-4)

1st Semi-Annual Statistical Analysis – September 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 sample event conducted in September 2020 for Georgia Power Company's Plant Hammond AP-4. 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 Hammond AP-4 in 2016, and at least 8 background samples have been collected at each of the groundwater monitoring wells analyzed in this report. The monitoring well network, as provided by Southern Company Services, consists of the following:

- Upgradient well: HGWA-47, HGWA-48D, HGWA-111, HGWA-112, and HGWA-113
- Downgradient wells: HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, and HGWC-118

Note that well HGWC-102 was first sampled in October 2019 and currently has 8 samples. New upgradient wells HGWA-47 and HGWA-48D were first sampled in September 2020 and were the only two wells sampled in both November and December 2020. These wells currently have 3 samples and are in the process of having background samples collected.

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

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of well/constituent pairs with 100% nondetects follows this letter. 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, antimony, mercury, molybdenum, selenium, and thallium were not detected, and therefore, were not required to be sampled during the September 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. 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 to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations.

Statistical Methods – Appendix III Parameters

Appendix III parameters are evaluated using interwell prediction limits combined with a 1-of-2 resample plan for all constituents: boron, calcium, chloride, fluoride, pH, sulfate, and TDS.

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are 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 will be 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 April 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, a few outliers were identified. Often, 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 as all other values are similar to remaining measurements within a given well or neighboring wells, or were reported nondetects.

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 were included with the previous screening and showed a few statistically significant decreasing and increasing trends for the Appendix III parameters. Most trends noted were relatively low in magnitude when compared to average concentrations, and the background period is short; therefore, no adjustments were made to the data sets.

<u>Appendix III – Determination of Spatial Variation</u>

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells would not be conservative from a regulatory perspective; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified no variation among upgradient well data for boron or fluoride, making these constituents eligible for interwell analyses. Variation was noted for calcium, chloride, pH, sulfate and TDS. While data were further tested for intrawell eligibility during

the screening, interwell methods will be used for all Appendix III constituents in accordance with Georgia EPD requirements.

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 using all historical upgradient well data through September 2020 except for upgradient wells HGWA-47 and HGWA-48D, which have samples through December 2020 (Figure D). Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The most recent sample from each downgradient well for the September 2020 sample event is compared to the background limit to determine whether there are statistically significant increases (SSIs).

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When a resample confirms the initial exceedance, a statistically significant increase is identified and further research would be required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result and, therefore, no exceedance is noted and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance. Several prediction limit exceedances were noted for Appendix III parameters. A summary table of the interwell prediction limits follows this letter.

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure E). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. When trends are present in upgradient trends, it is an indication of natural variability in groundwater unrelated to practices at the site. Trend tests require a minimum of 6 samples; therefore, the new upgradient wells HGWA-47 and HGWA-48D were not included in this analysis. A summary of the trend test results follows this letter. Statistically significant trends were noted for the following well/constituent pairs:

Increasing:

Boron: HGWC-107Calcium: HGWC-105

Decreasing:

• Sulfate: HGWA-113 (upgradient) and HGWC-105

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 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-47 and HGWA-48D, 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).

- 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 September 2020 sample event (Figure G). Note that a GWPS is established for antimony, mercury, molybdenum, 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.

To complete the statistical comparison to GWPS, State confidence intervals were constructed for the Appendix IV constituents in accordance with the state requirements in each downgradient well (Figure H). The Sanitas software was used to calculate the tolerance limits and the confidence intervals. The confidence intervals were compared to the GWPS established using the Georgia EPD Rules 391-3-4-.10(6)(a) for the State requirements. Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. A summary of the confidence intervals follows this letter. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. No exceedances were noted for any well/constituent pairs.

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Hammond AP-4. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,

Abdul Diane

Groundwater Analyst

Andrew Collins

Project Manager

Sanitas™ v.9.6.27 . UG

100% Non-Detects

Analysis Run 12/15/2020 10:56 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Arsenic (mg/L) HGWC-103, HGWC-105, HGWC-107, HGWC-118

Beryllium (mg/L) HGWC-102, HGWC-105, HGWC-107, HGWC-109, HGWC-118

Cadmium (mg/L) HGWC-105, HGWC-109, HGWC-118

Cobalt (mg/L) HGWC-107

Lithium (mg/L) HGWC-101

Interwell Prediction Limits - Significant Results

Client: Southern Company Data: Hammond AP-4 Printed 2/17/2021, 2:50 PM Method Constituent <u>Well</u> Upper Lim. Lower Lim. <u>Date</u> Sig. Bg N Bg Mean Std. Dev. %NDs ND Adj. HGWC-101 0.05 9/24/2020 Yes 42 n/a NP Inter (normality) 1 of 2 Boron (mg/L) 0.1 n/a 16.67 n/a 0.001041 n/a n/a Yes 42 n/a Boron (mg/L) **HGWC-102** 0.05 n/a 9/24/2020 2.9 n/a 16.67 n/a n/a 0.001041 NP Inter (normality) 1 of 2 Boron (mg/L) **HGWC-103** 0.05 n/a 9/24/2020 Yes 42 n/a n/a 16.67 0.001041 NP Inter (normality) 1 of 2 Boron (mg/L) 9/24/2020 Yes 42 n/a NP Inter (normality) 1 of 2 HGWC-105 0.05 n/a 1.2 n/a 16.67 n/a n/a 0.001041 HGWC-107 9/24/2020 Yes 42 0.001041 NP Inter (normality) 1 of 2 Boron (mg/L) Boron (mg/L) HGWC-109 0.05 9/25/2020 0.28 Yes 42 n/a 16.67 0.001041 NP Inter (normality) 1 of 2 n/a n/a n/a n/a Boron (mg/L) HGWC-117 0.05 9/25/2020 Yes 42 0.001041 NP Inter (normality) 1 of 2 1.1 16.67 NP Inter (normality) 1 of 2 Boron (mg/L) **HGWC-118** 9/28/2020 Yes 42 0.001041 0.05 0.65 n/a 16.67 n/a n/a n/a n/a Calcium (mg/L) **HGWC-102** 73.3 n/a 9/24/2020 120 Yes 42 0 n/a 0.001041 NP Inter (normality) 1 of 2 Calcium (mg/L) **HGWC-103** 9/24/2020 91.3 Yes 42 0 n/a 0.001041 NP Inter (normality) 1 of 2 73.3 n/a n/a n/a Calcium (mg/L) HGWC-105 73.3 n/a 9/24/2020 92.9 Yes 42 n/a n/a 0 n/a n/a 0.001041 NP Inter (normality) 1 of 2 Calcium (mg/L) HGWC-118 73.3 9/28/2020 88.9 Yes 42 n/a 0.001041 NP Inter (normality) 1 of 2 n/a n/a n/a Chloride (mg/L) **HGWC-102** 5.7 n/a 9/24/2020 7.2 Yes 42 n/a n/a 0 n/a n/a 0.001041 NP Inter (normality) 1 of 2 Chloride (mg/L) 5.7 9/24/2020 Yes 42 NP Inter (normality) 1 of 2 n/a n/a 9/25/2020 Chloride (mg/L) **HGWC-117** 16.1 Yes 42 0.001041 NP Inter (normality) 1 of 2 5.7 n/a n/a n/a n/a n/a Sulfate (mg/L) **HGWC-101** 14 9/24/2020 97 Yes 42 4.762 n/a 0.001041 NP Inter (normality) 1 of 2 n/a n/a Sulfate (mg/L) **HGWC-102** 14 9/24/2020 370 Yes 42 n/a 4.762 n/a n/a 0.001041 NP Inter (normality) 1 of 2 n/a n/a Sulfate (mg/L) **HGWC-103** 14 9/24/2020 293 Yes 42 4.762 n/a 0.001041 NP Inter (normality) 1 of 2 9/24/2020 Yes 42 4.762 NP Inter (normality) 1 of 2 Sulfate (mg/L) **HGWC-105** 14 n/a 177 n/a 0.001041 n/a n/a Sulfate (mg/L) **HGWC-107** 14 n/a 9/24/2020 126 Yes 42 n/a n/a 4.762 n/a 0.001041 NP Inter (normality) 1 of 2 Sulfate (mg/L) HGWC-109 14 n/a 9/25/2020 24.7 Yes 42 n/a n/a 4.762 n/a n/a 0.001041 NP Inter (normality) 1 of 2 NP Inter (normality) 1 of 2 Sulfate (mg/L) **HGWC-117** 14 n/a 9/25/2020 146 Yes 42 n/a n/a 4.762 n/a n/a 0.001041 HGWC-118 14 9/28/2020 86 Yes 42 NP Inter (normality) 1 of 2 Sulfate (mg/L) Total Dissolved Solids (mg/L) **HGWC-102** 288.3 n/a 9/24/2020 696 Yes 41 4.893 0.8528 0 None x^(1/3) 0.0009403 Param Inter 1 of 2 Total Dissolved Solids (mg/L) HGWC-103 288.3 9/24/2020 517 Yes 41 4.893 0.8528 0 None x^(1/3) 0.0009403 Param Inter 1 of 2 9/24/2020 Total Dissolved Solids (mg/L) **HGWC-105** 288.3 411 Yes 41 4.893 0.8528 x^(1/3) 0.0009403 Param Inter 1 of 2 n/a 0 None Total Dissolved Solids (mg/L) **HGWC-117** 288.3 n/a 9/25/2020 340 Yes 41 4.893 0.8528 0 x^(1/3) 0.0009403 Param Inter 1 of 2 Total Dissolved Solids (mg/L) HGWC-118 9/28/2020 Yes 41 4.893 0.0009403 Param Inter 1 of 2 288.3 n/a 332 0.8528 0 $x^{(1/3)}$ None

Interwell Prediction Limits - All Results

Data: Hammond AP-4 Client: Southern Company Constituent Well Sig. Bg N Bg Mean Std. Dev. %NDs ND Adj. Upper Lim. Lower Lim. Date Observ. Method NP Inter (normality) 1 of 2 Boron (mg/L) **HGWC-101** 0.05 0.1 Yes 42 n/a 16.67 0.001041 n/a n/a n/a n/a Boron (mg/L) NP Inter (normality) 1 of 2 **HGWC-102** 0.05 n/a 9/24/2020 2.9 Yes 42 n/a n/a 16.67 n/a n/a 0.001041 Boron (mg/L) **HGWC-103** 0.05 n/a 9/24/2020 2.2 Yes 42 n/a 16.67 n/a NP Inter (normality) 1 of 2 NP Inter (normality) 1 of 2 Boron (ma/L) HGWC-105 0.05 n/a 9/24/2020 1.2 Yes 42 n/a n/a 16.67 n/a n/a 0.001041 NP Inter (normality) 1 of 2 Boron (mg/L) **HGWC-107** 0.05 9/24/2020 0.88 Yes 42 **HGWC-109** 0.05 9/25/2020 0.28 Yes 42 n/a 0.001041 NP Inter (normality) 1 of 2 Boron (ma/L) n/a n/a 16.67 n/a n/a HGWC-117 9/25/2020 0.001041 NP Inter (normality) 1 of 2 Boron (mg/L) 0.05 1.1 Yes 42 16.67 n/a **HGWC-118** 9/28/2020 0.001041 NP Inter (normality) 1 of 2 Boron (mg/L) 0.05 0.65 Yes 42 n/a 16.67 n/a n/a n/a n/a Calcium (mg/L) HGWC-101 73.3 9/24/2020 20.3 No. 42 n/a n/a 0.001041 NP Inter (normality) 1 of 2 n/a n/a 0 n/a Calcium (mg/L) **HGWC-102** 9/24/2020 120 Yes 42 0.001041 NP Inter (normality) 1 of 2 73.3 n/a 0 n/a n/a n/a n/a Calcium (mg/L) HGWC-103 73 3 n/a 9/24/2020 91.3 Yas 42 n/a n/a n n/a n/a 0.001041 NP Inter (normality) 1 of 2 Calcium (mg/L) **HGWC-105** 73.3 9/24/2020 92.9 Yes 42 n/a 0.001041 NP Inter (normality) 1 of 2 n/a n/a n/a NP Inter (normality) 1 of 2 Calcium (mg/L) HGWC-107 73.3 n/a 9/24/2020 55.4 No 42 n/a n/a 0 n/a n/a 0.001041 Calcium (mg/L) HGWC-109 73.3 9/25/2020 48.5 No 42 0 n/a 0.001041 NP Inter (normality) 1 of 2 HGWC-117 72.8 42 0.001041 NP Inter (normality) 1 of 2 Calcium (mg/L) 73.3 n/a 9/25/2020 No n/a n/a 0 n/a n/a Calcium (mg/L) **HGWC-118** 9/28/2020 88.9 n/a 0.001041 NP Inter (normality) 1 of 2 73.3 n/a Yes 42 n/a 0 n/a HGWC-101 9/24/2020 42 0.001041 NP Inter (normality) 1 of 2 Chloride (mg/L) 5.7 n/a 5.5 No n/a 0 n/a n/a n/a Chloride (mg/L) HGWC-102 9/24/2020 7.2 Yes 42 n/a 0.001041 NP Inter (normality) 1 of 2 5.7 n/a O 9/24/2020 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-103 5.7 42 0 n/a 0.001041 n/a n/a n/a Chloride (mg/L) HGWC-105 5.7 n/a 9/24/2020 3.9 Nο 42 n/a n/a n n/a n/a 0.001041 NP Inter (normality) 1 of 2 Chloride (mg/L) **HGWC-107** 5.7 n/a 9/24/2020 3.5 No 42 n/a n/a 0.001041 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-109 5.7 n/a 9/25/2020 4.1 No 42 n/a n/a 0 n/a n/a 0.001041 NP Inter (normality) 1 of 2 NP Inter (normality) 1 of 2 Chloride (mg/L) **HGWC-117** 5.7 9/25/2020 16.1 42 0 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-118 5.7 n/a 9/28/2020 No 42 n/a n/a 0 n/a n/a 0.001041 Fluoride (mg/L) HGWC-101 0.181 n/a 9/24/2020 0.1ND No 48 0.0799 0.05086 25 Kaplan-Meier No 0.0009403 Param Inter 1 of 2 Fluoride (mg/L) HGWC-102 0.181 9/24/2020 0.1ND 48 0.0799 0.05086 25 0.0009403 Param Inter 1 of 2 n/a No Kaplan-Meier No 0.0009403 Param Inter 1 of 2 Fluoride (mg/L) HGWC-103 0.181 9/24/2020 0.1ND No 48 0.0799 0.05086 25 n/a Kaplan-Meier Fluoride (mg/L) HGWC-105 0.181 n/a 9/24/2020 0.1ND No 48 0.0799 0.05086 25 Kaplan-Meier No 0.0009403 Param Inter 1 of 2 Fluoride (mg/L) **HGWC-107** 0.181 n/a 9/24/2020 0.064J Nο 48 0.0799 0.05086 25 Kaplan-Meier 0.0009403 Param Inter 1 of 2 Fluoride (mg/L) HGWC-109 0.181 n/a 9/25/2020 0.091J No 0.0799 0.05086 25 Kaplan-Meier No 0.0009403 Param Inter 1 of 2 Fluoride (mg/L) HGWC-117 0.181 n/a 9/25/2020 0.1ND No 48 0.0799 0.05086 25 Kaplan-Meier No 0.0009403 Param Inter 1 of 2 Fluoride (ma/L) HGWC-118 0.181 9/28/2020 0.078J 48 0.0799 0.05086 25 Kaplan-Meier 0.0009403 Param Inter 1 of 2 HGWC-101 9/24/2020 48 0.001623 NP Inter (normality) 1 of 2 pH (s.u.) 7.54 5.47 5.48 No n/a n/a 0 n/a n/a 5.82 HGWC-102 7.54 5.47 9/24/2020 48 n/a 0.001623 NP Inter (normality) 1 of 2 pH (s.u.) No n/a n/a n n/a HGWC-103 9/24/2020 0.001623 pH (s.u.) 7.54 5.47 5.6 No 48 n/a n/a 0 n/a n/a NP Inter (normality) 1 of 2 HGWC-105 6.63 pH (s.u.) 7.54 5.47 9/24/2020 No 48 0 n/a 0.001623 NP Inter (normality) 1 of 2 HGWC-107 7.54 5.47 9/24/2020 6.11 No 48 0 n/a 0.001623 NP Inter (normality) 1 of 2 pH (s.u.) n/a n/a pH (s.u.) HGWC-109 7.54 5 47 9/25/2020 6.79 Nο 48 n/a n n/a n/a 0.001623 NP Inter (normality) 1 of 2 n/a pH (s.u.) HGWC-117 7.54 5.47 9/25/2020 6.01 No 48 n/a 0.001623 NP Inter (normality) 1 of 2 n/a n/a n/a pH (s.u.) HGWC-118 7.54 5.47 9/28/2020 7.03 No 48 n/a n/a 0 n/a n/a 0.001623 NP Inter (normality) 1 of 2 Sulfate (mg/L) 14 9/24/2020 97 Yes 42 n/a 0.001041 NP Inter (normality) 1 of 2 n/a n/a 9/24/2020 370 0.001041 NP Inter (normality) 1 of 2 Sulfate (mg/L) **HGWC-102** 14 n/a Yes 42 n/a n/a 4.762 n/a n/a Sulfate (mg/L) HGWC-103 14 9/24/2020 293 Yes 42 0.001041 NP Inter (normality) 1 of 2 n/a n/a 4.762 n/a Sulfate (mg/L) **HGWC-105** 9/24/2020 177 Yes 42 4.762 n/a 0.001041 NP Inter (normality) 1 of 2 14 n/a n/a n/a n/a 9/24/2020 126 Yes 42 0.001041 NP Inter (normality) 1 of 2 Sulfate (mg/L) **HGWC-107** 14 4.762 n/a Yes 42 NP Inter (normality) 1 of 2 Sulfate (mg/L) **HGWC-109** 14 9/25/2020 24.7 4.762 n/a 0.001041 n/a n/a n/a Sulfate (mg/L) **HGWC-117** 14 n/a 9/25/2020 146 Yes 42 n/a n/a 4.762 n/a n/a 0.001041 NP Inter (normality) 1 of 2 HGWC-118 14 9/28/2020 86 Yes 42 n/a 4.762 n/a 0.001041 NP Inter (normality) 1 of 2 Sulfate (mg/L) n/a n/a n/a Total Dissolved Solids (mg/L) HGWC-101 288.3 n/a 9/24/2020 170 No. 41 4 893 0.8528 n None x^(1/3) 0.0009403 Param Inter 1 of 2 Total Dissolved Solids (mg/L) **HGWC-102** 9/24/2020 696 0 0.0009403 Param Inter 1 of 2 n/a 0.8528 None x^(1/3) Total Dissolved Solids (mg/L) **HGWC-103** 288.3 n/a 9/24/2020 517 Yes 41 4.893 0.8528 0 None $x^{(1/3)}$ 0.0009403 Param Inter 1 of 2 Total Dissolved Solids (mg/L) HGWC-105 288.3 9/24/2020 411 Yes 41 4.893 0.8528 0 x^(1/3) 0.0009403 Param Inter 1 of 2 Total Dissolved Solids (mg/L) HGWC-107 288.3 9/24/2020 41 0.0009403 Param Inter 1 of 2 253 No 4.893 0.8528 0 $x^{(1/3)}$ n/a None No 0.0009403 Param Inter 1 of 2 Total Dissolved Solids (mg/L) **HGWC-109** 288.3 9/25/2020 188 41 4 893 0.8528 0 x^(1/3) n/a Total Dissolved Solids (mg/L) **HGWC-117** 288.3 9/25/2020 340 Yes 41 4.893 0.8528 0 x^(1/3) 0.0009403 Param Inter 1 of 2 n/a None Total Dissolved Solids (mg/L) **HGWC-118** 288 3 n/a 9/28/2020 332 Yas 41 4.893 0.8528 0 None x^(1/3) 0.0009403 Param Inter 1 of 2

Trend Tests - Prediction Limit Exceedances - Significant Results Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 2/17/2021, 2:57 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 2/11/2021, 2:57 PM											
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Boron (mg/L)	HGWC-107	0.04564	51	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-105	4.827	48	43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-113 (bg)	-1.886	-54	-38	Yes	12	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-105	-7.78	-45	-43	Yes	13	0	n/a	n/a	0.01	NP

Trend Tests - Prediction Limit Exceedances - All Results

	Plant Hammond	Client: Southern Compa	any Data: H	ammond A	P-4 Prin	ted 2/1	7/2021,	2:57 PI	М			
Constituent	Well		Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Boron (mg/L)	HGWA-111 (bg)		-0.001368	-12	-38	No	12	16.67	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-112 (bg)		-0.001715	-17	-38	No	12	25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-113 (bg)		-0.001134	-9	-38	No	12	8.333	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-101		0.002421	11	38	No	12	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-102		-0.517	-9	-21	No	8	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-103		0.00835	6	43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-105		0.01191	9	38	No	12	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-107		0.04564	51	43	Yes	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-109		-0.01598	-32	-43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-117		0.06364	30	38	No	12	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-118		-0.01732	-15	-38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-111 (bg)		2.597	6	38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-112 (bg)		0.01309	4	38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-113 (bg)		0.3543	33	38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-102		-18.4	-7	-21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-103		4.885	36	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-105		4.827	48	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-118		1.704	24	43	No	13	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-111 (bg)		-0.09705	-7	-38	No	12	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-112 (bg)		0.05844	15	38	No	12	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-113 (bg)		-0.09485	-28	-38	No	12	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-102		0.077	2	21	No	8	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-103		0.2451	22	43	No	13	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-117		1.765	31	38	No	12	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-111 (bg)		0	-8	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-112 (bg)		-0.0171	-22	-38	No	12	16.67	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-113 (bg)		-1.886	-54	-38	Yes	12	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-101		-3.62	-28	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-102		97.63	6	21	No	8	12.5	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-103		3.256	6	43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-105		-7.78	-45	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-107		-0.4916	-17	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-109		-3.13	-30	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-117		-3.325	-12	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-118		-1.393	-16	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-111 (bg)		4.343	6	38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-112 (bg)		0	-1	-34	No	11	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-113 (bg)		-3.149	-9	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-102		-68.87	-6	-21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-103		-0.5883	-4	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-105		14.15	16	43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-117		-6.012	-10	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-118		-7.987	-19	-43	No	13	0	n/a	n/a	0.01	NP

Upper Tolerance Limit Summary Table

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 2/17/2021, 3:03 PM Std. Dev. %NDs ND Adj. <u>Alpha</u> Constituent Upper Lim. Lower Lim. Sig. Bg N Bg Mean Transform Method 0.003 n/a 36 94.44 n/a 0.1578 NP Inter(NDs) Antimony (mg/L) n/a n/a n/a n/a 0.09944 NP Inter(NDs) Arsenic (mg/L) 0.005 n/a n/a 45 n/a n/a 95.56 n/a n/a Barium (mg/L) 0.091 n/a 45 n/a 0 n/a 0.09944 NP Inter(normality) n/a n/a n/a NP Inter(NDs) Beryllium (mg/L) 0.003 n/a 45 91.11 n/a n/a 0.09944 Cadmium (mg/L) 0.09944 NP Inter(NDs) 0.0025 n/a n/a 45 n/a n/a 100 n/a n/a 0.09944 NP Inter(normality) Chromium (mg/L) 0.01 n/a 45 n/a 26.67 n/a NP Inter(NDs) Cobalt (mg/L) 0.09944 0.005 n/a n/a 45 n/a n/a 84.44 n/a n/a Combined Radium 226 & 228 (pCi/L) 1.403 n/a 45 0.6915 0.34 0 None No 0.05 Inter Fluoride (mg/L) 0.0799 0.05086 25 Kaplan-Meier 0.05 0.1855 n/a n/a 48 No Inter Lead (mg/L) 0.005 n/a 66.67 0.09944 NP Inter(NDs) Lithium (mg/L) 0.09944 NP Inter(normality) 0.03 n/a 45 n/a 48.89 n/a n/a n/a n/a Mercury (mg/L) 0.0005 n/a 36 75 0.1578 NP Inter(NDs) Molybdenum (mg/L) 0.1578 NP Inter(NDs) 0.01 n/a n/a n/a 36 n/a n/a 88.89 n/a Selenium (mg/L) 0.01 n/a 36 77.78 n/a 0.1578 NP Inter(NDs) Thallium (mg/L) 0.001 100 0.1578 NP Inter(NDs) n/a n/a 36 n/a n/a n/a n/a

PLANT HAMMOND AP-4 GWPS										
Constituent Name	MCL	Background Limit	GWPS							
Antimony, Total (mg/L)	0.006	0.003	0.006							
Arsenic, Total (mg/L)	0.01	0.005	0.01							
Barium, Total (mg/L)	2	0.091	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)		0.005	0.005							
Combined Radium, Total (pCi/L)	5	1.4	5							
Fluoride, Total (mg/L)	4	0.19	4							
Lead, Total (mg/L)		0.005	0.005							
Lithium, Total (mg/L)		0.03	0.03							
Mercury, Total (mg/L)	0.002	0.0005	0.002							
Molybdenum, Total (mg/L)		0.01	0.01							
Selenium, Total (mg/L)	0.05	0.01	0.05							
Thallium, Total (mg/L)	0.002	0.001	0.002							

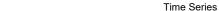
^{*}MCL = Maximum Contaminant Level

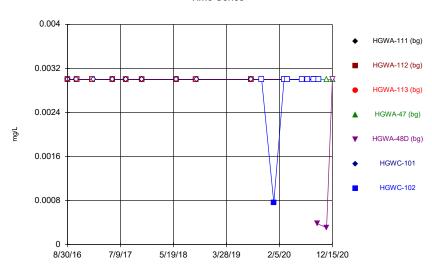
^{*}GWPS = Groundwater Protection Standard

State Confidence Interval - All Results (No Significant) Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 12/22/2020, 6:01 AM

	Plant Hammor	nd Client: Soi	uthern Company	Data: Ham	nmond	AP-4	Printed 12	2/22/2020, 6:01 AM	I	
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	<u>N</u>	%NDs	Transform	<u>Alpha</u>	Method
Arsenic (mg/L)	HGWC-101	0.005	0.00039	0.006	No	13	92.31	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-102	0.005	0.00036	0.006	No	8	50	No	0.004	NP (normality)
Arsenic (mg/L)	HGWC-109	0.002875	0.001355	0.006	No	13	0	No	0.01	Param.
Arsenic (mg/L)	HGWC-117	0.005	0.00037	0.006	No	13	92.31	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-101	0.0473	0.04081	2	No	13	0	sqrt(x)	0.01	Param.
Barium (mg/L)	HGWC-102	0.03521	0.02579	2	No	8	0	No	0.01	Param.
Barium (mg/L)	HGWC-103	0.04112	0.03476	2	No	13	0	x^2	0.01	Param.
Barium (mg/L) Barium (mg/L)	HGWC-105 HGWC-107	0.0745 0.03943	0.066 0.03716	2	No No	13 13	0	No x^3	0.01 0.01	NP (normality)
Barium (mg/L)	HGWC-107	0.03943	0.03716	2	No	13	0	No No	0.01	Param. Param.
Barium (mg/L)	HGWC-117	0.05061	0.04064	2	No	13	0	x^2	0.01	Param.
Barium (mg/L)	HGWC-118	0.06333	0.05368	2	No	13	0	No	0.01	Param.
Beryllium (mg/L)	HGWC-101	0.003	0.000057	0.004	No	13	53.85	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-103	0.003	0.000088	0.004	No	13	84.62	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-117	0.003	0.000066	0.004	No	13	69.23	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-101	0.0003	0.0001	0.005	No	13	7.692	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-102	0.0006617	0.0001883	0.005	No	8	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-103	0.0008	0.0006585	0.005	No	13	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-107	0.00125	0.00009	0.005	No	13	46.15	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-117	0.0007915	0.0005593	0.005	No	13	0	No	0.01	Param.
Chromium (mg/L)	HGWC-101	0.01	0.00064	0.1	No	13	76.92	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-102	0.01	0.00051	0.1	No	8	75	No	0.004	NP (NDs)
Chromium (mg/L)	HGWC-103	0.01	0.00063	0.1	No	13	61.54	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-105	0.01	0.00064	0.1	No	13	76.92	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-107	0.01	0.00074	0.1	No	13	92.31	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-109	0.01	0.0014	0.1	No	13	84.62	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-117	0.01	0.00067	0.1	No	13	76.92	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-118	0.01	0.00081	0.1	No	13	69.23	No	0.01	NP (NDs)
Cobalt (mg/L) Cobalt (mg/L)	HGWC-101 HGWC-102	0.002862 0.002645	0.001953 0.0008778	0.005 0.005	No No	13 8	7.692 0	No	0.01 0.01	Param. Param.
Cobalt (mg/L)	HGWC-102	0.002645	0.0008778	0.005	No	13	0	sqrt(x) No	0.01	Param.
Cobalt (mg/L)	HGWC-105	0.0025	0.001719	0.005	No	13	23.08	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-109	0.0020	0.001205	0.005	No	13	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-117	0.002033	0.004754	0.005	No	13	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-118	0.0025	0.0004	0.005	No	13	46.15	No	0.01	NP (normality)
Combined Radium 226 & 228 (pCi/L)	HGWC-101	0.9909	0.4373	5	No	13	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-102	1.418	0.6385	5	No	7	0	x^2	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-103	1.027	0.4663	5	No	13	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-105	0.9844	0.5634	5	No	13	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-107	1.212	0.5578	5	No	13	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-109	0.8708	0.4961	5	No	13	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-117	0.9457	0.4194	5	No	13	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-118	1.303	0.5322	5	No	12	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-101	0.1	0.05	4	No	14	85.71	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-102	0.22	0.1	4	No	8	87.5	No	0.004	NP (NDs)
Fluoride (mg/L)	HGWC-103	0.13	0.06	4	No	14	71.43	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-105 HGWC-107	0.13 0.0949	0.07 0.03505	4	No	14	50 50	No	0.01	NP (normality) Param.
Fluoride (mg/L) Fluoride (mg/L)	HGWC-107	0.0949	0.03303		No No	14	14.29	No No	0.01	Param.
Fluoride (mg/L)	HGWC-117	0.120	0.07 136	4	No	14 14	50	No	0.01 0.01	NP (normality)
Fluoride (mg/L)	HGWC-118	0.3	0.072	4	No	15	0	No	0.01	NP (normality)
Lead (mg/L)	HGWC-101	0.005	0.0009	0.005	No	13	92.31	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-102	0.005	0.00011	0.005	No	8	87.5	No	0.004	NP (NDs)
Lead (mg/L)	HGWC-103	0.005	0.00018	0.005	No	13	69.23	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-105	0.005	0.000068	0.005	No	13	76.92	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-107	0.005	0.00021	0.005	No	13	76.92	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-109	0.005	0.000058	0.005	No	13	84.62	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-117	0.005	0.00016	0.005	No	13	69.23	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-118	0.005	0.00022	0.005	No	13	69.23	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-102	0.001312	0.0009955	0.03	No	8	0	x^2	0.01	Param.
Lithium (mg/L)	HGWC-103	0.03	0.0015	0.03	No	13	23.08	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-105	0.004188	0.003797	0.03	No	13	0	No	0.01	Param.
Lithium (mg/L)	HGWC-107	0.03	0.00092	0.03	No	13	61.54	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-109	0.03	0.0009	0.03	No	13	46.15	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-117	0.03	0.0012	0.03	No	13	23.08	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-118	0.03	0.0015	0.03	No	13	46.15	No	0.01	NP (normality)

FIGURE A.

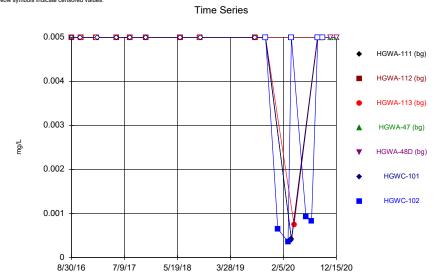




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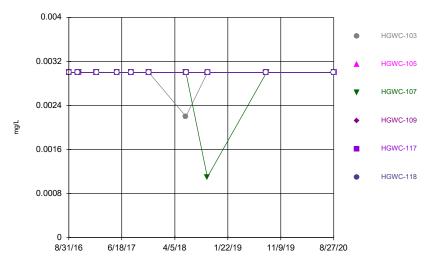
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Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



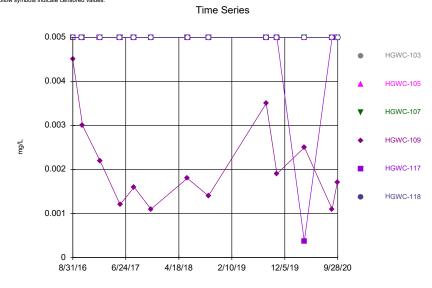
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Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series

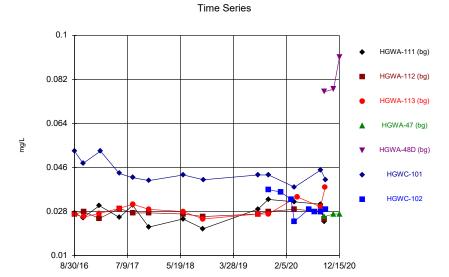


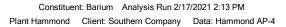
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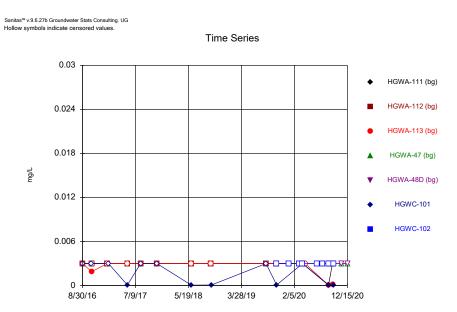
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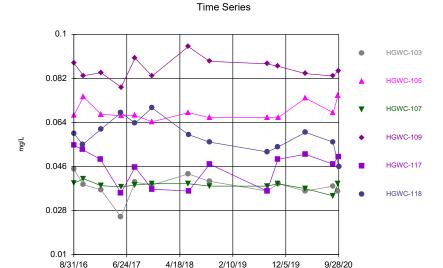
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Plant Hammond Client: Southern Company Data: Hammond AP-4



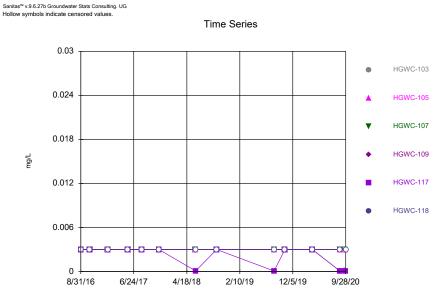




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Plant Hammond Client: Southern Company Data: Hammond AP-4



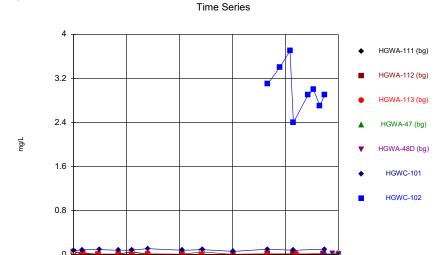
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Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Beryllium Analysis Run 2/17/2021 2:13 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

8/30/16

7/9/17



Constituent: Boron Analysis Run 2/17/2021 2:14 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

5/19/18

3/28/19

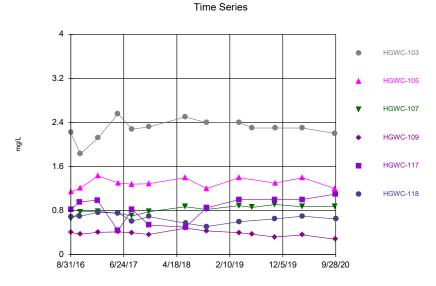
2/5/20

12/15/20

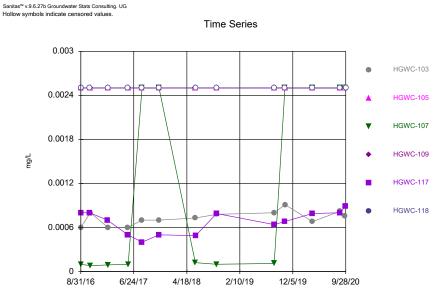
Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG Hollow symbols indicate censored values Time Series 0.003 HGWA-111 (bg) HGWA-112 (bg) 0.0024 HGWA-113 (bg) 0.0018 HGWA-47 (bg) mg/L HGWA-48D (bg) 0.0012 **HGWC-101** HGWC-102 0.0006 8/30/16 7/9/17 5/19/18 3/28/19 2/5/20 12/15/20

Constituent: Cadmium Analysis Run 2/17/2021 2:14 PM

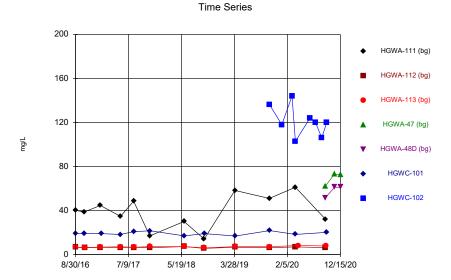
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Constituent: Boron Analysis Run 2/17/2021 2:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

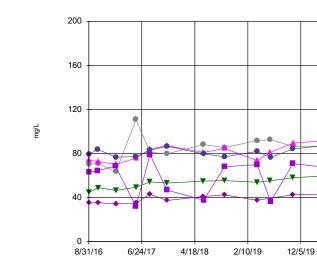


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Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Calcium Analysis Run 2/17/2021 2:14 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Calcium Analysis Run 2/17/2021 2:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series

HGWC-103

HGWC-105

HGWC-107

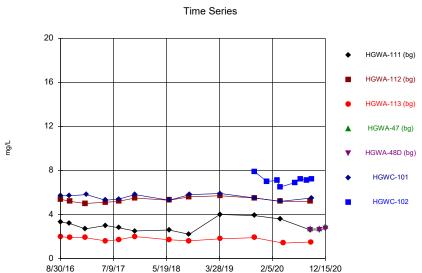
HGWC-109

HGWC-117

HGWC-118

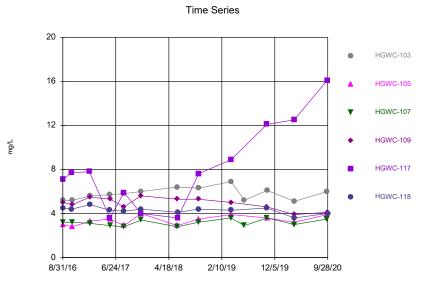
9/28/20

Sanitas $^{\text{\tiny TM}}$ v.9.6.27b Groundwater Stats Consulting. UG

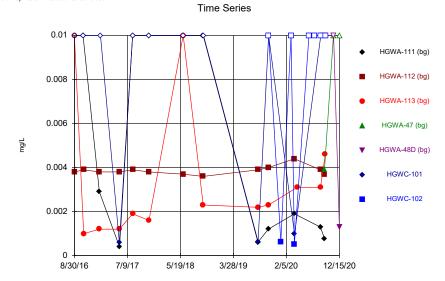


Constituent: Chloride Analysis Run 2/17/2021 2:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

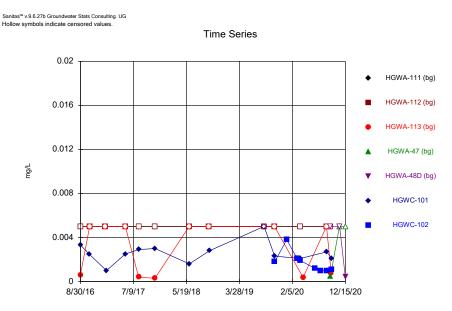


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Plant Hammond Client: Southern Company Data: Hammond AP-4



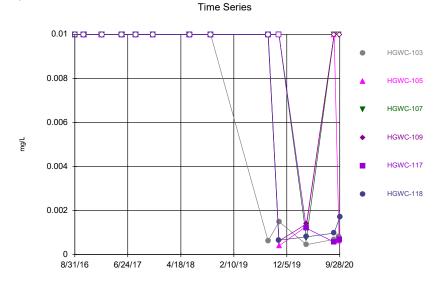
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Plant Hammond Client: Southern Company Data: Hammond AP-4

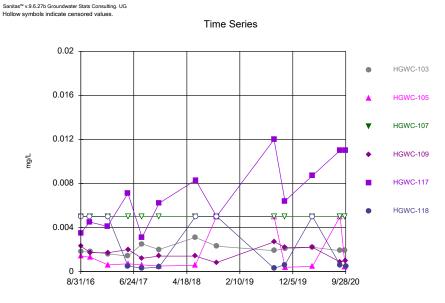


Constituent: Cobalt Analysis Run 2/17/2021 2:14 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Chromium Analysis Run 2/17/2021 2:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

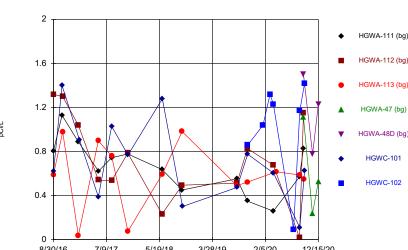


Constituent: Cobalt Analysis Run 2/17/2021 2:14 PM

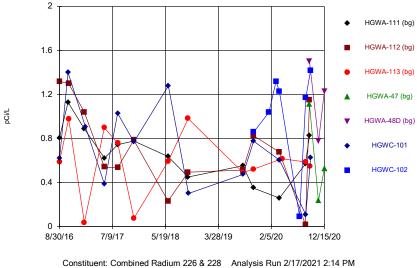
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

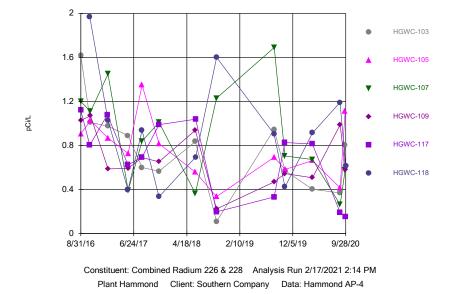
Hollow symbols indicate censored values.



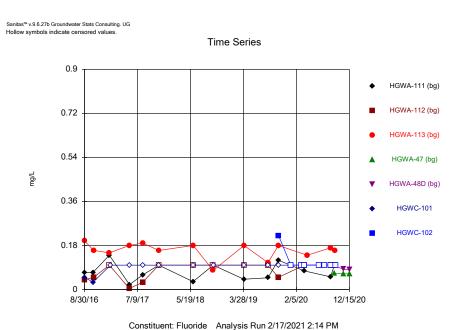
Time Series



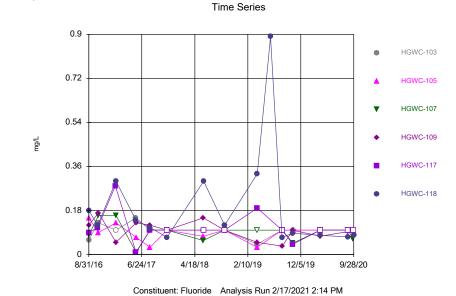
Plant Hammond Client: Southern Company Data: Hammond AP-4



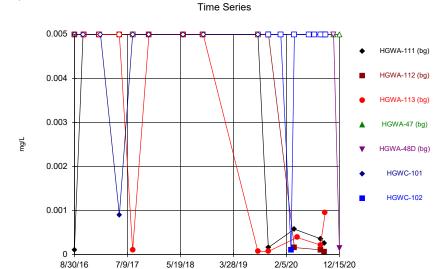
Time Series



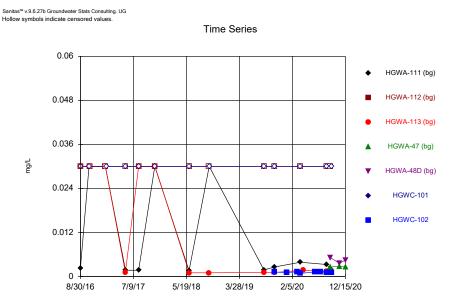
Plant Hammond Client: Southern Company Data: Hammond AP-4



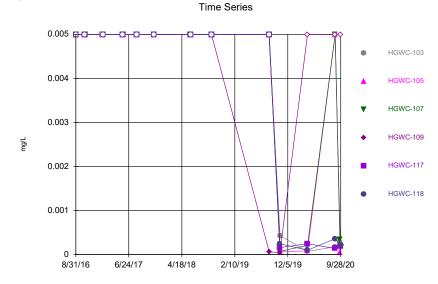
Plant Hammond Client: Southern Company Data: Hammond AP-4



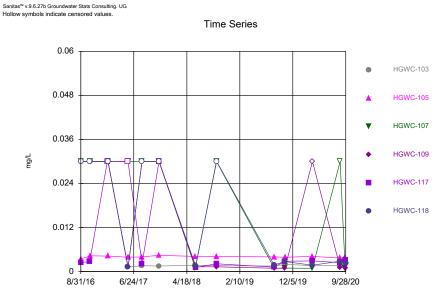
Constituent: Lead Analysis Run 2/17/2021 2:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Lithium Analysis Run 2/17/2021 2:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

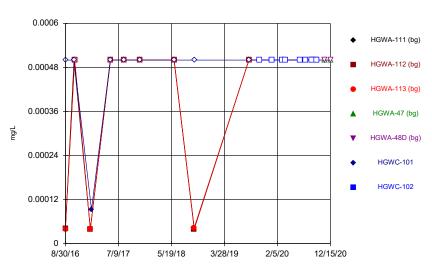


Constituent: Lead Analysis Run 2/17/2021 2:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4



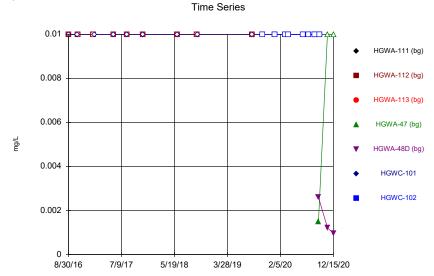
Constituent: Lithium Analysis Run 2/17/2021 2:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4





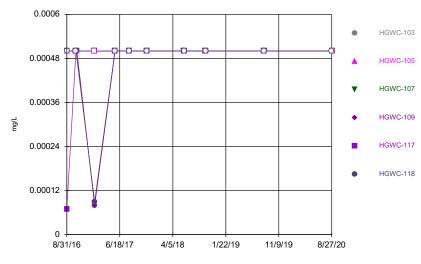
Constituent: Mercury Analysis Run 2/17/2021 2:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



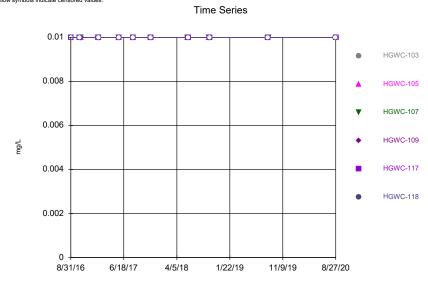
Constituent: Molybdenum Analysis Run 2/17/2021 2:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series

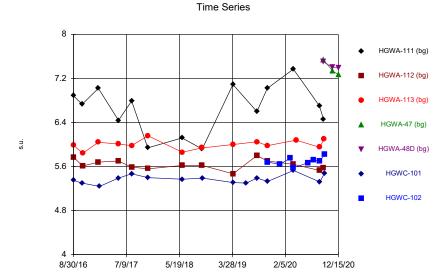


Constituent: Mercury Analysis Run 2/17/2021 2:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

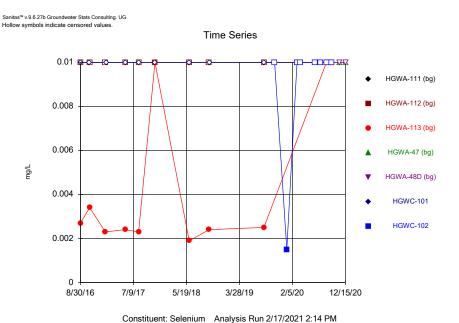
Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



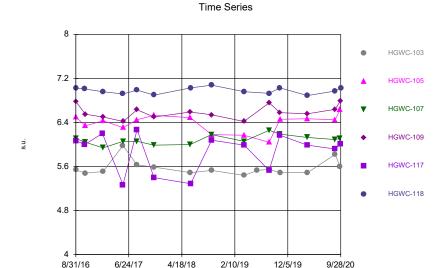
Constituent: Molybdenum Analysis Run 2/17/2021 2:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4



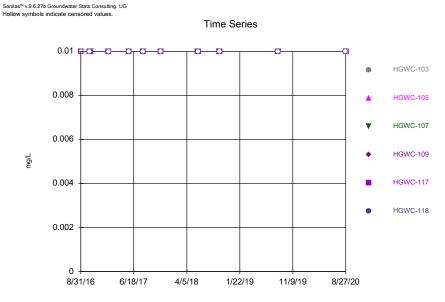
Constituent: pH Analysis Run 2/17/2021 2:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4



Plant Hammond Client: Southern Company Data: Hammond AP-4



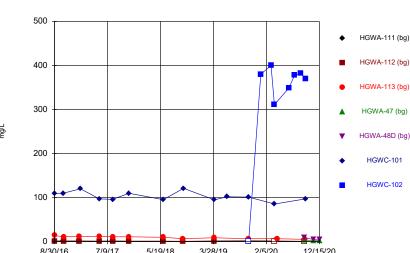
Constituent: pH Analysis Run 2/17/2021 2:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4



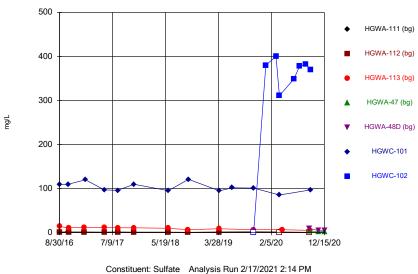
Constituent: Selenium Analysis Run 2/17/2021 2:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

8/30/16

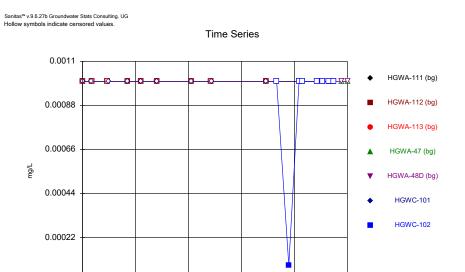
7/9/17



Time Series



Plant Hammond Client: Southern Company Data: Hammond AP-4



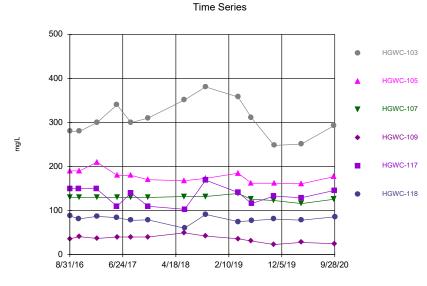
Constituent: Thallium Analysis Run 2/17/2021 2:14 PM Plant Hammond Client: Southern Company Data: Hammond AP-4

3/28/19

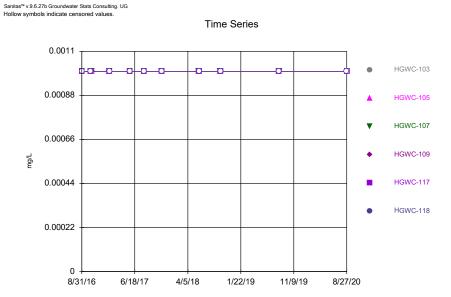
2/5/20

12/15/20

5/19/18

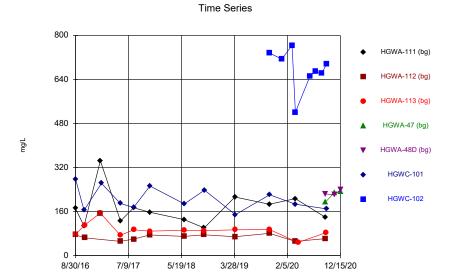


Constituent: Sulfate Analysis Run 2/17/2021 2:14 PM Plant Hammond Client: Southern Company Data: Hammond AP-4



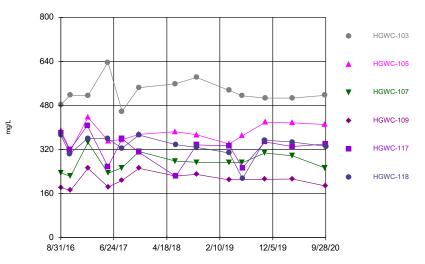
Constituent: Thallium Analysis Run 2/17/2021 2:14 PM Plant Hammond Client: Southern Company Data: Hammond AP-4 Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG



Constituent: Total Dissolved Solids Analysis Run 2/17/2021 2:14 PM Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



Constituent: Total Dissolved Solids Analysis Run 2/17/2021 2:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Constituent: Antimony (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.003	<0.003	<0.003				
8/31/2016						<0.003	
10/20/2016	<0.003					<0.003	
10/24/2016		<0.003	<0.003				
1/25/2017	<0.003	<0.003	<0.003				
1/31/2017						<0.003	
5/23/2017		<0.003	<0.003			<0.003	
5/24/2017	<0.003						
8/10/2017	<0.003	<0.003	<0.003			<0.003	
11/13/2017	<0.003	<0.003					
11/14/2017			<0.003			<0.003	
6/4/2018	<0.003	<0.003					
6/5/2018			<0.003				
6/6/2018						<0.003	
10/1/2018	<0.003	<0.003	<0.003				
10/3/2018						<0.003	
8/21/2019	<0.003	<0.003	<0.003				
8/22/2019						<0.003	
10/23/2019							<0.003
1/3/2020							0.00076 (J)
3/4/2020							<0.003
3/24/2020							<0.003
6/18/2020							<0.003
7/21/2020							<0.003
8/25/2020	<0.003	<0.003	<0.003				
8/27/2020						<0.003	<0.003
9/18/2020				<0.003	0.00038 (J)		
9/24/2020							<0.003
11/10/2020				<0.003			
11/11/2020					0.00031 (J)		
12/15/2020				<0.003	<0.003		

Constituent: Antimony (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

HGWC-118
< 0.003
<0.003
<0.003
<0.003
<0.003
<0.003
<0.003
<0.003
<0.003
<0.003

Constituent: Arsenic (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	<0.005	<0.005				
8/31/2016						<0.005	
10/20/2016	<0.005					<0.005	
10/24/2016		<0.005	<0.005				
1/25/2017	<0.005	<0.005	<0.005				
1/31/2017						<0.005	
5/23/2017		<0.005	<0.005			<0.005	
5/24/2017	<0.005						
8/10/2017	<0.005	<0.005	<0.005			<0.005	
11/13/2017	<0.005	<0.005					
11/14/2017			<0.005			<0.005	
6/4/2018	<0.005	<0.005					
6/5/2018			<0.005				
6/6/2018						<0.005	
10/1/2018	<0.005	<0.005	<0.005				
10/3/2018						<0.005	
8/21/2019	<0.005	<0.005	<0.005				
8/22/2019						<0.005	
10/21/2019	<0.005						
10/22/2019		<0.005	<0.005				
10/23/2019						<0.005	<0.005
1/3/2020							0.00065 (J)
3/4/2020							0.00036 (J)
3/24/2020	0.00042 (J)	<0.005					<0.005
3/25/2020						0.00039 (J)	
4/9/2020			0.00074 (J)				
6/18/2020							0.00092 (J)
7/21/2020							0.00083 (J)
8/25/2020	<0.005	<0.005	<0.005				
8/27/2020						<0.005	<0.005
9/18/2020	<0.005	<0.005		<0.005	<0.005		
9/22/2020			<0.005				
9/24/2020						<0.005	<0.005
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	<0.005		

Constituent: Arsenic (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.005	<0.005	<0.005	0.0045 (J)	<0.005	<0.005
10/20/2016					<0.005	<0.005
10/24/2016	<0.005					
10/25/2016		<0.005	<0.005	0.003 (J)		
1/27/2017					<0.005	
1/31/2017	<0.005	<0.005	<0.005	0.0022 (J)		<0.005
5/23/2017	<0.005				<0.005	<0.005
5/24/2017		<0.005	<0.005	0.0012 (J)		
8/10/2017	<0.005	<0.005	<0.005	0.0016 (J)	<0.005	<0.005
11/14/2017	<0.005	<0.005	<0.005	0.0011 (J)	<0.005	<0.005
6/6/2018	<0.005	<0.005	<0.005	0.0018 (J)		
6/7/2018					<0.005	<0.005
10/2/2018		<0.005	<0.005	0.0014 (J)		
10/3/2018	<0.005				<0.005	<0.005
8/22/2019	<0.005	<0.005			<0.005	<0.005
8/23/2019			<0.005	0.0035 (J)		
10/22/2019			<0.005	0.0019 (J)	<0.005	<0.005
10/23/2019	<0.005	<0.005				
3/24/2020					0.00037 (J)	
3/25/2020	<0.005	<0.005	<0.005	0.0025 (J)		<0.005
8/26/2020						<0.005
8/27/2020	<0.005	<0.005	<0.005	0.0011 (J)	<0.005	
9/24/2020	<0.005	<0.005	<0.005			
9/25/2020				0.0017 (J)	<0.005	
9/28/2020						<0.005

Constituent: Barium (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.0275	0.0269	0.0269				
8/31/2016						0.0527	
10/20/2016	0.0255					0.0477	
10/24/2016		0.028	0.0258				
1/25/2017	0.0304	0.0252	0.0272				
1/31/2017						0.0527	
5/23/2017		0.0293	0.0293			0.0436	
5/24/2017	0.0256						
8/10/2017	0.0306	0.0274	0.031			0.0419	
11/13/2017	0.0217	0.0275					
11/14/2017			0.0289			0.0407	
6/4/2018	0.025	0.027					
6/5/2018			0.028				
6/6/2018						0.043	
10/1/2018	0.021	0.026	0.025				
10/3/2018						0.041	
8/21/2019	0.029	0.027	0.027				
8/22/2019						0.043	
10/21/2019	0.033						
10/22/2019		0.028	0.027				
10/23/2019						0.043	0.037
1/3/2020							0.036
3/4/2020							0.033
3/24/2020	0.032	0.029					0.024
3/25/2020						0.038	
4/9/2020			0.034				
6/18/2020							0.029
7/21/2020							0.028
8/25/2020	0.031	0.028	0.03				
8/27/2020						0.045	0.028
9/18/2020	0.024	0.025		0.026	0.077		
9/22/2020			0.038				
9/24/2020						0.041	0.029
11/10/2020				0.027			
11/11/2020					0.078		
12/15/2020				0.027	0.091		

Constituent: Barium (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	0.045	0.067	0.0391	0.0883	0.0547	0.0595
10/20/2016					0.0529	0.055
10/24/2016	0.0386					
10/25/2016		0.0745	0.041	0.0831		
1/27/2017					0.049	
1/31/2017	0.0365	0.0674	0.0382	0.0844		0.0613
5/23/2017	0.0254				0.0352	0.068
5/24/2017		0.0668	0.0377	0.0784		
8/10/2017	0.0396	0.067	0.0385	0.0903	0.0457	0.0638
11/14/2017	0.0385	0.0643	0.039	0.083	0.0368	0.07
6/6/2018	0.043	0.068	0.039	0.095		
6/7/2018					0.036	0.059
10/2/2018		0.066	0.038	0.089		
10/3/2018	0.04				0.047	0.056
8/22/2019	0.036	0.066			0.036	0.052
8/23/2019			0.038	0.088		
10/22/2019			0.039	0.087	0.049	0.054
10/23/2019	0.039	0.066				
3/24/2020					0.051	
3/25/2020	0.036	0.074	0.037	0.084		0.06
8/26/2020						0.056
8/27/2020	0.038	0.068	0.034	0.083	0.047	
9/24/2020	0.036	0.075	0.039			
9/25/2020				0.085	0.05	
9/28/2020						0.046

Constituent: Beryllium (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.003	<0.003	<0.003				
8/31/2016						<0.003	
10/20/2016	<0.003					<0.003	
10/24/2016		<0.003	0.0019 (J)				
1/25/2017	<0.003	<0.003	<0.003				
1/31/2017						<0.003	
5/23/2017		<0.003	<0.003			7E-05 (J)	
5/24/2017	<0.003						
8/10/2017	<0.003	<0.003	<0.003			<0.003	
11/13/2017	<0.003	<0.003					
11/14/2017			<0.003			<0.003	
6/4/2018	<0.003	<0.003					
6/5/2018			<0.003				
6/6/2018						5.9E-05 (J)	
10/1/2018	<0.003	<0.003	<0.003				
10/3/2018						6.5E-05 (J)	
8/21/2019	<0.003	<0.003	<0.003				
8/22/2019						<0.003	
10/21/2019	<0.003						
10/22/2019		<0.003	<0.003				
10/23/2019						7.5E-05 (J)	<0.003
1/3/2020							<0.003
3/4/2020							<0.003
3/24/2020	<0.003	<0.003					<0.003
3/25/2020						<0.003	
4/9/2020			<0.003				
6/18/2020							<0.003
7/21/2020							<0.003
8/25/2020	4.7E-05 (J)	<0.003	4.6E-05 (J)				
8/27/2020						5.7E-05 (J)	<0.003
9/18/2020	<0.003	<0.003		<0.003	<0.003		
9/22/2020			9.9E-05 (J)				
9/24/2020						4.8E-05 (J)	<0.003
11/10/2020				<0.003			
11/11/2020					<0.003		
12/15/2020				<0.003	<0.003		

Constituent: Beryllium (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
10/20/2016					<0.003	<0.003
10/24/2016	<0.003					
10/25/2016		<0.003	<0.003	<0.003		
1/27/2017					<0.003	
1/31/2017	<0.003	<0.003	<0.003	<0.003		<0.003
5/23/2017	<0.003				<0.003	<0.003
5/24/2017		<0.003	<0.003	<0.003		
8/10/2017	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/14/2017	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
6/6/2018	<0.003	<0.003	<0.003	<0.003		
6/7/2018					6.8E-05 (J)	<0.003
10/2/2018		<0.003	<0.003	<0.003		
10/3/2018	<0.003				<0.003	<0.003
8/22/2019	<0.003	<0.003			7.9E-05 (J)	<0.003
8/23/2019			<0.003	<0.003		
10/22/2019			<0.003	<0.003	<0.003	<0.003
10/23/2019	<0.003	<0.003				
3/24/2020					<0.003	
3/25/2020	<0.003	<0.003	<0.003	<0.003		<0.003
8/26/2020						<0.003
8/27/2020	5E-05 (J)	<0.003	<0.003	<0.003	4.9E-05 (J)	
9/24/2020	8.8E-05 (J)	<0.003	<0.003			
9/25/2020				<0.003	6.6E-05 (J)	
9/28/2020						<0.003

Constituent: Boron (mg/L) Analysis Run 2/17/2021 2:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.1	<0.1	<0.1				
8/31/2016						0.0724 (J)	
10/20/2016	0.016 (J)					0.0877 (J)	
10/24/2016		0.0367 (J)	0.0226 (J)				
1/25/2017	0.0095 (J)	0.0075 (J)	0.009 (J)				
1/31/2017						0.0928	
5/23/2017		0.0073 (J)	0.0082 (J)			0.0795	
5/24/2017	0.0094 (J)						
8/10/2017	<0.1	<0.1	0.0061 (J)			0.0814	
11/13/2017	0.0103 (J)	0.0089 (J)					
11/14/2017			0.012 (J)			0.108	
6/4/2018	0.0065 (J)	0.007 (J)					
6/5/2018			0.0085 (J)				
6/6/2018						0.081	
10/1/2018	0.0054 (J)	<0.1	0.0042 (J)				
10/3/2018						0.092	
4/1/2019	0.0076 (J)						
4/2/2019		0.0043 (J)	0.0059 (J)				
4/4/2019						0.06 (X)	
10/21/2019	0.0097 (J)						
10/22/2019		0.016 (J)	0.01 (J)				
10/23/2019						0.1	3.1
1/3/2020							3.4
3/4/2020							3.7
3/24/2020	0.011 (J)	0.012 (J)					2.4
3/25/2020						0.08 (J)	
4/9/2020			0.012 (J)				
6/18/2020							2.9
7/21/2020							3
8/27/2020							2.7
9/18/2020	0.011 (J)	0.008 (J)		0.0082 (J)	0.015 (J)		
9/22/2020			0.021 (J)				
9/24/2020						0.1	2.9
11/10/2020				0.0064 (J)			
11/11/2020					0.014 (J)		
12/15/2020				<0.1	0.0083 (J)		

Constituent: Boron (mg/L) Analysis Run 2/17/2021 2:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	2.22	1.14	0.651	0.402	0.821	0.681
10/20/2016					0.956	0.697
10/24/2016	1.83					
10/25/2016		1.21	0.778	0.372		
1/27/2017					0.99	
1/31/2017	2.12	1.43	0.782	0.404		0.768
5/23/2017	2.56				0.438	0.754
5/24/2017		1.3	0.753	0.415		
8/10/2017	2.28	1.28	0.702	0.397	0.821	0.608
11/14/2017	2.32	1.29	0.78	0.366	0.536	0.691
6/6/2018	2.5	1.4	0.87	0.48		
6/7/2018					0.5	0.57
10/2/2018		1.2	0.82	0.43		
10/3/2018	2.4				0.85	0.51
4/3/2019			0.89	0.4		
4/4/2019	2.4	1.4 (X)				
4/5/2019					1 (X)	0.6 (X)
6/17/2019	2.3		0.86	0.37		
10/22/2019			0.91	0.32	1	0.65
10/23/2019	2.3	1.3				
3/24/2020					1	
3/25/2020	2.3	1.4	0.87	0.36		0.7
9/24/2020	2.2	1.2	0.88			
9/25/2020				0.28	1.1	
9/28/2020						0.65

Constituent: Cadmium (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.0025	<0.0025	<0.0025				
8/31/2016						0.0002 (J)	
10/20/2016	<0.0025					0.0003 (J)	
10/24/2016		<0.0025	<0.0025				
1/25/2017	<0.0025	<0.0025	<0.0025				
1/31/2017						0.0001 (J)	
5/23/2017		<0.0025	<0.0025			0.0002 (J)	
5/24/2017	<0.0025						
8/10/2017	<0.0025	<0.0025	<0.0025			0.0002 (J)	
11/13/2017	<0.0025	<0.0025					
11/14/2017			<0.0025			<0.0025	
6/4/2018	<0.0025	<0.0025					
6/5/2018			<0.0025				
6/6/2018						9.5E-05 (J)	
10/1/2018	<0.0025	<0.0025	<0.0025				
10/3/2018						0.00018 (J)	
8/21/2019	<0.0025	<0.0025	<0.0025				
8/22/2019						0.00014 (J)	
10/21/2019	<0.0025						
10/22/2019		<0.0025	<0.0025				
10/23/2019						0.0002 (J)	0.00026 (J)
1/3/2020							0.0002 (J)
3/4/2020							0.00026 (J)
3/24/2020	<0.0025	<0.0025					0.00068 (J)
3/25/2020						0.00014 (J)	
4/9/2020			<0.0025				
6/18/2020							0.00047 (J)
7/21/2020							0.00083 (J)
8/25/2020	<0.0025	<0.0025	<0.0025				
8/27/2020						0.00019 (J)	0.00038 (J)
9/18/2020	<0.0025	<0.0025		<0.0025	<0.0025		
9/22/2020			<0.0025				
9/24/2020						0.00014 (J)	0.00032 (J)
11/10/2020				<0.0025			
11/11/2020					<0.0025		
12/15/2020				<0.0025	<0.0025		

Constituent: Cadmium (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	0.0006 (J)	<0.0025	0.0001 (J)	<0.0025	0.0008 (J)	<0.0025
10/20/2016					0.0008 (J)	<0.0025
10/24/2016	0.0008 (J)					
10/25/2016		<0.0025	8E-05 (J)	<0.0025		
1/27/2017					0.0007 (J)	
1/31/2017	0.0006 (J)	<0.0025	9E-05 (J)	<0.0025		<0.0025
5/23/2017	0.0006 (J)				0.0005 (J)	<0.0025
5/24/2017		<0.0025	0.0001 (J)	<0.0025		
8/10/2017	0.0007 (J)	<0.0025	<0.0025	<0.0025	0.0004 (J)	<0.0025
11/14/2017	0.0007 (J)	<0.0025	<0.0025	<0.0025	0.0005 (J)	<0.0025
6/6/2018	0.00073 (J)	<0.0025	0.00012 (J)	<0.0025		
6/7/2018					0.00049 (J)	<0.0025
10/2/2018		<0.0025	0.0001 (J)	<0.0025		
10/3/2018	0.00078 (J)				0.00079 (J)	<0.0025
8/22/2019	0.0008 (J)	<0.0025			0.00064 (J)	<0.0025
8/23/2019			0.00011 (J)	<0.0025		
10/22/2019			<0.0025	<0.0025	0.00068 (J)	<0.0025
10/23/2019	0.00091 (J)	<0.0025				
3/24/2020					0.00079 (J)	
3/25/2020	0.00068 (J)	<0.0025	<0.0025	<0.0025		<0.0025
8/26/2020						<0.0025
8/27/2020	0.00082 (J)	<0.0025	<0.0025	<0.0025	0.0008 (J)	
9/24/2020	0.00076 (J)	<0.0025	<0.0025			
9/25/2020				<0.0025	0.00089 (J)	
9/28/2020						<0.0025

Constituent: Calcium (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	40.3	6.69	6.72				
8/31/2016						19.4	
10/20/2016	38.7					19.3	
10/24/2016		6.25	6.4				
1/25/2017	44.6	6.58	6.87				
1/31/2017						19.1	
5/23/2017		6.4	7.13			18.3	
5/24/2017	34.8						
8/10/2017	48.6	6.54	6.71			20.9	
11/13/2017	17.1	6.26					
11/14/2017			7.4			21.7	
6/4/2018	30.1	7.4					
6/5/2018			7.4				
6/6/2018						17	
10/1/2018	14.2 (J)	5.8	6.2				
10/3/2018						19.1 (J)	
4/1/2019	58.4						
4/2/2019		6.7	7.4				
4/4/2019						16.9	
10/21/2019	51						
10/22/2019		6.3	7.2				
10/23/2019						21.9	136
1/3/2020							118
3/4/2020							144
3/24/2020	61.2	7					103
3/25/2020						18.4	
4/9/2020			8.3				
6/18/2020							124
7/21/2020							120
8/27/2020							106
9/18/2020	32.2	6.5		62.2	51.8		
9/22/2020			7.9				
9/24/2020						20.3	120
11/10/2020				73.3			
11/11/2020					61.3		
12/15/2020				72.5	61.3		

Constituent: Calcium (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	70.4	74.2	44.7	35.1	63.4	79.3
10/20/2016					64.4	83.7
10/24/2016	70.9					
10/25/2016		72.5	49	35.4		
1/27/2017					68.6	
1/31/2017	63.6	70.3	46.6	34.2		76.8
5/23/2017	111				32	77.2
5/24/2017		75.9	49.5	35.3		
8/10/2017	81.2	84	54.2	43.1	78.9	83.1
11/14/2017	79.7	87.2	53.2	37.4	46.9	86.7
6/6/2018	88.3	81	55	41.1		
6/7/2018					37.7	79.7
10/2/2018		84.7	55.4	42.5		
10/3/2018	85.3				68	77.1
4/3/2019			54	37.5		
4/4/2019	91.9	73.8				
4/5/2019					70	82
6/17/2019	92.6	81.2	55.3			
6/18/2019					36.3	76.5
10/22/2019			58.1	42.6	70.9	84.2
10/23/2019	86.5	89.4				
3/24/2020					68	
3/25/2020	86.8	91.4	59.5	42.6		86.8
9/24/2020	91.3	92.9	55.4			
9/25/2020				48.5	72.8	
9/28/2020						88.9

Constituent: Chloride (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	3.3	5.4	2				
8/31/2016						5.7	
10/20/2016	3.2					5.7	
10/24/2016		5.2	1.9				
1/25/2017	2.7	5	1.9				
1/31/2017						5.8	
5/23/2017		5.1	1.6			5.3	
5/24/2017	3						
8/10/2017	2.8	5.2	1.7			5.4	
11/13/2017	2.5	5.5					
11/14/2017			2			5.8	
6/4/2018	2.6	5.3					
6/5/2018			1.7				
6/6/2018						5.3	
10/1/2018	2.2	5.6	1.6				
10/3/2018						5.8	
4/1/2019	4						
4/2/2019		5.7	1.8				
4/4/2019						5.9	
10/21/2019	3.9						
10/22/2019		5.5	1.9				
10/23/2019						5.5	7.9
1/3/2020							7
3/4/2020							7.1
3/24/2020	3.6	5.2					6.5
3/25/2020						5.2	
4/9/2020			1.4				
6/18/2020							6.9
7/21/2020							7.2
8/27/2020							7.1
9/18/2020	2.6	5.2		2.7	2.6		
9/22/2020			1.5				
9/24/2020						5.5	7.2
11/10/2020				2.7			
11/11/2020					2.6		
12/15/2020				2.9	2.7		

Constituent: Chloride (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	5.2	3	3.2	5	7.1	4.5
10/20/2016					7.7	4.4
10/24/2016	5.2					
10/25/2016		2.8	3.2	4.8		
1/27/2017					7.8	
1/31/2017	5.6	3.3	3.1	5.5		4.8
5/23/2017	5.7				3.6	4.3
5/24/2017		3.5	2.9	5.3		
8/10/2017	5.8	2.9	2.8	4.6	5.9	4.2
11/14/2017	6	4	3.4	5.6	4	4.4
6/6/2018	6.4	2.9	2.8	5.3		
6/7/2018					3.6	4.1
10/2/2018		3.5	3.2	5.3		
10/3/2018	6.3				7.6	4.4
4/3/2019			3.6	5		
4/4/2019	6.9	3.9				
4/5/2019					8.9	4.3
6/17/2019	5.2		2.9			
10/22/2019			3.6	4.6	12.1	4.5
10/23/2019	6.1	3.6				
3/24/2020					12.5	
3/25/2020	5.1	3.2	3	3.9		3.6
9/24/2020	6	3.9	3.5			
9/25/2020				4.1	16.1	
9/28/2020						4

Constituent: Chromium (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.01	0.0038 (J)	<0.01				
8/31/2016						<0.01	
10/20/2016	<0.01					<0.01	
10/24/2016		0.0039 (J)	0.001 (J)				
1/25/2017	0.0029 (J)	0.0038 (J)	0.0012 (J)				
1/31/2017						<0.01	
5/23/2017		0.0038 (J)	0.0012 (J)			0.0006 (J)	
5/24/2017	0.0004 (J)						
8/10/2017	<0.01	0.0039 (J)	0.0019 (J)			<0.01	
11/13/2017	<0.01	0.0038 (J)					
11/14/2017			0.0016 (J)			<0.01	
6/4/2018	<0.01	0.0037 (J)					
6/5/2018			<0.01				
6/6/2018						<0.01	
10/1/2018	<0.01	0.0036 (J)	0.0023 (J)				
10/3/2018						<0.01	
8/21/2019	0.00061 (J)	0.0039 (J)	0.0022 (J)				
8/22/2019						0.00064 (J)	
10/21/2019	0.0012 (J)						
10/22/2019		0.004 (J)	0.0023 (J)				
10/23/2019						<0.01	<0.01
1/3/2020							0.00063 (J)
3/4/2020							<0.01
3/24/2020	0.0019 (J)	0.0044 (J)					0.00051 (J)
3/25/2020						0.00098 (J)	
4/9/2020			0.0031 (J)				
6/18/2020							<0.01
7/21/2020							<0.01
8/25/2020	0.0013 (J)	0.0039 (J)	0.0031 (J)				
8/27/2020						<0.01	<0.01
9/18/2020	0.00077 (J)	0.0037 (J)		0.0039 (J)	<0.01		
9/22/2020			0.0046 (J)				
9/24/2020						<0.01	<0.01
11/10/2020				<0.01			
11/11/2020					<0.01		
12/15/2020				<0.01	0.0013 (J)		

Constituent: Chromium (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
10/20/2016					<0.01	<0.01
10/24/2016	<0.01					
10/25/2016		<0.01	<0.01	<0.01		
1/27/2017					<0.01	
1/31/2017	<0.01	<0.01	<0.01	<0.01		<0.01
5/23/2017	<0.01				<0.01	<0.01
5/24/2017		<0.01	<0.01	<0.01		
8/10/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/14/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
6/6/2018	<0.01	<0.01	<0.01	<0.01		
6/7/2018					<0.01	<0.01
10/2/2018		<0.01	<0.01	<0.01		
10/3/2018	<0.01				<0.01	<0.01
8/22/2019	0.00063 (J)	<0.01			<0.01	<0.01
8/23/2019			<0.01	<0.01		
10/22/2019			<0.01	0.00062 (J)	<0.01	0.00066 (J)
10/23/2019	0.0015 (J)	0.0004 (J)				
3/24/2020					0.0012 (J)	
3/25/2020	0.00045 (J)	0.0013 (J)	0.00074 (J)	0.0014 (J)		0.00081 (J)
8/26/2020						0.00098 (J)
8/27/2020	0.00069 (J)	<0.01	<0.01	<0.01	0.00057 (J)	
9/24/2020	0.00081 (J)	0.00064 (J)	<0.01			
9/25/2020				<0.01	0.00067 (J)	
9/28/2020						0.0017 (J)

Constituent: Cobalt (mg/L) Analysis Run 2/17/2021 2:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	<0.005	0.0006 (J)				
8/31/2016						0.0033 (J)	
10/20/2016	<0.005					0.0025 (J)	
10/24/2016		<0.005	<0.005				
1/25/2017	<0.005	<0.005	<0.005				
1/31/2017						0.001 (J)	
5/23/2017		<0.005	<0.005			0.0025 (J)	
5/24/2017	<0.005						
8/10/2017	<0.005	<0.005	0.0004 (J)			0.0029 (J)	
11/13/2017	<0.005	<0.005					
11/14/2017			0.0003 (J)			0.003 (J)	
6/4/2018	<0.005	<0.005					
6/5/2018			<0.005				
6/6/2018						0.0016 (J)	
10/1/2018	<0.005	<0.005	<0.005				
10/3/2018						0.0028 (J)	
8/21/2019	<0.005	<0.005	<0.005				
8/22/2019						<0.005	
10/21/2019	<0.005						
10/22/2019		<0.005	<0.005				
10/23/2019						0.0023 (J)	0.0018 (J)
1/3/2020							0.0038 (J)
3/4/2020							0.0021 (J)
3/24/2020	<0.005	<0.005					0.0019 (J)
3/25/2020						0.0021 (J)	
4/9/2020			0.00037 (J)				
6/18/2020							0.0012 (J)
7/21/2020							0.00098 (J)
8/25/2020	<0.005	<0.005	<0.005				
8/27/2020						0.0027 (J)	0.001 (J)
9/18/2020	<0.005	<0.005		0.00049 (J)	<0.005		
9/22/2020			0.00074 (J)				
9/24/2020						0.0021 (J)	0.0011 (J)
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	0.00039 (J)		

Constituent: Cobalt (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	0.0018 (J)	0.0014 (J)	<0.005	0.0023 (J)	0.0035 (J)	<0.005
10/20/2016					0.0045 (J)	<0.005
10/24/2016	0.0018 (J)					
10/25/2016		0.0013 (J)	<0.005	0.0017 (J)		
1/27/2017					0.0041 (J)	
1/31/2017	0.0016 (J)	0.0006 (J)	<0.005	0.0017 (J)		<0.005
5/23/2017	0.0014 (J)				0.0071 (J)	0.0005 (J)
5/24/2017		0.0007 (J)	<0.005	0.002 (J)		
8/10/2017	0.0025 (J)	0.0006 (J)	<0.005	0.0012 (J)	0.0031 (J)	0.0003 (J)
11/14/2017	0.002 (J)	0.0005 (J)	<0.005	0.0014 (J)	0.0062 (J)	0.0004 (J)
6/6/2018	0.0031 (J)	0.00056 (J)	<0.005	0.0014 (J)		
6/7/2018					0.0083 (J)	<0.005
10/2/2018		<0.005	<0.005	0.00081 (J)		
10/3/2018	0.0023 (J)				0.005 (J)	<0.005
8/22/2019	0.0019 (J)	<0.005			0.012	0.0003 (J)
8/23/2019			<0.005	0.0027 (J)		
10/22/2019			<0.005	0.0022 (J)	0.0064	0.00061 (J)
10/23/2019	0.0021 (J)	0.00038 (J)				
3/24/2020					0.0087	
3/25/2020	0.0022 (J)	0.00047 (J)	<0.005	0.0022 (J)		<0.005
8/26/2020						0.00061 (J)
8/27/2020	0.0019 (J)	<0.005	<0.005	0.00086 (J)	0.011	
9/24/2020	0.0019 (J)	0.00044 (J)	<0.005			
9/25/2020				0.001 (J)	0.011	
9/28/2020						0.00048 (J)

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.804 (U)	1.32 (U)	0.587 (U)				
8/31/2016						0.621 (U)	
10/20/2016	1.13 (U)					1.4	
10/24/2016		1.3 (U)	0.979 (U)				
1/25/2017	0.888 (U)	1.04 (U)	0.038 (U)				
1/31/2017						0.906 (U)	
5/23/2017		0.541 (U)	0.898 (U)			0.388 (U)	
5/24/2017	0.622 (U)						
8/10/2017	0.745 (U)	0.536 (U)	0.759 (U)			1.03 (U)	
11/13/2017	0.778 (U)	0.786 (U)					
11/14/2017			0.0762 (U)			0.769 (U)	
6/4/2018	0.637 (U)	0.233 (U)					
6/5/2018			0.594 (U)				
6/6/2018						1.28 (U)	
10/1/2018	0.451 (U)	0.494 (U)	0.982				
10/3/2018						0.302 (U)	
8/21/2019	0.553 (U)	0.514 (U)	0.492 (U)				
8/22/2019						0.474 (U)	
10/21/2019	0.351 (U)						
10/22/2019		0.828 (U)	0.523 (U)				
10/23/2019						0.776 (U)	0.858 (U)
1/22/2020							1.04 (U)
3/4/2020							1.32
3/24/2020	0.26 (U)	0.677 (U)					1.23 (U)
3/25/2020						0.603 (U)	
4/9/2020			0.617 (U)				
7/21/2020							0.0938 (U)
8/25/2020	0.57 (U)	0.0182 (U)	0.587 (U)				
8/27/2020						0.109 (U)	1.17 (U)
9/18/2020	0.828 (U)	1.15 (U)		1.11 (U)	1.5 (U)		
9/22/2020			0.551 (U)				
9/24/2020						0.625 (U)	1.42
11/10/2020				0.234 (U)			
11/11/2020					0.776 (U)		
12/15/2020				0.529 (U)	1.23 (U)		

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	1.62	0.906 (U)	1.2	1.03	1.12	
10/20/2016					0.803 (U)	1.97
10/24/2016	1.01 (U)					
10/25/2016		1.03	1.11 (U)	1.07		
1/27/2017					1.08 (U)	
1/31/2017	0.976 (U)	0.868 (U)	1.45	0.588 (U)		1.03
5/23/2017	0.891 (U)				0.624 (U)	0.398 (U)
5/24/2017		0.728 (U)	0.393 (U)	0.593 (U)		
8/10/2017	0.601 (U)	1.35	0.84 (U)	0.691 (U)	0.695 (U)	0.938 (U)
11/14/2017	0.567 (U)	0.817 (U)	1.01 (U)	0.653 (U)	0.99 (U)	0.335 (U)
6/6/2018	0.836 (U)	0.559 (U)	0.365 (U)	0.939 (U)		
6/7/2018					1.04 (U)	0.696 (U)
10/2/2018		0.336 (U)	1.23	0.225 (U)		
10/3/2018	0.111 (U)				0.198 (U)	1.6 (U)
8/22/2019	0.946 (U)	0.694 (U)			0.333 (U)	0.904 (U)
8/23/2019			1.69	0.47 (U)		
10/22/2019			0.705 (U)	0.545 (U)	0.827 (U)	0.424 (U)
10/23/2019	0.571 (U)	0.584 (U)				
3/24/2020					0.815 (U)	
3/25/2020	0.403 (U)	0.663 (U)	0.673 (U)	0.508 (U)		0.915 (U)
8/26/2020						1.19
8/27/2020	0.37 (U)	0.416 (U)	0.264 (U)	0.989 (U)	0.193 (U)	
9/24/2020	0.804 (U)	1.11 (U)	0.576 (U)			
9/25/2020				0.584 (U)	0.155 (U)	
9/28/2020						0.613 (U)

Constituent: Fluoride (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.07 (J)	0.04 (J)	0.2 (J)				
8/31/2016						0.05 (J)	
10/20/2016	0.07 (J)					0.03 (J)	
10/24/2016		0.05 (J)	0.16 (J)				
1/25/2017	0.14 (J)	<0.1	0.15 (J)				
1/31/2017						<0.1	
5/23/2017		0.004 (J)	0.18 (J)			<0.1	
5/24/2017	0.02 (J)						
8/10/2017	0.06 (J)	0.03 (J)	0.19 (J)			<0.1	
11/13/2017	<0.1	<0.1					
11/14/2017			0.16 (J)			<0.1	
6/4/2018	0.032 (J)	<0.1					
6/5/2018			0.18 (J)				
6/6/2018						<0.1	
10/1/2018	<0.1	<0.1	0.078 (J)				
10/3/2018						<0.1	
4/1/2019	0.042 (J)						
4/2/2019		<0.1	0.18 (J)				
4/4/2019						<0.1	
8/21/2019	0.048 (J)	<0.1	0.11 (J)				
8/22/2019						<0.1	
10/21/2019	0.12 (J)						
10/22/2019		0.05 (J)	0.18 (J)				
10/23/2019						<0.1	0.22 (J)
1/3/2020							<0.1
3/4/2020							<0.1
3/24/2020	0.076 (J)	<0.1					<0.1
3/25/2020						<0.1	
4/9/2020			0.14 (J)				
6/18/2020							<0.1
7/21/2020							<0.1
8/25/2020	0.052 (J)	<0.1	0.17				
8/27/2020						<0.1	<0.1
9/18/2020	<0.1	<0.1		0.067 (J)	0.098 (J)		
9/22/2020			0.16				
9/24/2020						<0.1	<0.1
11/10/2020				0.065 (J)			
11/11/2020					0.083 (J)		
12/15/2020				0.064 (J)	0.081 (J)		

Constituent: Fluoride (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	0.06 (J)	0.15 (J)	0.08 (J)	0.12 (J)	0.09 (J)	0.18 (J)
10/20/2016					0.11 (J)	0.12 (J)
10/24/2016	0.13 (J)					
10/25/2016		0.09 (J)	0.16 (J)	0.17 (J)		
1/27/2017					0.28 (J)	
1/31/2017	<0.1	0.13 (J)	0.16 (J)	0.05 (J)		0.3
5/23/2017	0.15 (J)				0.01 (J)	0.14 (J)
5/24/2017		0.07 (J)	0.009 (J)	0.13 (J)		
8/10/2017	<0.1	0.03 (J)	<0.1	0.12 (J)	0.1 (J)	0.11 (J)
11/14/2017	<0.1	<0.1	<0.1	<0.1	<0.1	0.07 (J)
6/6/2018	<0.1	0.074 (J)	0.057 (J)	0.15 (J)		
6/7/2018					<0.1	0.3
10/2/2018		<0.1	<0.1	<0.1		
10/3/2018	<0.1				<0.1	0.12 (J)
4/3/2019			<0.1	0.05 (J)		
4/4/2019	0.042 (J)	0.03 (J)				
4/5/2019					0.19 (J)	0.33
6/18/2019						0.89
8/22/2019	<0.1	<0.1			<0.1	0.07 (J)
8/23/2019			<0.1	0.034 (J)		
10/22/2019			0.047 (J)	0.099 (J)	0.042 (J)	0.087 (J)
10/23/2019	<0.1	<0.1				
3/24/2020					<0.1	
3/25/2020	<0.1	<0.1	<0.1	0.075 (J)		0.078 (J)
8/26/2020						0.072 (J)
8/27/2020	<0.1	<0.1	<0.1	0.094 (J)	<0.1	
9/24/2020	<0.1	<0.1	0.064 (J)			
9/25/2020				0.091 (J)	<0.1	
9/28/2020						0.078 (J)

Constituent: Lead (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	110\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	LIC\A(A 112 (ba)	LIC/M/A 112 /b~)	LIC\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	11C/M/A 48D (b-c)	LICWC 101	LICWO 102
8/30/2016	HGWA-111 (bg)	HGWA-112 (bg) <0.005	HGWA-113 (bg) <0.005	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/31/2016	0.0001 (J)	<0.005	<0.005			<0.005	
10/20/2016	<0.005					<0.005	
10/24/2016	~0.003	<0.005	<0.005			<0.003	
1/25/2017	<0.005	<0.005	<0.005				
1/31/2017	<0.005	<0.005	<0.005			<0.005	
5/23/2017		<0.005	<0.005			0.0009 (J)	
5/23/2017	<0.005	<0.005	<0.005			0.0009 (3)	
8/10/2017	<0.005	<0.005	0.0001 (J)			<0.005	
11/13/2017	<0.005	<0.005	0.0001 (3)			<0.005	
11/13/2017	~ 0.005	<0.005	<0.005			<0.005	
6/4/2018	<0.00E	<0.005	<0.005			<0.005	
6/5/2018	<0.005	<0.005	<0.005				
6/6/2018			<0.005			<0.005	
10/1/2018	<0.005	<0.005	<0.005			<0.005	
10/1/2018	<0.005	<0.005	<0.005			<0.005	
8/21/2019	<0.005	<0.005	7.1E-05 (J)			<0.005	
8/22/2019	~ 0.005	<0.005	7.12-05 (3)			<0.005	
	0.00016 (1)					<0.005	
10/21/2019	0.00016 (J)	<0.00E	7.25 05 (1)				
10/22/2019		<0.005	7.3E-05 (J)			<0.005	40.00 F
10/23/2019						<0.005	<0.005
1/3/2020							<0.005
3/4/2020	0.00059 (1)	0.00016 (1)					0.00011 (J)
3/24/2020	0.00058 (J)	0.00016 (J)				<0.005	<0.005
3/25/2020			0.00000 (1)			<0.005	
4/9/2020			0.00039 (J)				<0.005
6/18/2020							
7/21/2020	0.00000 (1)	0.00011 (1)	0.00000 (1)				<0.005
8/25/2020	0.00036 (J)	0.00011 (J)	0.00022 (J)			-0.005	40.00F
8/27/2020	0.00000 (1)	C FF OF (1)		<0.005	10.005	<0.005	<0.005
9/18/2020	0.00026 (J)	6.5E-05 (J)	0.00000 (1)	<0.005	<0.005		
9/22/2020			0.00096 (J)			-0.005	40.005
9/24/2020				.0.005		<0.005	<0.005
11/10/2020				<0.005	10.005		
11/11/2020				.0.005	<0.005		
12/15/2020				<0.005	0.00015 (J)		

Constituent: Lead (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
10/20/2016					<0.005	<0.005
10/24/2016	<0.005					
10/25/2016		<0.005	<0.005	<0.005		
1/27/2017					<0.005	
1/31/2017	<0.005	<0.005	<0.005	<0.005		<0.005
5/23/2017	<0.005				<0.005	<0.005
5/24/2017		<0.005	<0.005	<0.005		
8/10/2017	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/14/2017	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
6/6/2018	<0.005	<0.005	<0.005	<0.005		
6/7/2018					<0.005	<0.005
10/2/2018		<0.005	<0.005	<0.005		
10/3/2018	<0.005				<0.005	<0.005
8/22/2019	<0.005	<0.005			<0.005	<0.005
8/23/2019			<0.005	5.8E-05 (J)		
10/22/2019			7.9E-05 (J)	5.4E-05 (J)	0.00016 (J)	0.00025 (J)
10/23/2019	0.00043 (J)	6.8E-05 (J)				
3/24/2020					0.00025 (J)	
3/25/2020	7.6E-05 (J)	8.5E-05 (J)	0.00021 (J)	<0.005		0.0001 (J)
8/26/2020						0.00036 (J)
8/27/2020	0.00018 (J)	<0.005	<0.005	<0.005	0.00014 (J)	
9/24/2020	0.00028 (J)	4.9E-05 (J)	0.00034 (J)			
9/25/2020				<0.005	0.00019 (J)	
9/28/2020						0.00022 (J)

Constituent: Lithium (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.0022 (J)	<0.03	<0.03				
8/31/2016						<0.03	
10/20/2016	<0.03					<0.03	
10/24/2016		<0.03	<0.03				
1/25/2017	<0.03	<0.03	<0.03				
1/31/2017						<0.03	
5/23/2017		<0.03	0.0011 (J)			<0.03	
5/24/2017	0.0017 (J)						
8/10/2017	0.0017 (J)	<0.03	<0.03			<0.03	
11/13/2017	<0.03	<0.03					
11/14/2017			<0.03			<0.03	
6/4/2018	0.0016 (J)	<0.03					
6/5/2018			0.001 (J)				
6/6/2018						<0.03	
10/1/2018	<0.03	<0.03	0.001 (J)				
10/3/2018						<0.03	
8/21/2019	0.0018 (J)	<0.03	0.0011 (J)				
8/22/2019						<0.03	
10/21/2019	0.0026 (J)						
10/22/2019		<0.03	0.0011 (J)				
10/23/2019						<0.03	0.0012 (J)
1/3/2020							0.0011 (J)
3/4/2020							0.0013 (J)
3/24/2020	0.0039 (J)	<0.03					0.00084 (J)
3/25/2020						<0.03	
4/9/2020			0.0017 (J)				
6/18/2020							0.0013 (J)
7/21/2020							0.0013 (J)
8/25/2020	0.0033 (J)	<0.03	0.0014 (J)				
8/27/2020						<0.03	0.0011 (J)
9/18/2020	0.0021 (J)	<0.03		0.0026 (J)	0.0051 (J)		
9/22/2020			0.0018 (J)				
9/24/2020						<0.03	0.0011 (J)
11/10/2020				0.0028 (J)			
11/11/2020					0.0036 (J)		
12/15/2020				0.0026 (J)	0.0045 (J)		

Constituent: Lithium (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.03	0.0034 (J)	<0.03	<0.03	0.0024 (J)	<0.03
10/20/2016					0.0027 (J)	<0.03
10/24/2016	<0.03					
10/25/2016		0.0043 (J)	<0.03	<0.03		
1/27/2017					<0.03	
1/31/2017	<0.03	0.0042 (J)	<0.03	<0.03		<0.03
5/23/2017	0.0012 (J)				<0.03	0.0012 (J)
5/24/2017		0.0039 (J)	<0.03	0.0012 (J)		
8/10/2017	0.0016 (J)	0.004 (J)	<0.03	<0.03	0.0021 (J)	<0.03
11/14/2017	0.0015 (J)	0.0044 (J)	<0.03	<0.03	<0.03	<0.03
6/6/2018	0.0017 (J)	0.0041 (J)	0.00099 (J)	0.0013 (J)		
6/7/2018					0.0011 (J)	0.0015 (J)
10/2/2018		0.0041 (J)	<0.03	0.0013 (J)		
10/3/2018	0.0016 (J)				0.0021 (J)	<0.03
8/22/2019	0.0015 (J)	0.004 (J)			0.0012 (J)	0.0018 (J)
8/23/2019			0.00092 (J)	0.0009 (J)		
10/22/2019			0.00094 (J)	0.00088 (J)	0.0028 (J)	0.0027 (J)
10/23/2019	0.002 (J)	0.0039 (J)				
3/24/2020					0.0029 (J)	
3/25/2020	0.0016 (J)	0.0041 (J)	0.00091 (J)	<0.03		0.0017 (J)
8/26/2020						0.0028 (J)
8/27/2020	0.0016 (J)	0.0037 (J)	<0.03	0.0011 (J)	0.0024 (J)	
9/24/2020	0.0017 (J)	0.0038 (J)	0.00098 (J)			
9/25/2020				0.001 (J)	0.0031 (J)	
9/28/2020						0.0022 (J)

Constituent: Mercury (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	4E-05 (J)	4.1E-05 (J)	4E-05 (J)				
8/31/2016						<0.0005	
10/20/2016	<0.0005					<0.0005	
10/24/2016		<0.0005	<0.0005				
1/25/2017	4E-05 (J)	4E-05 (J)	4E-05 (J)				
1/31/2017						9.3E-05 (J)	
5/23/2017		<0.0005	<0.0005			<0.0005	
5/24/2017	<0.0005						
8/10/2017	<0.0005	<0.0005	<0.0005			<0.0005	
11/13/2017	<0.0005	<0.0005					
11/14/2017			<0.0005			<0.0005	
6/4/2018	<0.0005	<0.0005					
6/5/2018			<0.0005				
6/6/2018						<0.0005	
10/1/2018	4.3E-05 (J)	3.9E-05 (J)	4.3E-05 (J)				
10/3/2018						<0.0005	
8/21/2019	<0.0005	<0.0005	<0.0005				
8/22/2019						<0.0005	
10/23/2019							<0.0005
1/3/2020							<0.0005
3/4/2020							<0.0005
3/24/2020							<0.0005
6/18/2020							<0.0005
7/21/2020							<0.0005
8/25/2020	<0.0005	<0.0005	<0.0005				
8/27/2020						<0.0005	<0.0005
9/18/2020				<0.0005	<0.0005		
9/24/2020							<0.0005
11/10/2020				<0.0005			
11/11/2020					<0.0005		
12/15/2020				<0.0005	<0.0005		

Constituent: Mercury (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.0005	<0.0005	<0.0005	<0.0005	7E-05 (J)	<0.0005
10/20/2016					<0.0005	<0.0005
10/24/2016	<0.0005					
10/25/2016		<0.0005	<0.0005	<0.0005		
1/27/2017					<0.0005	
1/31/2017	8E-05 (J)	<0.0005	<0.0005	8E-05 (J)		9E-05 (J)
5/23/2017	<0.0005				<0.0005	<0.0005
5/24/2017		<0.0005	<0.0005	<0.0005		
8/10/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
11/14/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6/6/2018	<0.0005	<0.0005	<0.0005	<0.0005		
6/7/2018					<0.0005	<0.0005
10/2/2018		<0.0005	<0.0005	<0.0005		
10/3/2018	<0.0005				<0.0005	<0.0005
8/22/2019	<0.0005	<0.0005			<0.0005	<0.0005
8/23/2019			<0.0005	<0.0005		
8/26/2020						<0.0005
8/27/2020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	

Constituent: Molybdenum (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.01	<0.01	<0.01				
8/31/2016						<0.01	
10/20/2016	<0.01					<0.01	
10/24/2016		<0.01	<0.01				
1/25/2017	<0.01	<0.01	<0.01				
1/31/2017						<0.01	
5/23/2017		<0.01	<0.01			<0.01	
5/24/2017	<0.01						
8/10/2017	<0.01	<0.01	<0.01			<0.01	
11/13/2017	<0.01	<0.01					
11/14/2017			<0.01			<0.01	
6/4/2018	<0.01	<0.01					
6/5/2018			<0.01				
6/6/2018						<0.01	
10/1/2018	<0.01	<0.01	<0.01				
10/3/2018						<0.01	
8/21/2019	<0.01	<0.01	<0.01				
8/22/2019						<0.01	
10/23/2019							<0.01
1/3/2020							<0.01
3/4/2020							<0.01
3/24/2020							<0.01
6/18/2020							<0.01
7/21/2020							<0.01
8/25/2020	<0.01	<0.01	<0.01				
8/27/2020						<0.01	<0.01
9/18/2020				0.0015 (J)	0.0026 (J)		
9/24/2020							<0.01
11/10/2020				<0.01			
11/11/2020					0.0012 (J)		
12/15/2020				<0.01	0.00097 (J)		

Constituent: Molybdenum (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	110110 100	1101410 405	110140 407	110140 400	110000 447	1101410 440
	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
10/20/2016					<0.01	<0.01
10/24/2016	<0.01					
10/25/2016		<0.01	<0.01	<0.01		
1/27/2017					<0.01	
1/31/2017	<0.01	<0.01	<0.01	<0.01		<0.01
5/23/2017	<0.01				<0.01	<0.01
5/24/2017		<0.01	<0.01	<0.01		
8/10/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/14/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
6/6/2018	<0.01	<0.01	<0.01	<0.01		
6/7/2018					<0.01	<0.01
10/2/2018		<0.01	<0.01	<0.01		
10/3/2018	<0.01				<0.01	<0.01
8/22/2019	<0.01	<0.01			<0.01	<0.01
8/23/2019			<0.01	<0.01		
8/26/2020						<0.01
8/27/2020	<0.01	<0.01	<0.01	<0.01	<0.01	

Constituent: pH (s.u.) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	6.89	5.77	5.99				
8/31/2016						5.35	
10/20/2016	6.73					5.3	
10/24/2016		5.61	5.84				
1/25/2017	7.02	5.68	6.04			5.04	
1/31/2017						5.24	
5/23/2017		5.7	6.01			5.39	
5/24/2017	6.44						
8/10/2017	6.79	5.59	5.98			5.47	
11/13/2017	5.94	5.56					
11/14/2017			6.16			5.4	
6/4/2018	6.12	5.62	5.00				
6/5/2018			5.86				
6/6/2018						5.37	
10/1/2018	5.92	5.62	5.94				
10/3/2018	7.00					5.39	
4/1/2019	7.09	5.47					
4/2/2019		5.47	6			5.04	
4/4/2019						5.31	
6/18/2019		5.0	0.05			5.3	
8/21/2019	6.6	5.8	6.05			F 20	
8/22/2019	7.00					5.39	
10/21/2019 10/22/2019	7.02	5.7	5.98				
10/22/2019		5.7	5.96			5.33	5.68
1/3/2020						5.55	5.64
3/4/2020							5.75
3/24/2020	7.37	5.64					5.58
3/25/2020	7.57	3.04				5.53	3.30
4/9/2020			6.08			3.33	
6/18/2020			0.00				5.67
7/21/2020							5.72
8/25/2020	6.7	5.53	5.95				0.72
8/27/2020	0.7	0.00	0.00			5.32	5.7
9/18/2020	6.46	5.58		7.54	7.5	0.02	.,
9/22/2020	-		6.1		-		
9/24/2020						5.48	5.82
11/10/2020				7.34		- · · - ·	
11/11/2020					7.4		
12/15/2020				7.27	7.39		

Constituent: pH (s.u.) Analysis Run 2/17/2021 2:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	5.54	6.5	6.11	6.78	6.07	7.03
10/20/2016					6	7.01
10/24/2016	5.48					
10/25/2016		6.34	6.04	6.55		
1/27/2017					6.2	
1/31/2017	5.51	6.43	5.94	6.5		6.96
5/23/2017	5.98				5.27	6.92
5/24/2017		6.31	6.06	6.42		
8/10/2017	5.63	6.45	6.06	6.63	6.27	6.99
11/14/2017	5.59	6.53	5.99	6.5	5.4	6.9
6/6/2018	5.49	6.49	6	6.59		
6/7/2018					5.29	7.03
10/2/2018		6.18	6.18	6.54		
10/3/2018	5.53				6.08	7.08
4/3/2019			6.06	6.42		
4/4/2019	5.44	6.17				
4/5/2019					5.99	6.96
6/17/2019	5.53					
8/22/2019	5.55	6.04			5.53	6.93
8/23/2019			6.26	6.76		
10/22/2019			6.19	6.58	6.17	7.03
10/23/2019	5.49	6.46				
3/24/2020					5.99	
3/25/2020	5.49	6.47	6.13	6.56		6.89
8/26/2020						6.97
8/27/2020	5.82	6.45	6.09	6.64	5.92	
9/24/2020	5.6	6.63	6.11			
9/25/2020				6.79	6.01	
9/28/2020						7.03

Constituent: Selenium (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

8/30/2016	
10/20/2016 <0.01	
10/24/2016 <0.01	
1/25/2017 <0.01 <0.01 0.0023 (J) 1/31/2017 <0.01 <0.001 0.0024 (J) <0.01 5/23/2017 <0.01 0.0024 (J) <0.01 5/24/2017 <0.01 <0.01 0.0023 (J) <0.01 11/13/2017 <0.01 <0.01 <0.01	
1/31/2017 < 0.01 5/23/2017 < 0.01	
5/23/2017 <0.01	
5/24/2017 <0.01 8/10/2017 <0.01 <0.01 0.0023 (J) <0.01 11/13/2017 <0.01 <0.01	
8/10/2017 <0.01 <0.01 0.0023 (J) <0.01 11/13/2017 <0.01 <0.01	
11/13/2017 <0.01 <0.01	
11/14/2017 <0.01 <0.01	
6/4/2018 <0.01 <0.01	
6/5/2018 0.0019 (J)	
6/6/2018 <0.01	
10/1/2018 <0.01 <0.01 0.0024 (J)	
10/3/2018 <0.01	
8/21/2019 <0.01 <0.01 0.0025 (J)	
8/22/2019 <0.01	
10/23/2019 <0.01	
1/3/2020 0.0015 (J)	
3/4/2020 <0.01	
3/24/2020 <0.01	
6/18/2020 <0.01	
7/21/2020 <0.01	
8/25/2020 <0.01 <0.01 <0.01	
8/27/2020 <0.01 <0.01	
9/18/2020 <0.01 <0.01	
9/24/2020 <0.01	
11/10/2020 <0.01	
11/11/2020 <0.01	
12/15/2020 <0.01 <0.01	

Constituent: Selenium (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
10/20/2016					<0.01	<0.01
10/24/2016	<0.01					
10/25/2016		<0.01	<0.01	<0.01		
1/27/2017					<0.01	
1/31/2017	<0.01	<0.01	<0.01	<0.01		<0.01
5/23/2017	<0.01				<0.01	<0.01
5/24/2017		<0.01	<0.01	<0.01		
8/10/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/14/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
6/6/2018	<0.01	<0.01	<0.01	<0.01		
6/7/2018					<0.01	<0.01
10/2/2018		<0.01	<0.01	<0.01		
10/3/2018	<0.01				<0.01	<0.01
8/22/2019	<0.01	<0.01			<0.01	<0.01
8/23/2019			<0.01	<0.01		
8/26/2020						<0.01
8/27/2020	<0.01	<0.01	<0.01	<0.01	<0.01	

Constituent: Sulfate (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	1.6	0.63 (J)	14				
8/31/2016						110	
10/20/2016	1.6					110	
10/24/2016		0.62 (J)	11				
1/25/2017	1.6	0.62 (J)	12				
1/31/2017						120	
5/23/2017		0.55 (J)	12			97	
5/24/2017	1.4						
8/10/2017	1.6	0.66 (J)	11			96	
11/13/2017	1.3	0.61 (J)					
11/14/2017			11			110	
6/4/2018	1.4	0.73 (J)					
6/5/2018			9.9				
6/6/2018						95.5	
10/1/2018	1	0.52 (J)	6.7				
10/3/2018						121	
4/1/2019	1.7						
4/2/2019		0.78 (J)	8.7				
4/4/2019						95.1	
6/18/2019						102	
10/21/2019	1.8						
10/22/2019		0.6 (J)	6.8				
10/23/2019						101	<1
1/3/2020							380
3/4/2020							400
3/24/2020	1.6	<1					311
3/25/2020						85.5	
4/9/2020			6.6				
6/18/2020							349
7/21/2020							378
8/27/2020							382
9/18/2020	1	<1		3.5	9.5		
9/22/2020			5.3				
9/24/2020						97	370
11/10/2020				2.3			
11/11/2020					4.5		
12/15/2020				2.4	4.2		

Constituent: Sulfate (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	280	190	130	36	150	88
10/20/2016					150	81
10/24/2016	280					
10/25/2016		190	130	41		
1/27/2017					150	
1/31/2017	300	210	130	37		87
5/23/2017	340				110	84
5/24/2017		180	130	40		
8/10/2017	300	180	130	40	140	78
11/14/2017	310	170	130	40	110	79
6/6/2018	351	168	132	49.7		
6/7/2018					103	60.1
10/2/2018		173	132	42.3		
10/3/2018	381				169	91.5
4/3/2019			139	36		
4/4/2019	358	185				
4/5/2019					141	75.1
6/17/2019	311	162	126	30.9		
6/18/2019					116	77
10/22/2019			123	23.2	133	80.9
10/23/2019	248	162				
3/24/2020					129	
3/25/2020	251	161	116	27.9		78.4
9/24/2020	293	177	126			
9/25/2020				24.7	146	
9/28/2020						86

Constituent: Thallium (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.001	<0.001	<0.001				
8/31/2016						<0.001	
10/20/2016	<0.001					<0.001	
10/24/2016		<0.001	<0.001				
1/25/2017	<0.001	<0.001	<0.001				
1/31/2017						<0.001	
5/23/2017		<0.001	<0.001			<0.001	
5/24/2017	<0.001						
8/10/2017	<0.001	<0.001	<0.001			<0.001	
11/13/2017	<0.001	<0.001					
11/14/2017			<0.001			<0.001	
6/4/2018	<0.001	<0.001					
6/5/2018			<0.001				
6/6/2018						<0.001	
10/1/2018	<0.001	<0.001	<0.001				
10/3/2018						<0.001	
8/21/2019	<0.001	<0.001	<0.001				
8/22/2019						<0.001	
10/23/2019							<0.001
1/3/2020							8E-05 (J)
3/4/2020							<0.001
3/24/2020							<0.001
6/18/2020							<0.001
7/21/2020							<0.001
8/25/2020	<0.001	<0.001	<0.001				
8/27/2020						<0.001	<0.001
9/18/2020				<0.001	<0.001		
9/24/2020							<0.001
11/10/2020				<0.001			
11/11/2020					<0.001		
12/15/2020				<0.001	<0.001		

Constituent: Thallium (mg/L) Analysis Run 2/17/2021 2:20 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10/20/2016					<0.001	<0.001
10/24/2016	<0.001					
10/25/2016		<0.001	<0.001	<0.001		
1/27/2017					<0.001	
1/31/2017	<0.001	<0.001	<0.001	<0.001		<0.001
5/23/2017	<0.001				<0.001	<0.001
5/24/2017		<0.001	<0.001	<0.001		
8/10/2017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
11/14/2017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6/6/2018	<0.001	<0.001	<0.001	<0.001		
6/7/2018					<0.001	<0.001
10/2/2018		<0.001	<0.001	<0.001		
10/3/2018	<0.001				<0.001	<0.001
8/22/2019	<0.001	<0.001			<0.001	<0.001
8/23/2019			<0.001	<0.001		
8/26/2020						<0.001
8/27/2020	<0.001	<0.001	<0.001	<0.001	<0.001	

Constituent: Total Dissolved Solids (mg/L) Analysis Run 2/17/2021 2:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

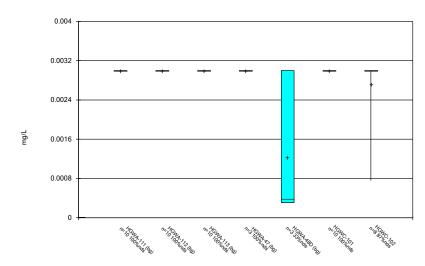
	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	172	76	77				
8/31/2016						278	
10/20/2016	108					165	
10/24/2016		65	111				
1/25/2017	345	152 (o)	155				
1/31/2017						263	
5/23/2017		52	74			190	
5/24/2017	126						
8/10/2017	174	60	94			175	
11/13/2017	158	75					
11/14/2017			89			253	
6/4/2018	131	70					
6/5/2018			92				
6/6/2018						188	
10/1/2018	101	76	91				
10/3/2018						238	
4/1/2019	213						
4/2/2019		69	94				
4/4/2019						149	
10/21/2019	187						
10/22/2019		81	95				
10/23/2019						221	736
1/3/2020							714
3/4/2020							764
3/24/2020	207	52					521
3/25/2020						187	
4/9/2020			48				
6/18/2020							652
7/21/2020							669
8/27/2020							663
9/18/2020	139	62		195	224		
9/22/2020			84				
9/24/2020						170	696
11/10/2020				229			
11/11/2020					221		
12/15/2020				233	239		

Constituent: Total Dissolved Solids (mg/L) Analysis Run 2/17/2021 2:20 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	483	389	235	182	381	373
10/20/2016					319	305
10/24/2016	517					
10/25/2016		316	223	172		
1/27/2017					407	
1/31/2017	516	437	346	252		361
5/23/2017	637				258	359
5/24/2017		352	234	184		
8/10/2017	459	356	254	208	359	325
11/14/2017	545	375	313	252	310	373
6/6/2018	559	385	278	224		
6/7/2018					223	338
10/2/2018		374	274	230		
10/3/2018	582				337	328
4/3/2019			273	210		
4/4/2019	535	340				
4/5/2019					334	308
6/17/2019	515	370	272			
6/18/2019					254	215
10/22/2019			308	212	348	354
10/23/2019	507	419				
3/24/2020					331	
3/25/2020	507	417	297	213		347
9/24/2020	517	411	253			
9/25/2020				188	340	
9/28/2020						332

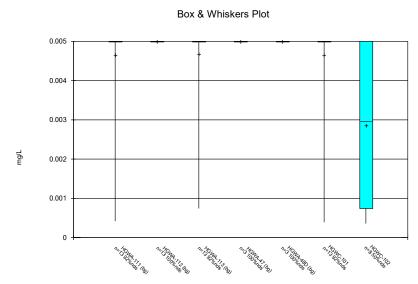
FIGURE B.



Constituent: Antimony Analysis Run 2/17/2021 1:34 PM

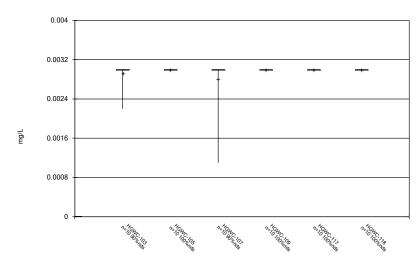
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG



Constituent: Arsenic Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot

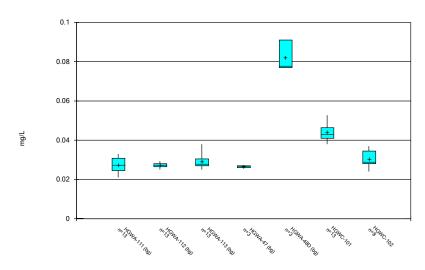


Constituent: Antimony Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

0.005 0.004 0.003 0.001

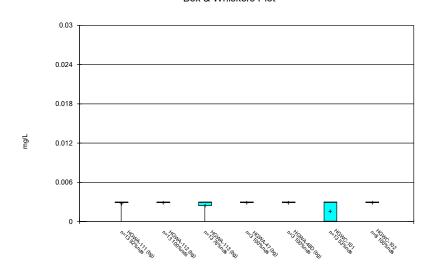
Constituent: Arsenic Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Barium Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

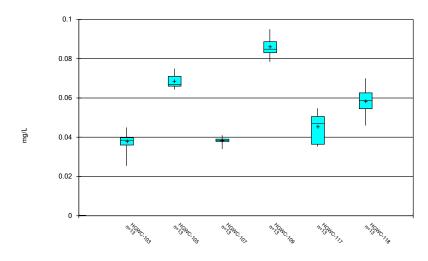
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 2/17/2021 1:34 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

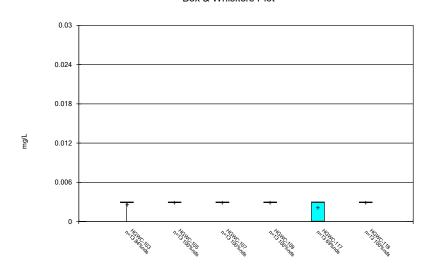
Box & Whiskers Plot



Constituent: Barium Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

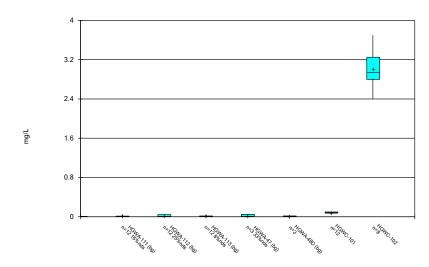
Box & Whiskers Plot



Constituent: Beryllium Analysis Run 2/17/2021 1:34 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot

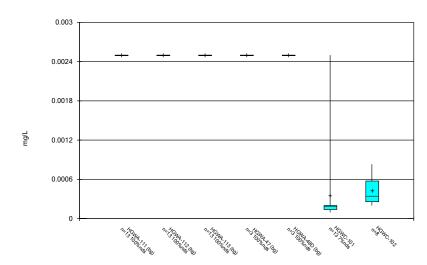


Constituent: Boron Analysis Run 2/17/2021 1:34 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas $^{\text{\tiny TM}}$ v.9.6.27b Groundwater Stats Consulting. UG

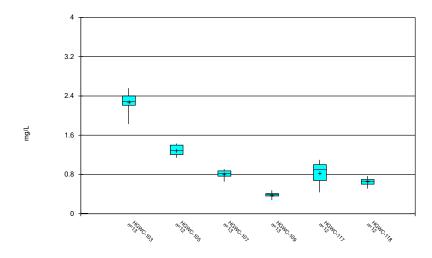
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 2/17/2021 1:34 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot

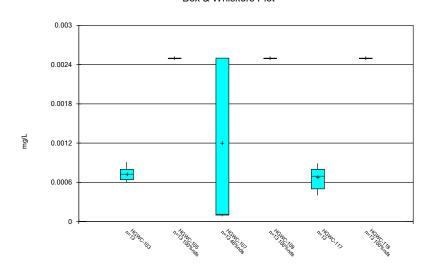


Constituent: Boron Analysis Run 2/17/2021 1:34 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

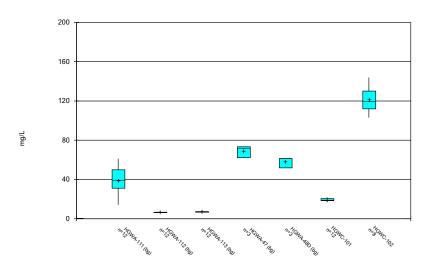
Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Cadmium Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

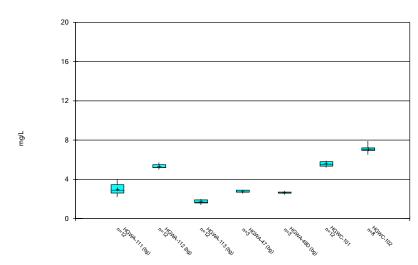
Box & Whiskers Plot



Constituent: Calcium Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

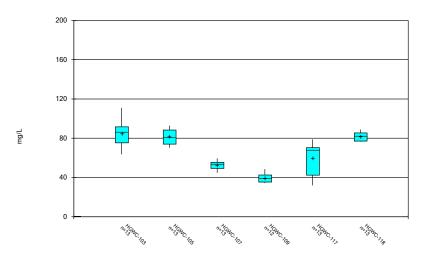
Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Chloride Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

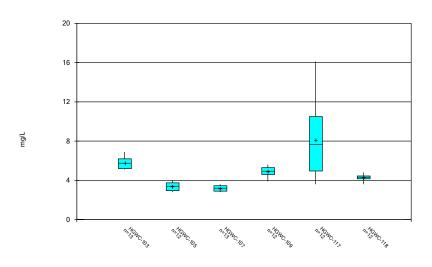
Box & Whiskers Plot



Constituent: Calcium Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

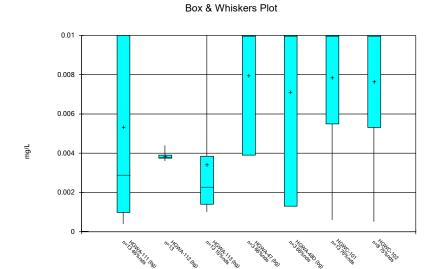
Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot



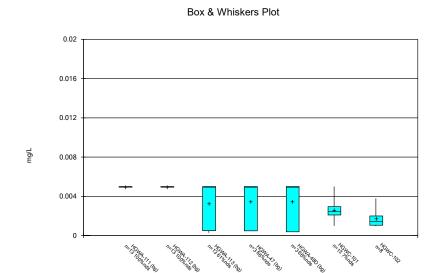
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Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG



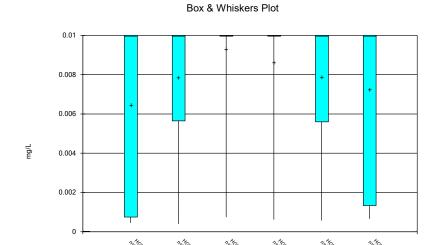
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Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Cobalt Analysis Run 2/17/2021 1:34 PM

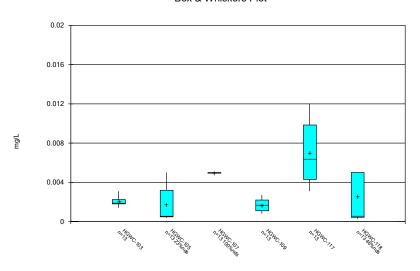
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Chromium Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

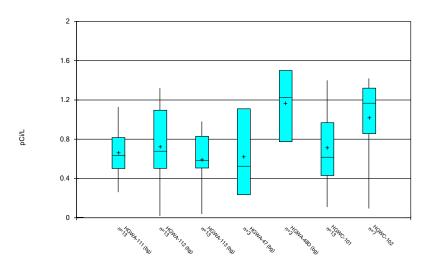
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 2/17/2021 1:34 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

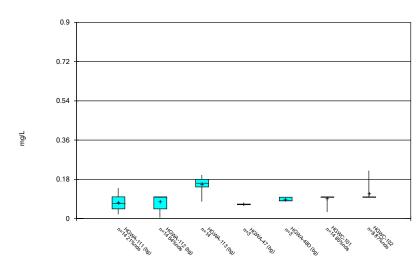
Box & Whiskers Plot



Constituent: Combined Radium 226 & 228 Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

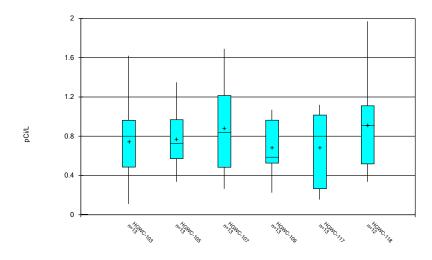
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 2/17/2021 1:34 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

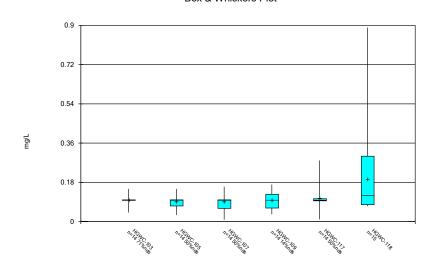
Box & Whiskers Plot



Constituent: Combined Radium 226 & 228 Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

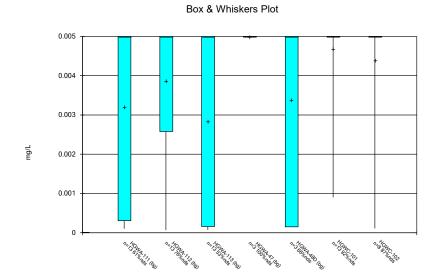
Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot

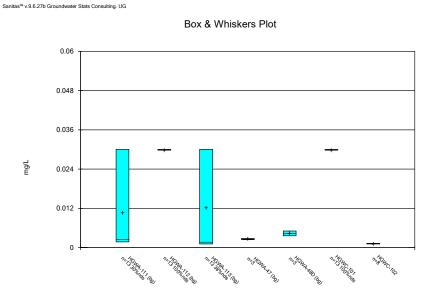


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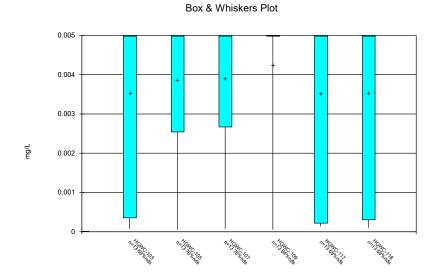
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Lead Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Lithium Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Lead Analysis Run 2/17/2021 1:34 PM

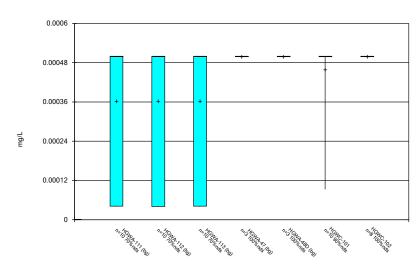
Plant Hammond Client: Southern Company Data: Hammond AP-4



0.048 0.036 0.012 0.012

Constituent: Lithium Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

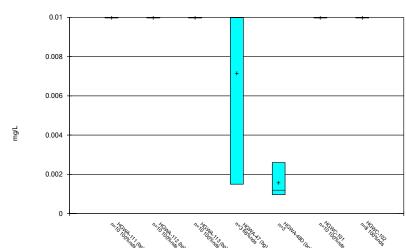
Box & Whiskers Plot



Constituent: Mercury Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

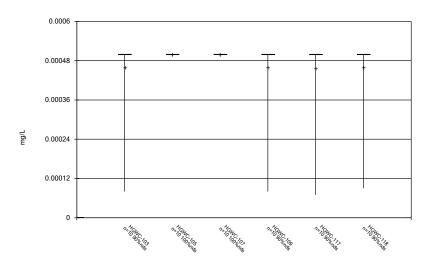
Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

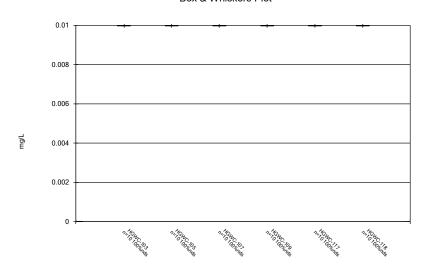
Box & Whiskers Plot



Constituent: Mercury Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

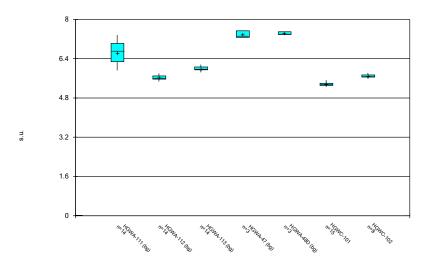
Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot



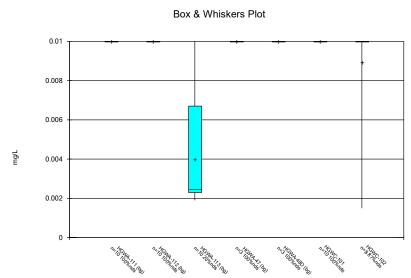
Constituent: Molybdenum Analysis Run 2/17/2021 1:34 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4



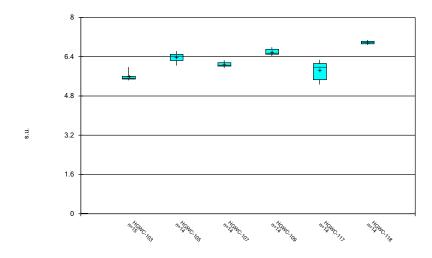
Constituent: pH Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG



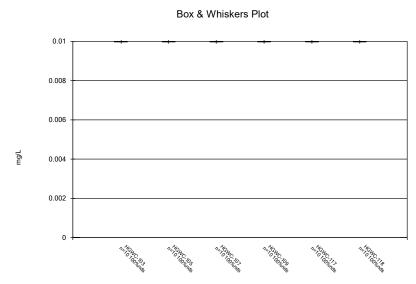
Constituent: Selenium Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Box & Whiskers Plot



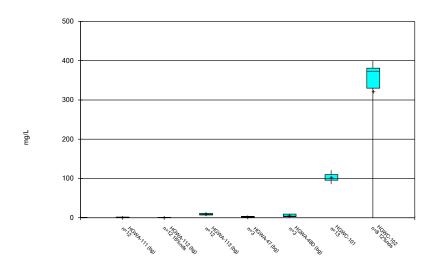
Constituent: pH Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG



Constituent: Selenium Analysis Run 2/17/2021 1:34 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

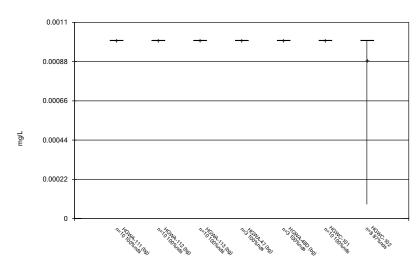


Constituent: Sulfate Analysis Run 2/17/2021 1:34 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

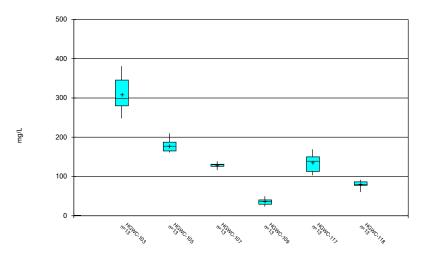
Box & Whiskers Plot



Constituent: Thallium Analysis Run 2/17/2021 1:34 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

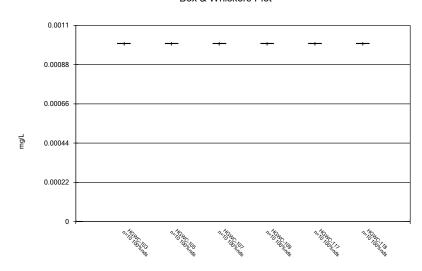
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot

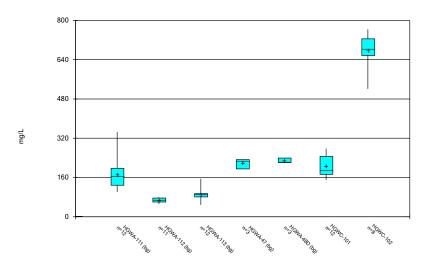


Constituent: Thallium Analysis Run 2/17/2021 1:34 PM

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

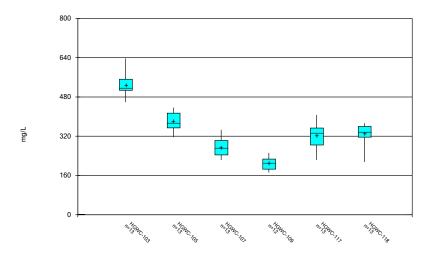
Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 2/17/2021 1:34 PM
Plant Hammond Client: Southern Company Data: Hammond AP-4

FIGURE C.

Outlier Summary										
		Plant Hammond	Client: Southern Company	Data: Hammond AP-4	Printed 12/22/2020, 5:22 AM					
	(10)									
	HGNA-112 Total Dissolved Solids (mg/L)									
	152 (o)									

FIGURE D.

Interwell Prediction Limits - Significant Results

Client: Southern Company Data: Hammond AP-4 Printed 2/17/2021, 2:50 PM Method Constituent <u>Well</u> Upper Lim. Lower Lim. <u>Date</u> Sig. Bg N Bg Mean Std. Dev. %NDs ND Adj. HGWC-101 0.05 9/24/2020 Yes 42 n/a NP Inter (normality) 1 of 2 Boron (mg/L) 0.1 n/a 16.67 n/a 0.001041 n/a n/a Yes 42 n/a Boron (mg/L) **HGWC-102** 0.05 n/a 9/24/2020 2.9 n/a 16.67 n/a n/a 0.001041 NP Inter (normality) 1 of 2 Boron (mg/L) **HGWC-103** 0.05 n/a 9/24/2020 Yes 42 n/a n/a 16.67 0.001041 NP Inter (normality) 1 of 2 Boron (mg/L) 9/24/2020 Yes 42 n/a NP Inter (normality) 1 of 2 HGWC-105 0.05 n/a 1.2 n/a 16.67 n/a n/a 0.001041 HGWC-107 9/24/2020 Yes 42 0.001041 NP Inter (normality) 1 of 2 Boron (mg/L) Boron (mg/L) HGWC-109 0.05 9/25/2020 0.28 Yes 42 n/a 16.67 0.001041 NP Inter (normality) 1 of 2 n/a n/a n/a n/a Boron (mg/L) HGWC-117 0.05 9/25/2020 Yes 42 0.001041 NP Inter (normality) 1 of 2 1.1 16.67 NP Inter (normality) 1 of 2 Boron (mg/L) **HGWC-118** 9/28/2020 Yes 42 0.001041 0.05 0.65 n/a 16.67 n/a n/a n/a n/a Calcium (mg/L) **HGWC-102** 73.3 n/a 9/24/2020 120 Yes 42 0 n/a 0.001041 NP Inter (normality) 1 of 2 Calcium (mg/L) **HGWC-103** 9/24/2020 91.3 Yes 42 0 n/a 0.001041 NP Inter (normality) 1 of 2 73.3 n/a n/a n/a Calcium (mg/L) HGWC-105 73.3 n/a 9/24/2020 92.9 Yes 42 n/a n/a 0 n/a n/a 0.001041 NP Inter (normality) 1 of 2 Calcium (mg/L) HGWC-118 73.3 9/28/2020 88.9 Yes 42 n/a 0.001041 NP Inter (normality) 1 of 2 n/a n/a n/a Chloride (mg/L) **HGWC-102** 5.7 n/a 9/24/2020 7.2 Yes 42 n/a n/a 0 n/a n/a 0.001041 NP Inter (normality) 1 of 2 Chloride (mg/L) 5.7 9/24/2020 Yes 42 NP Inter (normality) 1 of 2 n/a n/a 9/25/2020 Chloride (mg/L) **HGWC-117** 16.1 Yes 42 0.001041 NP Inter (normality) 1 of 2 5.7 n/a n/a n/a n/a n/a Sulfate (mg/L) **HGWC-101** 14 9/24/2020 97 Yes 42 4.762 n/a 0.001041 NP Inter (normality) 1 of 2 n/a n/a Sulfate (mg/L) **HGWC-102** 14 9/24/2020 370 Yes 42 n/a 4.762 n/a n/a 0.001041 NP Inter (normality) 1 of 2 n/a n/a Sulfate (mg/L) **HGWC-103** 14 9/24/2020 293 Yes 42 4.762 n/a 0.001041 NP Inter (normality) 1 of 2 9/24/2020 Yes 42 4.762 NP Inter (normality) 1 of 2 Sulfate (mg/L) **HGWC-105** 14 n/a 177 n/a 0.001041 n/a n/a Sulfate (mg/L) **HGWC-107** 14 n/a 9/24/2020 126 Yes 42 n/a n/a 4.762 n/a 0.001041 NP Inter (normality) 1 of 2 Sulfate (mg/L) HGWC-109 14 n/a 9/25/2020 24.7 Yes 42 n/a n/a 4.762 n/a n/a 0.001041 NP Inter (normality) 1 of 2 NP Inter (normality) 1 of 2 Sulfate (mg/L) **HGWC-117** 14 n/a 9/25/2020 146 Yes 42 n/a n/a 4.762 n/a n/a 0.001041 HGWC-118 14 9/28/2020 86 Yes 42 NP Inter (normality) 1 of 2 Sulfate (mg/L) Total Dissolved Solids (mg/L) **HGWC-102** 288.3 n/a 9/24/2020 696 Yes 41 4.893 0.8528 0 None x^(1/3) 0.0009403 Param Inter 1 of 2 Total Dissolved Solids (mg/L) HGWC-103 288.3 9/24/2020 517 Yes 41 4.893 0.8528 0 None x^(1/3) 0.0009403 Param Inter 1 of 2 9/24/2020 Total Dissolved Solids (mg/L) **HGWC-105** 288.3 411 Yes 41 4.893 0.8528 x^(1/3) 0.0009403 Param Inter 1 of 2 n/a 0 None Total Dissolved Solids (mg/L) **HGWC-117** 288.3 n/a 9/25/2020 340 Yes 41 4.893 0.8528 0 x^(1/3) 0.0009403 Param Inter 1 of 2 Total Dissolved Solids (mg/L) HGWC-118 9/28/2020 Yes 41 4.893 0.0009403 Param Inter 1 of 2 288.3 n/a 332 0.8528 0 $x^{(1/3)}$ None

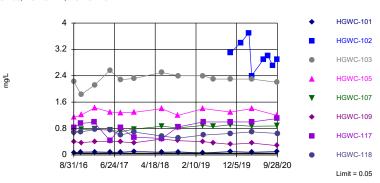
Interwell Prediction Limits - All Results

Data: Hammond AP-4 Client: Southern Company Constituent Well Sig. Bg N Bg Mean Std. Dev. %NDs ND Adj. Upper Lim. Lower Lim. Date Observ. Method NP Inter (normality) 1 of 2 Boron (mg/L) **HGWC-101** 0.05 0.1 Yes 42 n/a 16.67 0.001041 n/a n/a n/a n/a Boron (mg/L) NP Inter (normality) 1 of 2 **HGWC-102** 0.05 n/a 9/24/2020 2.9 Yes 42 n/a n/a 16.67 n/a n/a 0.001041 Boron (mg/L) **HGWC-103** 0.05 n/a 9/24/2020 2.2 Yes 42 n/a 16.67 n/a NP Inter (normality) 1 of 2 NP Inter (normality) 1 of 2 Boron (ma/L) HGWC-105 0.05 n/a 9/24/2020 1.2 Yes 42 n/a n/a 16.67 n/a n/a 0.001041 NP Inter (normality) 1 of 2 Boron (mg/L) **HGWC-107** 0.05 9/24/2020 0.88 Yes 42 **HGWC-109** 0.05 9/25/2020 0.28 Yes 42 n/a 0.001041 NP Inter (normality) 1 of 2 Boron (ma/L) n/a n/a 16.67 n/a n/a HGWC-117 9/25/2020 0.001041 NP Inter (normality) 1 of 2 Boron (mg/L) 0.05 1.1 Yes 42 16.67 n/a **HGWC-118** 9/28/2020 0.001041 NP Inter (normality) 1 of 2 Boron (mg/L) 0.05 0.65 Yes 42 n/a 16.67 n/a n/a n/a n/a Calcium (mg/L) HGWC-101 73.3 9/24/2020 20.3 No. 42 n/a n/a 0.001041 NP Inter (normality) 1 of 2 n/a n/a 0 n/a Calcium (mg/L) HGWC-102 9/24/2020 120 Yes 42 0.001041 NP Inter (normality) 1 of 2 73.3 n/a 0 n/a n/a n/a n/a Calcium (mg/L) HGWC-103 73 3 n/a 9/24/2020 91.3 Yas 42 n/a n/a n n/a n/a 0.001041 NP Inter (normality) 1 of 2 Calcium (mg/L) **HGWC-105** 73.3 9/24/2020 92.9 Yes 42 n/a 0.001041 NP Inter (normality) 1 of 2 n/a n/a n/a NP Inter (normality) 1 of 2 Calcium (mg/L) HGWC-107 73.3 n/a 9/24/2020 55.4 Nο 42 n/a n/a 0 n/a n/a 0.001041 Calcium (mg/L) HGWC-109 73.3 9/25/2020 48.5 No 42 0 n/a 0.001041 NP Inter (normality) 1 of 2 HGWC-117 72.8 42 0.001041 NP Inter (normality) 1 of 2 Calcium (mg/L) 73.3 n/a 9/25/2020 No n/a n/a 0 n/a n/a Calcium (mg/L) **HGWC-118** 9/28/2020 88.9 n/a 0.001041 NP Inter (normality) 1 of 2 73.3 n/a Yes 42 n/a 0 n/a HGWC-101 9/24/2020 42 0.001041 NP Inter (normality) 1 of 2 Chloride (mg/L) 5.7 n/a 5.5 No n/a 0 n/a n/a n/a Chloride (mg/L) HGWC-102 9/24/2020 7.2 Yes 42 n/a 0.001041 NP Inter (normality) 1 of 2 5.7 n/a O 9/24/2020 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-103 5.7 42 0 n/a 0.001041 n/a n/a n/a Chloride (mg/L) HGWC-105 5.7 n/a 9/24/2020 3.9 Nο 42 n/a n/a n n/a n/a 0.001041 NP Inter (normality) 1 of 2 Chloride (mg/L) **HGWC-107** 5.7 n/a 9/24/2020 3.5 No 42 n/a n/a 0.001041 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-109 5.7 n/a 9/25/2020 4.1 No 42 n/a n/a 0 n/a n/a 0.001041 NP Inter (normality) 1 of 2 NP Inter (normality) 1 of 2 Chloride (mg/L) **HGWC-117** 5.7 9/25/2020 16.1 42 0 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-118 5.7 n/a 9/28/2020 No 42 n/a n/a 0 n/a n/a 0.001041 Fluoride (mg/L) HGWC-101 0.181 n/a 9/24/2020 0.1ND No 48 0.0799 0.05086 25 Kaplan-Meier No 0.0009403 Param Inter 1 of 2 Fluoride (mg/L) HGWC-102 0.181 9/24/2020 0.1ND 48 0.0799 0.05086 25 0.0009403 Param Inter 1 of 2 n/a No Kaplan-Meier No 0.0009403 Param Inter 1 of 2 Fluoride (mg/L) HGWC-103 0.181 9/24/2020 0.1ND No 48 0.0799 0.05086 25 n/a Kaplan-Meier Fluoride (mg/L) HGWC-105 0.181 n/a 9/24/2020 0.1ND No 48 0.0799 0.05086 25 Kaplan-Meier No 0.0009403 Param Inter 1 of 2 Fluoride (mg/L) **HGWC-107** 0.181 n/a 9/24/2020 0.064J Nο 48 0.0799 0.05086 25 Kaplan-Meier 0.0009403 Param Inter 1 of 2 Fluoride (mg/L) HGWC-109 0.181 n/a 9/25/2020 0.091J No 0.0799 0.05086 25 Kaplan-Meier No 0.0009403 Param Inter 1 of 2 Fluoride (mg/L) HGWC-117 0.181 n/a 9/25/2020 0.1ND No 48 0.0799 0.05086 25 Kaplan-Meier No 0.0009403 Param Inter 1 of 2 Fluoride (ma/L) HGWC-118 0.181 9/28/2020 0.078J 48 0.0799 0.05086 25 Kaplan-Meier 0.0009403 Param Inter 1 of 2 HGWC-101 9/24/2020 48 0.001623 NP Inter (normality) 1 of 2 pH (s.u.) 7.54 5.47 5.48 No n/a n/a 0 n/a n/a 5.82 HGWC-102 7.54 5.47 9/24/2020 48 n/a 0.001623 NP Inter (normality) 1 of 2 pH (s.u.) No n/a n/a n n/a HGWC-103 9/24/2020 0.001623 pH (s.u.) 7.54 5.47 5.6 No 48 n/a n/a 0 n/a n/a NP Inter (normality) 1 of 2 HGWC-105 6.63 pH (s.u.) 7.54 5.47 9/24/2020 No 48 0 n/a 0.001623 NP Inter (normality) 1 of 2 HGWC-107 7.54 5.47 9/24/2020 6.11 No 48 0 n/a 0.001623 NP Inter (normality) 1 of 2 pH (s.u.) n/a n/a pH (s.u.) HGWC-109 7.54 5 47 9/25/2020 6.79 Nο 48 n/a n n/a n/a 0.001623 NP Inter (normality) 1 of 2 n/a pH (s.u.) HGWC-117 7.54 5.47 9/25/2020 6.01 No 48 n/a 0.001623 NP Inter (normality) 1 of 2 n/a n/a n/a pH (s.u.) HGWC-118 7.54 5.47 9/28/2020 7.03 No 48 n/a n/a 0 n/a n/a 0.001623 NP Inter (normality) 1 of 2 Sulfate (mg/L) 14 9/24/2020 97 Yes 42 n/a 0.001041 NP Inter (normality) 1 of 2 n/a n/a 9/24/2020 370 0.001041 NP Inter (normality) 1 of 2 Sulfate (mg/L) **HGWC-102** 14 n/a Yes 42 n/a n/a 4.762 n/a n/a Sulfate (mg/L) HGWC-103 14 9/24/2020 293 Yes 42 0.001041 NP Inter (normality) 1 of 2 n/a n/a 4.762 n/a Sulfate (mg/L) **HGWC-105** 9/24/2020 177 Yes 42 4.762 n/a 0.001041 NP Inter (normality) 1 of 2 14 n/a n/a n/a n/a 9/24/2020 126 Yes 42 0.001041 NP Inter (normality) 1 of 2 Sulfate (mg/L) **HGWC-107** 14 4.762 n/a Yes 42 NP Inter (normality) 1 of 2 Sulfate (mg/L) **HGWC-109** 14 9/25/2020 24.7 4.762 n/a 0.001041 n/a n/a n/a Sulfate (mg/L) **HGWC-117** 14 n/a 9/25/2020 146 Yes 42 n/a n/a 4.762 n/a n/a 0.001041 NP Inter (normality) 1 of 2 HGWC-118 14 9/28/2020 86 Yes 42 n/a 4.762 n/a 0.001041 NP Inter (normality) 1 of 2 Sulfate (mg/L) n/a n/a n/a Total Dissolved Solids (mg/L) HGWC-101 288.3 n/a 9/24/2020 170 No. 41 4 893 0.8528 n None x^(1/3) 0.0009403 Param Inter 1 of 2 Total Dissolved Solids (mg/L) **HGWC-102** 9/24/2020 696 0 0.0009403 Param Inter 1 of 2 n/a 0.8528 None x^(1/3) Total Dissolved Solids (mg/L) **HGWC-103** 288.3 n/a 9/24/2020 517 Yes 41 4.893 0.8528 0 None $x^{(1/3)}$ 0.0009403 Param Inter 1 of 2 Total Dissolved Solids (mg/L) HGWC-105 288.3 9/24/2020 411 Yes 41 4.893 0.8528 0 x^(1/3) 0.0009403 Param Inter 1 of 2 Total Dissolved Solids (mg/L) HGWC-107 288.3 9/24/2020 41 0.0009403 Param Inter 1 of 2 253 No 4.893 0.8528 0 $x^{(1/3)}$ n/a None No 0.0009403 Param Inter 1 of 2 Total Dissolved Solids (mg/L) **HGWC-109** 288.3 9/25/2020 188 41 4 893 0.8528 0 x^(1/3) n/a Total Dissolved Solids (mg/L) **HGWC-117** 288.3 9/25/2020 340 Yes 41 4.893 0.8528 0 x^(1/3) 0.0009403 Param Inter 1 of 2 n/a None Total Dissolved Solids (mg/L) **HGWC-118** 288 3 n/a 9/28/2020 332 Yas 41 4.893 0.8528 0 None x^(1/3) 0.0009403 Param Inter 1 of 2

Exceeds Limit: HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109. HGWC-117. HGWC-118

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 42 background values. 16.67% NDs. Annual perconstituent alpha = 0.01653. Individual comparison alpha = 0.001041 (1 of 2). Comparing 8 points to limit.

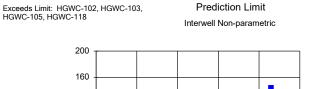
Constituent: Boron Analysis Run 2/17/2021 2:48 PM View: Interwell PLs
Plant Hammond Client: Southern Company Data: Hammond AP-4

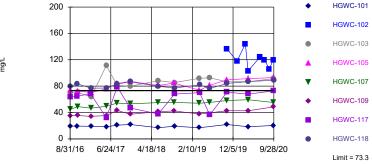
Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Prediction Limit Exceeds Limit: HGWC-102, HGWC-103, HGWC-117 Interwell Non-parametric HGWC-101 20 HGWC-102 16 HGWC-103 12 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 8/31/16 6/24/17 4/18/18 2/10/19 12/5/19 9/28/20 Limit = 5.7

Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 42 background values. Annual per-constituent alpha = 0.001653. Individual comparison alpha = 0.001041 (1 of 2). Comparing 8 points to limit.

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG



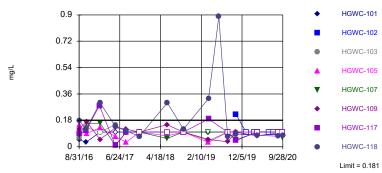


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 42 background values. Annual per-constituent alpha = 0.001643. Individual comparison alpha = 0.001041 (1 of 2). Comparing 8 points to limit.

Constituent: Calcium Analysis Run 2/17/2021 2:48 PM View: Interwell PLs
Plant Hammond Client: Southern Company Data: Hammond AP-4

 $\mbox{Sanitas}^{\mbox{\tiny TM}} \ \mbox{v.9.6.27b Groundwater Stats Consulting. UG} \\ \mbox{Hollow symbols indicate censored values}.$



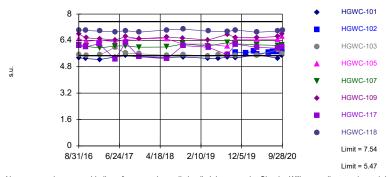


Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.0799, Std. Dev.=0.05086, n=48, 25% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9437, critical = 0.929. Kappa = 1.988 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009403. Comparing 8 points to limit

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Within Limits

Prediction Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 48 background values. Annual perconstituent alpha = 0.02581. Individual comparison alpha = 0.001623 (1 of 2). Comparing 8 points to limit.

Constituent: pH Analysis Run 2/17/2021 2:48 PM View: Interwell PLs
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG

Prediction Limit Exceeds Limit: HGWC-102, HGWC-103, HGWC-105, HGWC-117, HGWC-118 Interwell Parametric HGWC-101 800 HGWC-102 640 HGWC-103 480 HGWC-105 HGWC-107 320 HGWC-109 160 HGWC-117 HGWC-118 8/31/16 6/24/17 4/18/18 2/10/19 12/5/19 9/28/20 Limit = 288.3

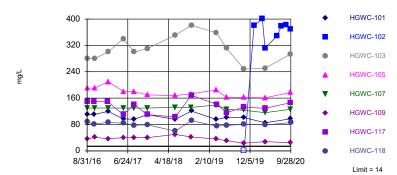
Background Data Summary (based on cube root transformation): Mean=4.893, Std. Dev.=0.8528, n=41. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9297, critical = 0.92. Kappa = 2.009 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.009403. Comparing 8 points to limit.

Constituent: Total Dissolved Solids Analysis Run 2/17/2021 2:48 PM View: Interwell PLs
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

Exceeds Limit: HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118

Prediction Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 42 background values. 4,762% NDs. Annual perconstituent alpha = 0.01653. Individual comparison alpha = 0.001041 (1 of 2). Comparing 8 points to limit.

Constituent: Sulfate Analysis Run 2/17/2021 2:48 PM View: Interwell PLs
Plant Hammond Client: Southern Company Data: Hammond AP-4

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 2/17/2021 2:50 PM View: Interwell PLs Plant Hammond Client: Southern Company Data: Hammond AP-4

8/30/2016	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-107	HGWC-101	HGWC-109	HGWC-118
8/31/2016				2.22	1.14	0.651	0.0724 (J)	0.402	0.681
10/20/2016	0.016 (J)					0.00	0.0877 (J)	0.102	0.697
10/24/2016	0.010 (0)	0.0226 (J)	0.0367 (J)	1.83			0.0077 (0)		0.007
10/25/2016		(,)	(,)		1.21	0.778		0.372	
1/25/2017	0.0095 (J)	0.009 (J)	0.0075 (J)			0.770		0.072	
1/27/2017	(-)	(-,	(1)						
1/31/2017				2.12	1.43	0.782	0.0928	0.404	0.768
5/23/2017		0.0082 (J)	0.0073 (J)	2.56			0.0795		0.754
5/24/2017	0.0094 (J)	. ,	. ,		1.3	0.753		0.415	
8/10/2017	<0.1	0.0061 (J)	<0.1	2.28	1.28	0.702	0.0814	0.397	0.608
11/13/2017	0.0103 (J)		0.0089 (J)						
11/14/2017		0.012 (J)		2.32	1.29	0.78	0.108	0.366	0.691
6/4/2018	0.0065 (J)		0.007 (J)						
6/5/2018		0.0085 (J)							
6/6/2018				2.5	1.4	0.87	0.081	0.48	
6/7/2018									0.57
10/1/2018	0.0054 (J)	0.0042 (J)	<0.1						
10/2/2018					1.2	0.82		0.43	
10/3/2018				2.4			0.092		0.51
4/1/2019	0.0076 (J)								
4/2/2019		0.0059 (J)	0.0043 (J)						
4/3/2019						0.89		0.4	
4/4/2019				2.4	1.4 (X)		0.06 (X)		
4/5/2019									0.6 (X)
6/17/2019				2.3		0.86		0.37	
10/21/2019	0.0097 (J)								
10/22/2019		0.01 (J)	0.016 (J)			0.91		0.32	0.65
10/23/2019				2.3	1.3		0.1		
1/3/2020									
3/4/2020									
3/24/2020	0.011 (J)		0.012 (J)						
3/25/2020				2.3	1.4	0.87	0.08 (J)	0.36	0.7
4/9/2020		0.012 (J)							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	0.011 (J)		0.008 (J)						
9/22/2020		0.021 (J)							
9/24/2020				2.2	1.2	0.88	0.1		
9/25/2020								0.28	
9/28/2020									0.65
11/10/2020									
11/11/2020									
12/15/2020									

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 2/17/2021 2:50 PM View: Interwell PLs Plant Hammond Client: Southern Company Data: Hammond AP-4

8/3/02016 8/3/12016 8/3/12016 10/20/2016 10/25/2016 10/25/2017 11/27/2017 10/29/2017 10/3/2017 10/3/2017 10/3/2017 10/3/2018 6/6/2018 6/6/2018 6/6/2018 6/6/2018 10/3/2018 10/3/2018 10/3/2018 10/3/2018 10/3/2019 1/3/2019 1/3/2019 1/3/2019 1/3/2019 1/3/2019 1/3/2019 1/3/2019 1/3/2019 1/3/2019 1/3/200 3/3/3/2/200 1/3/200 4/6/200 6/18/200		HGWC-117	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/31/2016 0.821 10/20/2016 0.956 10/24/2016 10/25/2016 10/25/2017 0.99 1/31/2017 0.438 5/24/2017 0.821 11/13/2017 0.536 6/4/2018 6/6/2018 6/6/2018 6/6/2018 6/6/2018 6/6/2018 0.55 10/1/2018 0.5 10/1/2018 10/2/2019 14/2/2019 14/2/2019 14/3/2019 14/3/2019 14/3/2019 11/3/2020 3.3 3/4/2020 1.3 3/24/2020 2.9 9/24/2020 2.9 9/25/2020 1.1 9/28/2020 1.1	8/30/2016			. 3,	. 0,
10/20/2016		0.821			
10/24/2016 10/25/2016 11/25/2017 11/27/2017 10/29 11/31/2017 5/23/2017 0.438 5/24/2017 8/10/2017 0.821 11/13/2017 11/14/2017 0.536 6/4/2018 6/6/2018 6/6/2018 6/6/2018 6/6/2018 0.5 10/1/2018 10/2/2018 10/2/2018 10/3/2019 4/4/2019 4/4/2019 4/4/2019 4/4/2019 4/4/2019 1/2/2020 1/2/2020 1/1/1/2020 1/2/2020					
10/25/2016 1/25/2017 1/27/2017 0.99 1/31/2017 0.438 5/24/2017 0.821 1/1/3/2017 0.536 6/4/2018 6/5/2018 6/6/2018 6/6/2018 6/6/2018 0.5 10/1/2018 10/2/2018 10/3/2018 10/3/2019 4/4/2019 4/4/2019 4/4/2019 4/4/2019 1/1/2019 1/1/2020 1 0.23/2019 1/1/3/2020 1 0.34 3/4/2020 4/9/2020 6/18/2020 1/2/2020 9/24/2020 9/24/2020 9/25/2020 1/1/10/2020 1 0.0064 (J) 1/1/10/2020 1/2/2020 1/1/1/2020 1/2/2020 1/2/2020 1/2/2020 1/2/2020 1/2/2020 1/2/2020 1/2/2020 1/2/2020 1/2/2020 1/2/2020 1/2/2020 1/2/2020 1/2/2020 1/1/1/2020 1/2/2020					
1/25/2017 1/27/2017 1/27/2017 1/27/2017 5/23/2017 5/23/2017 0.438 5/24/2017 8/10/2017 11/14/2017 11/14/2017 11/14/2017 0.536 6/4/2018 6/6/2018 6/6/2018 6/6/2018 6/6/2018 10/1/2018 10/2/2018 10/3/2018 10/3/2018 10/3/2018 10/3/2019 4/4/2019 4/4/2019 4/4/2019 4/4/2019 1/1/2019 10/21/2020 11/10/2020 10/014 (J)					
1/27/2017 0.99 1/31/2017 5/23/2017 0.438 5/24/2017 8/10/2017 0.821 11/13/2017 11/14/2017 0.536 6/4/2018 6/5/2018 6/6/2018 6/6/2018 6/6/2018 6/7/2018 0.5 10/1/2018 10/2/2018 10/3/2018 0.85 4/1/2019 4/2/2019 4/3/2019 4/4/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/23/2019 3.1 1/3/2020 3.4 3/4/2020 1 2.4 3/25/2020 4/9/2020 6/18/2020 6/18/2020 9/24/2020 9/24/2020 9/24/2020 9/24/2020 9/24/2020 9/24/2020 9/24/2020 11/10/2020 11/10/2020 11/10/2020 11/10/2020 11/10/2020 11/10/2020 11/10/2020 11/11/2020 10.0064 (J) 11/11/2020 11/11/2020 10.0064 (J) 11/11/2020 10.0064 (J)					
1/31/2017 5/23/2017 0.438 5/24/2017 8/10/2017 0.821 11/13/2017 11/14/2017 0.536 6/4/2018 6/6/2018 6/6/2018 6/6/2018 0.5 10/1/2018 10/2/2018 10/3/2018 0.85 4/1/2019 4/2/2019 4/3/2019 4/4/2019 10/22/2019 10/22/2019 10/22/2019 10/22/2019 11/3/2020 3.4 3/4/2020 3.7 3/24/2020 4/9/2020 6/18/2020 9/24/2020 9/24/2020 11/10/2020 11/11/2020 10/28/2002 11/11/2020 10/28/2002 11/11/2020 10/28/2002 11/11/2020 10/28/2002 11/11/2020 10/28/2000 11/11/2020 10/28/2000 11/11/2020 10/28/2000 11/11/2020 10/28/2000 11/11/2020 10/28/2000 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020 11/11/2020 10/28/2020		0.99			
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5/24/2017 8/10/2017 0.821 11/13/2017 11/14/2017 0.536 6/4/2018 6/5/2018 6/6/2018 6/6/2018 6/7/2018 0.5 10/1/2018 10/2/2018 10/2/2018 10/2/2018 10/2/2018 10/2/2018 10/2/2018 10/2/2019 4/4/2019 4/4/2019 4/4/2019 4/4/2019 1/1/2019 10/21/2019 10/21/2019 10/22/2019 1 (X) 6/17/2019 10/22/2019 1 (X) 6/17/2019 10/22/2019 1 (X) 6/17/2019 10/22/2019 1 (X) 6/17/2019 10/22/2019 1 (X) 6/17/2019 10/22/2019 1 (X) 6/17/2019 10/22/2019 1 (X) 6/17/2019 10/22/2019 1 (X) 6/17/2019 10/22/2019 1 (X) 6/17/2019 1 (X)		0.438			
8/10/2017 0.821 11/13/2017 11/14/2017 0.536 6/4/2018 6/5/2018 6/6/2018 6/6/2018 6/7/2018 0.5 10/1/2018 10/2/2018 10/3/2018 0.85 4/1/2019 4/2/2019 4/2/2019 4/2/2019 1/3/2019 10/21/2019 10/21/2019 10/21/2019 10/22/2019 11 10/23/2019 11 10/23/2019 13.1 1/3/2020 3.4 3/4/2020 3.7 3/24/2020 11 2.9 9/25/2020 9/24/2020 9/24/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.0 0.0064 (J)					
11/13/2017 11/14/2017		0.821			
11/14/2017 0.536 6/4/2018 6/5/2018 6/6/2018 6/6/2018 0.5 10/1/2018 10/2/2018 10/2/2018 10/3/2018 0.85 4/1/2019 4/2/2019 4/3/2019 4/4/2019 4/4/2019 1 (X) 6/17/2019 10/21/2019 10/22/2019 11 10/23/2019 11 10/23/2019 13.1 1/3/2020 3.7 3/24/2020 6/18/2020 6/18/2020 9/24/2020 9/24/2020 9/25/2020 11.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.0 0.0064 (J) 1.1 1/1/2020 1.0 0.0014 (J)					
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6/6/2018 6/7/2018					
6/7/2018					
10/1/2018 10/2/2018 10/3/2018 0.85 4/1/2019 4/2/2019 4/3/2019 4/4/2019 4/5/2019 1 (X) 6/17/2019 10/21/2019 10/22/2019 1 1 10/23/2019 1 3.1 1/3/2020 3.4 3/4/2020 3.7 3/24/2020 1 2.4 3/25/2020 4/9/2020 6/18/2020 6/18/2020 9/24/2020 9/24/2020 9/24/2020 9/24/2020 9/24/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/10/2020 10.0064 (J) 11/11/2020		0.5			
10/2/2018 10/3/2018					
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4/1/2019 4/2/2019 4/3/2019 4/4/2019 4/5/2019 1 (X) 6/17/2019 10/21/2019 10/22/2019 1 1 10/23/2019 1 3.1 1/3/2020 3.4 3/4/2020 3.7 3/24/2020 1 2.4 3/25/2020 4/9/2020 6/18/2020 6/18/2020 7/21/2020 9/24/2020 9/24/2020 9/25/2020 1.1 9/28/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/11/2020 0.0064 (J) 11/11/2020		0.85			
4/3/2019 4/4/2019 4/5/2019 1 (X) 6/17/2019 10/21/2019 10/22/2019 1 3.1 10/23/2019 3.4 3/4/2020 3.7 3/24/2020 4/9/2020 6/18/2020 4/9/2020 6/18/2020 9/24/2020 9/25/2020 1.1 9/28/2020 1.1 9/28/2020 1.1 1/11/2020 0.0064 (J) 11/11/2020					
4/3/2019 4/4/2019 4/5/2019 1 (X) 6/17/2019 10/21/2019 10/22/2019 1 3.1 10/23/2019 3.4 3/4/2020 3.7 3/24/2020 1 2.4 3/25/2020 4/9/2020 6/18/2020 6/18/2020 9/24/2020 9/24/2020 9/25/2020 1.1 9/28/2020 1.1 9/28/2020 1.1 1/11/2020 0.0064 (J) 11/11/2020					
4/5/2019 1 (X) 6/17/2019 10/21/2019 1 10/23/2019 1 11/3/2020 3.4 3/4/2020 3.7 3/24/2020 1 2.4 3/25/2020 4/9/2020 6/18/2020 2.9 7/21/2020 3 8/27/2020 3.8 8/27/2020 2.7 9/18/2020 0.0082 (J) 0.015 (J) 9/22/2020 9/24/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/11/2020 0.0064 (J)	4/3/2019				
4/5/2019 1 (X) 6/17/2019 10/21/2019 1 10/23/2019 1 11/3/2020 3.4 3/4/2020 3.7 3/24/2020 1 2.4 3/25/2020 4/9/2020 6/18/2020 2.9 7/21/2020 3 8/27/2020 3.8 8/27/2020 2.7 9/18/2020 0.0082 (J) 0.015 (J) 9/22/2020 9/24/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/11/2020 0.0064 (J)					
6/17/2019 10/21/2019 10/22/2019 1 10/23/2019 3.1 11/3/2020 3.4 3/4/2020 3.7 3/24/2020 1 2.4 3/25/2020 4/9/2020 6/18/2020 6/18/2020 7/21/2020 3 8/27/2020 9/18/2020 9/24/2020 9/24/2020 1.1 9/28/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/11/2020 0.0064 (J) 11/11/2020		1 (X)			
10/21/2019 10/22/2019 10/23/2019 3.1 11/3/2020 3.4 3/4/2020 3.7 3/24/2020 1 2.4 3/25/2020 4/9/2020 6/18/2020 7/21/2020 3 8/27/2020 9/18/2020 9/24/2020 9/24/2020 1.1 9/28/2020 1.1 9/28/2020 11/10/2020 1.1 9/28/2020 11/11/2020 0.0064 (J) 11/11/2020					
10/22/2019 1 10/23/2019 3.1 11/3/2020 3.4 3/4/2020 3.7 3/24/2020 1 2.4 3/25/2020 4/9/2020 6/18/2020 2.9 7/21/2020 3 8/27/2020 2.7 9/18/2020 2.7 9/18/2020 2.9 9/22/2020 9/24/2020 2.9 9/25/2020 1.1 9/28/2020 1.1 9/28/2020 1.1 1/11/2020 0.0064 (J) 11/11/2020 0.0014 (J)					
10/23/2019 3.1 1/3/2020 3.4 3/4/2020 1 3/24/2020 1 3/25/2020 4/9/2020 6/18/2020 2.9 7/21/2020 3 8/27/2020 2.7 9/18/2020 0.0082 (J) 0.015 (J) 9/22/2020 9/24/2020 2.9 9/25/2020 1.1 9/28/2020 1.1/10/2020 0.0064 (J) 11/11/2020 0.014 (J)		1			
1/3/2020 3.4 3/4/2020 1 2.4 3/25/2020 4/9/2020 6/18/2020 2.9 7/21/2020 3 8/27/2020 2.7 9/18/2020 0.0082 (J) 0.015 (J) 9/22/2020 9/24/2020 2.9 9/25/2020 1.1 9/28/2020 11/10/2020 0.0064 (J) 11/11/2020 0.0014 (J)			3.1		
3/4/2020 3.7 3/24/2020 1 2.4 3/25/2020 4/9/2020 6/18/2020 2.9 7/21/2020 3 8/27/2020 2.7 9/18/2020 0.0082 (J) 0.015 (J) 9/22/2020 9/24/2020 2.9 9/25/2020 1.1 9/28/2020 11/10/2020 0.0064 (J) 11/11/2020 0.0014 (J)					
3/24/2020 1 2.4 3/25/2020 4/9/2020 6/18/2020 2.9 7/21/2020 3 8/27/2020 2.7 9/18/2020 0.0082 (J) 0.015 (J) 9/22/2020 9/24/2020 2.9 9/25/2020 1.1 9/28/2020 11/10/2020 0.0064 (J) 11/11/2020 0.0014 (J)					
3/25/2020 4/9/2020 6/18/2020 2.9 7/21/2020 3 8/27/2020 2.7 9/18/2020 0.0082 (J) 0.015 (J) 9/22/2020 9/24/2020 2.9 9/25/2020 1.1 9/28/2020 11/10/2020 0.0064 (J) 11/11/2020 0.0014 (J)		1			
4/9/2020 6/18/2020 2.9 7/21/2020 3 8/27/2020 9/18/2020 9/22/2020 9/24/2020 9/25/2020 1.1 9/28/2020 11/10/2020 0.0064 (J) 11/11/2020 0.014 (J)					
6/18/2020 2.9 7/21/2020 3 8/27/2020 2.7 9/18/2020 0.0082 (J) 0.015 (J) 9/22/2020 9/24/2020 2.9 9/25/2020 1.1 9/28/2020 11/10/2020 0.0064 (J) 11/11/2020 0.0014 (J)					
7/21/2020 3 8/27/2020 2.7 9/18/2020 0.0082 (J) 0.015 (J) 9/22/2020 9/24/2020 2.9 9/25/2020 1.1 9/28/2020 11/10/2020 0.0064 (J) 11/11/2020 0.014 (J)			2.9		
8/27/2020 2.7 9/18/2020 0.0082 (J) 0.015 (J) 9/22/2020 9/24/2020 2.9 9/25/2020 1.1 9/28/2020 11/10/2020 0.0064 (J) 11/11/2020 0.0014 (J)	7/21/2020				
9/18/2020 0.0082 (J) 0.015 (J) 9/22/2020 9/24/2020 2.9 9/25/2020 1.1 9/28/2020 11/10/2020 0.0064 (J) 11/11/2020 0.014 (J)					
9/22/2020 9/24/2020 2.9 9/25/2020 1.1 9/28/2020 11/10/2020 0.0064 (J) 11/11/2020 0.014 (J)				0.0082 (J)	0.015 (J)
9/24/2020 2.9 9/25/2020 1.1 9/28/2020 11/10/2020 0.0064 (J) 11/11/2020 0.014 (J)					
9/25/2020 1.1 9/28/2020 11/10/2020 0.0064 (J) 11/11/2020 0.014 (J)			2.9		
9/28/2020 11/10/2020 0.0064 (J) 11/11/2020 0.014 (J)		1.1			
11/10/2020 0.0064 (J) 11/11/2020 0.014 (J)					
11/11/2020 0.014 (J)				0.0064 (J)	
	11/11/2020				0.014 (J)
	12/15/2020			<0.1	0.0083 (J)

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 2/17/2021 2:50 PM View: Interwell PLs Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-105	HGWC-107	HGWC-103	HGWC-109	HGWC-101	HGWC-117
8/30/2016	40.3	6.72	6.69						
8/31/2016				74.2	44.7	70.4	35.1	19.4	63.4
10/20/2016	38.7							19.3	64.4
10/24/2016		6.4	6.25			70.9			
10/25/2016		0	0.20	72.5	49	70.0	35.4		
	44.6	6.07	6.59	72.5	49		33.4		
1/25/2017	44.6	6.87	6.58						
1/27/2017									68.6
1/31/2017				70.3	46.6	63.6	34.2	19.1	
5/23/2017		7.13	6.4			111		18.3	32
5/24/2017	34.8			75.9	49.5		35.3		
8/10/2017	48.6	6.71	6.54	84	54.2	81.2	43.1	20.9	78.9
11/13/2017	17.1		6.26						
11/14/2017		7.4		87.2	53.2	79.7	37.4	21.7	46.9
6/4/2018	30.1		7.4						
6/5/2018		7.4							
6/6/2018				81	55	88.3	41.1	17	
6/7/2018				01	00	00.0	71.1	.,	37.7
	140(1)	6.0	F 0						57.7
10/1/2018	14.2 (J)	6.2	5.8	0.4.7	55.4		10.5		
10/2/2018				84.7	55.4		42.5		
10/3/2018						85.3		19.1 (J)	68
4/1/2019	58.4								
4/2/2019		7.4	6.7						
4/3/2019					54		37.5		
4/4/2019				73.8		91.9		16.9	
4/5/2019									70
6/17/2019				81.2	55.3	92.6			
6/18/2019									36.3
10/21/2019	51								
10/22/2019		7.2	6.3		58.1		42.6		70.9
10/23/2019		7.2	0.0	89.4	33.1	86.5	.2.0	21.9	70.0
1/3/2020				03.4		00.0		21.5	
3/4/2020			_						
3/24/2020	61.2		7						68
3/25/2020				91.4	59.5	86.8	42.6	18.4	
4/9/2020		8.3							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	32.2		6.5						
9/22/2020		7.9							
9/24/2020				92.9	55.4	91.3		20.3	
9/25/2020							48.5		72.8
9/28/2020									-
11/10/2020									
11/11/2020									
12/15/2020									

Constituent: Calcium (mg/L) Analysis Run 2/17/2021 2:50 PM View: Interwell PLs Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-118	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/30/2016				
8/31/2016	79.3			
10/20/2016	83.7			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	76.8			
5/23/2017	77.2			
5/24/2017	77.2			
	00.1			
8/10/2017	83.1			
11/13/2017				
11/14/2017	86.7			
6/4/2018				
6/5/2018				
6/6/2018				
6/7/2018	79.7			
10/1/2018				
10/2/2018				
10/3/2018	77.1			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019				
4/5/2019	82			
6/17/2019				
6/18/2019	76.5			
10/21/2019				
10/22/2019	84.2			
10/23/2019		136		
1/3/2020		118		
3/4/2020		144		
3/24/2020		103		
3/25/2020	86.8			
4/9/2020				
6/18/2020		124		
7/21/2020		120		
8/27/2020		106		
9/18/2020			51.8	62.2
9/22/2020			31.0	Vis. 12
9/24/2020		120		
		120		
9/25/2020	00.0			
9/28/2020	88.9			
11/10/2020				73.3
11/11/2020			61.3	
12/15/2020			61.3	72.5

Constituent: Chloride (mg/L) Analysis Run 2/17/2021 2:50 PM View: Interwell PLs Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-105	HGWC-101	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/30/2016	3.3	2	5.4						
8/31/2016				3	5.7	3.2	5	7.1	4.5
10/20/2016	3.2				5.7			7.7	4.4
10/24/2016		1.9	5.2						
10/25/2016				2.8		3.2	4.8		
1/25/2017	2.7	1.9	5						
1/27/2017								7.8	
1/31/2017				3.3	5.8	3.1	5.5		4.8
5/23/2017		1.6	5.1		5.3			3.6	4.3
5/24/2017	3			3.5		2.9	5.3		
8/10/2017	2.8	1.7	5.2	2.9	5.4	2.8	4.6	5.9	4.2
11/13/2017	2.5		5.5						
11/14/2017		2		4	5.8	3.4	5.6	4	4.4
6/4/2018	2.6		5.3						
6/5/2018		1.7							
6/6/2018				2.9	5.3	2.8	5.3		
6/7/2018								3.6	4.1
10/1/2018	2.2	1.6	5.6						
10/2/2018				3.5		3.2	5.3		
10/3/2018					5.8			7.6	4.4
4/1/2019	4								
4/2/2019		1.8	5.7						
4/3/2019						3.6	5		
4/4/2019				3.9	5.9				
4/5/2019								8.9	4.3
6/17/2019						2.9			
10/21/2019	3.9								
10/22/2019		1.9	5.5			3.6	4.6	12.1	4.5
10/23/2019				3.6	5.5				
1/3/2020									
3/4/2020 3/24/2020	3.6		5.2					12.5	
3/25/2020	3.0		5.2	3.2	5.2	3	3.9	12.5	3.6
4/9/2020		1.4		5.2	5.2	3	5.5		3.0
6/18/2020		1.4							
7/21/2020									
8/27/2020									
9/18/2020	2.6		5.2						
9/22/2020		1.5							
9/24/2020				3.9	5.5	3.5			
9/25/2020				-	-	-	4.1	16.1	
9/28/2020									4
11/10/2020									
11/11/2020									
12/15/2020									

Constituent: Chloride (mg/L) Analysis Run 2/17/2021 2:50 PM View: Interwell PLs Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)		
8/30/2016						
8/31/2016	5.2					
10/20/2016						
10/24/2016	5.2					
10/25/2016						
1/25/2017						
1/27/2017						
1/31/2017	5.6					
5/23/2017	5.7					
5/24/2017	5.7					
	F 0					
8/10/2017	5.8					
11/13/2017	6					
11/14/2017	6					
6/4/2018						
6/5/2018						
6/6/2018	6.4					
6/7/2018						
10/1/2018						
10/2/2018						
10/3/2018	6.3					
4/1/2019						
4/2/2019						
4/3/2019						
4/4/2019	6.9					
4/5/2019						
6/17/2019	5.2					
10/21/2019						
10/22/2019						
10/23/2019	6.1	7.9				
1/3/2020		7				
3/4/2020		7.1				
3/24/2020		6.5				
3/25/2020	5.1					
4/9/2020						
6/18/2020		6.9				
7/21/2020		7.2				
8/27/2020		7.1				
9/18/2020			2.7	2.6		
9/22/2020						
9/24/2020	6	7.2				
9/25/2020	v	1.4				
9/28/2020						
			2.7			
11/10/2020			2.7	2.6		
11/11/2020			2.0	2.6		
12/15/2020			2.9	2.7		

Constituent: Fluoride (mg/L) Analysis Run 2/17/2021 2:50 PM View: Interwell PLs Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-107	HGWC-101	HGWC-109	HGWC-117	HGWC-118
8/30/2016	0.07 (J)	0.2 (J)	0.04 (J)						
8/31/2016				0.06 (J)	0.08 (J)	0.05 (J)	0.12 (J)	0.09 (J)	0.18 (J)
10/20/2016	0.07 (J)					0.03 (J)		0.11 (J)	0.12 (J)
10/24/2016		0.16 (J)	0.05 (J)	0.13 (J)					
10/25/2016					0.16 (J)		0.17 (J)		
1/25/2017	0.14 (J)	0.15 (J)	<0.1						
1/27/2017								0.28 (J)	
1/31/2017				<0.1	0.16 (J)	<0.1	0.05 (J)		0.3
5/23/2017		0.18 (J)	0.004 (J)	0.15 (J)	, ,	<0.1		0.01 (J)	0.14 (J)
5/24/2017	0.02 (J)	. ,	. ,	()	0.009 (J)		0.13 (J)	.,	.,
8/10/2017	0.06 (J)	0.19 (J)	0.03 (J)	<0.1	<0.1	<0.1	0.12 (J)	0.1 (J)	0.11 (J)
11/13/2017	<0.1	. ,	<0.1				` '	,	.,
11/14/2017		0.16 (J)		<0.1	<0.1	<0.1	<0.1	<0.1	0.07 (J)
6/4/2018	0.032 (J)		<0.1						
6/5/2018	. ,	0.18 (J)							
6/6/2018		. ,		<0.1	0.057 (J)	<0.1	0.15 (J)		
6/7/2018					.,		()	<0.1	0.3
10/1/2018	<0.1	0.078 (J)	<0.1						
10/2/2018		()			<0.1		<0.1		
10/3/2018				<0.1		<0.1		<0.1	0.12 (J)
4/1/2019	0.042 (J)								
4/2/2019	. ,	0.18 (J)	<0.1						
4/3/2019		. ,			<0.1		0.05 (J)		
4/4/2019				0.042 (J)		<0.1	()		
4/5/2019				. ,				0.19 (J)	0.33
6/18/2019								.,	0.89
8/21/2019	0.048 (J)	0.11 (J)	<0.1						
8/22/2019				<0.1		<0.1		<0.1	0.07 (J)
8/23/2019					<0.1		0.034 (J)		
10/21/2019	0.12 (J)								
10/22/2019		0.18 (J)	0.05 (J)		0.047 (J)		0.099 (J)	0.042 (J)	0.087 (J)
10/23/2019				<0.1		<0.1			
1/3/2020									
3/4/2020									
3/24/2020	0.076 (J)		<0.1					<0.1	
3/25/2020				<0.1	<0.1	<0.1	0.075 (J)		0.078 (J)
4/9/2020		0.14 (J)							
6/18/2020									
7/21/2020									
8/25/2020	0.052 (J)	0.17	<0.1						
8/26/2020									0.072 (J)
8/27/2020				<0.1	<0.1	<0.1	0.094 (J)	<0.1	
9/18/2020	<0.1		<0.1						
9/22/2020		0.16							
9/24/2020				<0.1	0.064 (J)	<0.1			
9/25/2020							0.091 (J)	<0.1	
9/28/2020									0.078 (J)
11/10/2020									
11/11/2020									
12/15/2020									

Constituent: Fluoride (mg/L) Analysis Run 2/17/2021 2:50 PM View: Interwell PLs Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-105	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/30/2016				
8/31/2016	0.15 (J)			
10/20/2016				
10/24/2016				
10/25/2016	0.09 (J)			
1/25/2017				
1/27/2017				
1/31/2017	0.13 (J)			
5/23/2017				
5/24/2017	0.07 (J)			
8/10/2017	0.03 (J)			
11/13/2017				
11/14/2017	<0.1			
6/4/2018				
6/5/2018				
6/6/2018	0.074 (J)			
6/7/2018	ν-/			
10/1/2018				
10/2/2018	<0.1			
10/3/2018				
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	0.03 (J)			
4/5/2019	· · · · \ - /			
6/18/2019				
8/21/2019				
8/22/2019	<0.1			
8/23/2019	-0.1			
10/21/2019				
10/22/2019				
10/22/2019	<0.1	0.22 (J)		
1/3/2020	~U. I	<0.1		
3/4/2020		<0.1		
3/24/2020		<0.1		
3/25/2020	<0.1	50.1		
	~ 0.1			
4/9/2020		<0.1		
6/18/2020		<0.1		
7/21/2020		<0.1		
8/25/2020				
8/26/2020	-0.1	-0.1		
8/27/2020	<0.1	<0.1	0.009 / 15	0.06771)
9/18/2020			0.098 (J)	0.067 (J)
9/22/2020	-0.1	-0.4		
9/24/2020	<0.1	<0.1		
9/25/2020				
9/28/2020				
				0.065 (J)
11/10/2020				• •
11/10/2020 11/11/2020 12/15/2020			0.083 (J) 0.081 (J)	0.064 (J)

Constituent: pH (s.u.) Analysis Run 2/17/2021 2:50 PM View: Interwell PLs
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-105	HGWC-101	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/30/2016	6.89	5.99	5.77						
8/31/2016				6.5	5.35	6.11	6.78	6.07	7.03
10/20/2016	6.73				5.3			6	7.01
10/24/2016		5.84	5.61						
10/25/2016				6.34		6.04	6.55		
1/25/2017	7.02	6.04	5.68						
1/27/2017								6.2	
1/31/2017				6.43	5.24	5.94	6.5		6.96
5/23/2017		6.01	5.7		5.39			5.27	6.92
5/24/2017	6.44			6.31		6.06	6.42		
8/10/2017	6.79	5.98	5.59	6.45	5.47	6.06	6.63	6.27	6.99
11/13/2017	5.94		5.56						
11/14/2017		6.16		6.53	5.4	5.99	6.5	5.4	6.9
6/4/2018	6.12		5.62						
6/5/2018		5.86							
6/6/2018				6.49	5.37	6	6.59		
6/7/2018								5.29	7.03
10/1/2018	5.92	5.94	5.62						
10/2/2018				6.18		6.18	6.54		
10/3/2018					5.39			6.08	7.08
4/1/2019	7.09								
4/2/2019		6	5.47						
4/3/2019						6.06	6.42		
4/4/2019				6.17	5.31				
4/5/2019								5.99	6.96
6/17/2019									
6/18/2019	0.0	0.05	5.0		5.3				
8/21/2019	6.6	6.05	5.8	0.04	5.00			5.50	0.00
8/22/2019				6.04	5.39	0.00	0.70	5.53	6.93
8/23/2019	7.00					6.26	6.76		
10/21/2019	7.02	F 09	F 7			6.10	6.50	6 17	7.02
10/22/2019		5.98	5.7	6.46	F 33	6.19	6.58	6.17	7.03
10/23/2019				6.46	5.33				
1/3/2020 3/4/2020									
3/24/2020	7.37		5.64					5.99	
3/25/2020	7.57		3.04	6.47	5.53	6.13	6.56	3.99	6.89
4/9/2020		6.08		0.47	3.33	0.13	0.00		0.03
6/18/2020		0.00							
7/21/2020									
8/25/2020	6.7	5.95	5.53						
8/26/2020									6.97
8/27/2020				6.45	5.32	6.09	6.64	5.92	
9/18/2020	6.46		5.58						
9/22/2020		6.1							
9/24/2020				6.63	5.48	6.11			
9/25/2020							6.79	6.01	
9/28/2020									7.03
11/10/2020									
11/11/2020									
12/15/2020									

Constituent: pH (s.u.) Analysis Run 2/17/2021 2:50 PM View: Interwell PLs
Plant Hammond Client: Southern Company Data: Hammond AP-4

Mayor Mayo					
8-00/2015 S-54 100/2016 S-58 S-68 S-75 S-754 S-7		HGWC-103	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
Marchand S.54	8/30/2016				
1004-0016		5.54			
1005/2018	10/20/2016				
16272017		5.48			
16272017	10/25/2016				
1717 17					
S222017 S31					
S240017 S38		5.51			
SAPACOT S. S. S. S. S. S. S. S	5/23/2017				
11/14/2017					
1142017	8/10/2017	5.63			
1142017	11/13/2017				
642018		5.59			
600/2018	6/4/2018				
692018					
677/2018 101/2018 101/2018 5.53 4.71/2019 4.71/2019 5.44 4.75/2019 4.75/2019 5.53 6.75/2019 5.55 6.75/2019 5.55 6.75/2019 6.71/201		5.49			
101/12018 101/22018 101/22019 41/12019 41/12019 41/12019 41/12019 5.44 41/2019 5.54 61/12019 82712019 82712019 82712019 82712019 101/120					
10/2/2018					
10/3/2018 5.53 4/1/2019 4/3/2019 4/4/2019 5.44 4/5/2019 6/17/2019 5.53 6/18/2019 8/21/2019 5.55 8/23/2019 10/21/2019 10/21/2019 5.56 8/23/2019 5.57 10/21/2019 5.58 8/33/2019 5.59 8/33/2019 5.59 8/33/2019 5.59 8/33/2019 5.59 8/33/2019 5.59 8/33/2019 5.59 10/21/2019 5.59 8/33/2019 5.59 8/33/2019 5.59 8/33/2019 5.59 8/33/2019 5.59 8/33/2019 5.59 8/33/2019 5.59 8/33/2019 5.59 8/33/2019 5.59 8/33/2010 5.59 8/33/2					
4/1/2019		5.53			
4/3/2019 4/3/2019 4/3/2019 6/17/2019 5.53 6/18/2019 8/21/2019 8/21/2019 8/21/2019 10/21/2019 5.68 1/3/2020 5.575 3/24/2020 5.49 4/9/2020 6/18/2020 8/25/2020 8/25/2020 8/25/2020 8/25/2020 9/22/2020					
4//3/2019 4//3/2019 6/17/2019 5.53 6/18/2019 8/21/2019 8/21/2019 8/21/2019 8/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 5.49 3/21/2020 5.55 3/21/2020 5.55 8/21/2020 8/21/2020 8/21/2020 8/21/2020 8/21/2020 8/21/2020 8/21/2020 8/21/2020 9/21/2020					
44/4/2019 5.44 44/5/2019 6/17/2019 5.53 6/18/2019 8/21/2019 5.55 8/21/2019 5.55 8/21/2019 5.55 8/21/2019 5.55 8/21/2019 5.68 110/21/2019 5.49 5.68 11/3/2020 5.58 3/25/2020 5.59 4/4/2020 5.59 4/4/2020 5.59 8/25/2020 5.49 4/4/2020 5.52 8/25/2020 5.22 8/25/2020 5.					
4/5/2019 6/17/2019 5.53 6/18/2019 8/21/2019 5.55 8/23/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 5.49 5.68 13/3020 5.75 3/34/2020 5.75 3/34/2020 5.89 3/25/2020 8/27/2020 5.89 8/27/2020 9/28/2020 9/28/		5.44			
6/17/2019 5.53 6/18/2019 8/21/2019 5.55 8/23/2019 5.55 8/23/2019 5.59 10/21/2019 5.49 5.68 1/3/2020 5.64 3/4/2020 5.55 3/24/2020 5.49 4/9/2020 5.67 7/21/2020 5.67 7/21/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.63 5.82 9/24/2020 5.66 5.82 9/24/2020 5.66 5.82 9/24/2020 5.66 5.82 9/24/2020 5.67 7.54 9/24/2020 5.68 5.82 9/24/2020 5.68 5.82 9/24/2020 5.69 5.82 9/24/2020 5.69 5.82 9/24/2020 5.60 5.82 9/24/2020 5.60 5.82 9/24/2020 5.60 5.82 9/24/2020 5.60 5.82 9/24/2020 5.60 5.82 9/24/2020 5.60 5.82 9/24/2020 5.60 5.82 9/24/2020 5.60 5.82 9/24/2020 5.60 5.82 9/24/2020 5.60 5.82 9/24/2020 5.60 5.82 9/24/2020 5.60 5.82 9/24/2020 5.60 5.82					
6/18/2019 8/21/2019 8/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 10/21/2019 5.64 3/4/2020 5.58 3/5/5020 8/5/5020 8/5/5020 8/7/21/2020 5.82 8/5/2020 8/7/21/2020 5.82 8/5/2020 8/7/21/2020 5.82 8/5/2020 8/7/21/2020 5.82 8/5/2020 8/21/2020 5.82 8/5/2020 9/28/2020 9/28/2020 9/28/2020 9/28/2020 11/11/2020 1.34 4.4		5.53			
8/21/2019 5.55 8/23/2019 5.55 8/23/2019 5.55 8/23/2019 5.49 10/21/2019 5.49 5.68 1/3/2020 5.55 3/24/2020 5.49 4/9/2020 5.67 7/21/2020 5.72 8/25/2020 8.27 8/25/2020 5.82 5.72 8/25/2020 5.82 5.72 8/25/2020 5.82 5.72 8/25/2020 5.82 5.72 8/25/2020 5.82 5.72 8/25/2020 5.82 5.72 8/25/2020 5.82 5.72 8/25/2020 5.82 5.73 9/24/2020 5.6 5.82 5.7 9/24/2020 5.6 5.82 5.7 9/24/2020 5.6 5.82 5.7 9/24/2020 5.6 5.82 5.7 9/24/2020 5.6 5.82 5.7 9/24/2020 5.6 5.82 5.7 9/24/2020 5.6 5.82 5.7 9/24/2020 5.6 5.82 5.7 9/24/2020 5.6 5.82 5.7 9/24/2020 5.6 5.82 5.7 9/24/2020 5.6 5.82 5.7 9/24/2020 5.6 5.82 5.7 9/24/2020 5.6 5.82 5.7 9/24/2020 5.6 5.82 5.7 9/24/2020 5.6 5.82 5.7 9/24/2020 5.6 5.82 5.82 5.82 5.82 5.82 5.82 5.82 5.82					
8/22/2019 10/21/2019 10/21/2019 10/22/2019 10/23/2019 5.49 5.68 1/3/2020 5.55 3/24/2020 5.58 3/25/2020 6/18/2020 6/18/2020 8/26/2020 8/26/2020 8/26/2020 8/26/2020 8/26/2020 9/28/2020 9/28/2020 9/28/2020 11/11/2020 5.6 5.82 7.5 7.54 9/26/2020 11/11/2020 7.5 7.34					
8/23/2019 10/21/2019 10/22/2019 10/22/2019 10/23/2019 5.49 5.68 11/3/2020 5.75 3/24/2020 5.58 3/25/2020 5.49 4/9/2020 6/18/2020 6/18/2020 5.72 8/25/2020 8/25/2020 8/25/2020 8/25/2020 8/25/2020 8/25/2020 8/25/2020 8/25/2020 8/25/2020 8/25/2020 8/25/2020 8/25/2020 9/22/2020 9/22/2020 9/22/2020 9/25/2020 9/25/2020 9/25/2020 9/25/2020 9/25/2020 9/25/2020 9/25/2020 9/25/2020 9/25/2020 9/25/2020 9/25/2020 9/25/2020 9/25/2020 9/25/2020 9/25/2020 9/25/2020 9/25/2020 9/25/2020 9/25/2020 11/10/2020 1 7.34		5.55			
10/21/2019 10/23/2019 10/23/2019 5.49 5.68 1/3/2020 5.75 3/24/2020 5.58 3/25/2020 5.49 4/9/2020 6/18/2020 5.72 8/25/2020 8/26/2020 8/26/2020 8/26/2020 8/26/2020 9/22/2020 9/22/2020 9/22/2020 9/22/2020 1/1/10/2020 1/1/10/2020 1/1/10/2020 1/1/10/2020 1/1/10/2020 1/1/10/2020 1/1/10/2020 1/1/10/2020 1/2 / 7.4					
10/23/2019 5.49 5.68 1/3/2020 5.54 3/4/2020 5.55 3/24/2020 5.59 4/9/2020 6/18/2020 5.72 8/25/2020 8/25/2020 8/25/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.82 5.7 9/28/2020 9/28/2020 5.82 5.82 9/28/2020 5.82 9/28/2020 5.82 5.82 9/28/2020 5.82 5.82					
10/23/2019 5.49 5.68 1/3/2020 5.64 3/4/2020 5.55 3/24/2020 5.59 3/25/2020 5.49 4/9/2020 5.67 7/21/2020 5.72 8/25/2020 8/25/2020 8/26/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.82 5.7 9/24/2020 5.82 5.7 9/24/2020 5.82 5.7 9/24/2020 5.82 5.7 9/24/2020 5.82 5.82 9/24/2020 5.82 5.82 9/24/2020 5.82 5.82 9/24/2020 5.82 5.82 9/24/2020 5.82 5.82					
1/3/2020 5.64 3/4/2020 5.75 3/24/2020 5.58 3/25/2020 5.49 4/9/2020 6/18/2020 5.67 7/21/2020 5.72 8/25/2020 8/26/2020 8/26/2020 8/26/2020 8/26/2020 9/28/2020 9/28/2020 9/28/2020 9/28/2020 11/1/10/2020 7.4		5 49	5 68		
3/4/2020 5.58 3/24/2020 5.49 4/9/2020 6/18/2020 5.67 7/21/2020 5.72 8/25/2020 8/25/2020 8/25/2020 8/25/2020 9/18/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.6 5.82 9/22/2020 9/22/2020 11/10/2020 5.6 5.82 1/10/2020 5.82 5.82 9/25/2020 9/28/2020 9/28/2020 11/10/2020 7.4					
3/24/2020 5.49 4/9/2020 6/18/2020 5.67 7/21/2020 5.72 8/25/2020 8/26/2020 8/27/2020 5.82 5.7 9/18/2020 5.82 5.7 9/18/2020 5.6 5.82 9/22/2020 9/24/2020 5.6 5.82 11/10/2020 7.4					
3/25/2020 5.49 4/9/2020 5.67 7/21/2020 5.72 8/25/2020 8/26/2020 8/27/2020 5.82 5.7 9/18/2020 7.5 7.54 9/22/2020 9/24/2020 5.6 5.82 9/25/2020 9/25/2020 7.34 11/11/2020 7.4 7.4					
4/9/2020 6/18/2020 5.67 7/21/2020 8/25/2020 8/26/2020 8/27/2020 5.82 5.7 9/18/2020 9/22/2020 9/24/2020 5.6 5.82 5.82 7.5 7.54 9/18/2020 9/24/2020 9/24/2020 9/28/2020 9/28/2020 11/10/2020 7.4		5.49			
6/18/2020 5.67 7/21/2020 5.72 8/25/2020 8/26/2020 8/27/2020 5.82 5.7 9/18/2020 7.5 7.54 9/22/2020 9/22/2020 9/28/2020 5.82 7.34 11/10/2020 7.4 7.34		00			
7/21/2020 5.72 8/25/2020 8/26/2020 8/27/2020 5.82 5.7 9/18/2020 7.5 7.54 9/22/2020 9/24/2020 5.6 5.82 9/25/2020 9/28/2020 11/10/2020 7.34 11/11/2020 7.4			5.67		
8/25/2020 8/27/2020 5.82 5.7 9/18/2020 7.5 7.54 9/22/2020 9/24/2020 5.6 5.82 9/25/2020 9/28/2020 11/10/2020 7.34					
8/27/2020 5.82 5.7 9/18/2020 7.5 7.5 7.54 9/22/2020 9/24/2020 5.6 5.82 9/25/2020 9/28/2020 11/10/2020 7.34			V., <u>-</u>		
8/27/2020 5.82 5.7 9/18/2020 7.5 7.54 9/22/2020 9/24/2020 5.6 5.82 9/25/2020 9/28/2020 11/10/2020 7.34 11/11/2020 7.4					
9/18/2020 7.5 7.54 9/22/2020 9/24/2020 5.6 5.82 9/25/2020 9/25/2020 11/10/2020 7.34 11/11/2020 7.4		5.82	5.7		
9/22/2020 9/24/2020 5.6 5.82 9/25/2020 9/28/2020 7.34 11/11/2020 7.4		0.02	0.7	7.5	7.54
9/24/2020 5.6 5.82 9/25/2020 9/28/2020 11/10/2020 7.34 11/11/2020 7.4				7.0	
9/25/2020 9/28/2020 11/10/2020 7.34 11/11/2020 7.4		5.6	5.82		
9/28/2020 11/10/2020 7.34 11/11/2020 7.4		5.0	J.U <u>Z</u>		
11/10/2020 7.34 11/11/2020 7.4					
11/11/2020 7.4					7.34
				7.4	7.JH
1.1 35 1.21					7.27
	12/13/2020			7.38	1.21

Constituent: Sulfate (mg/L) Analysis Run 2/17/2021 2:50 PM View: Interwell PLs Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-107	HGWC-109	HGWC-101	HGWC-117	HGWC-105
8/30/2016	1.6	14	0.63 (J)						
8/31/2016				280	130	36	110	150	190
10/20/2016	1.6						110	150	
10/24/2016		11	0.62 (J)	280					
10/25/2016					130	41			190
1/25/2017	1.6	12	0.62 (J)						
1/27/2017								150	
1/31/2017				300	130	37	120		210
5/23/2017		12	0.55 (J)	340			97	110	
5/24/2017	1.4				130	40			180
8/10/2017	1.6	11	0.66 (J)	300	130	40	96	140	180
11/13/2017	1.3		0.61 (J)						
11/14/2017		11		310	130	40	110	110	170
6/4/2018	1.4		0.73 (J)						
6/5/2018		9.9							
6/6/2018				351	132	49.7	95.5		168
6/7/2018								103	
10/1/2018	1	6.7	0.52 (J)						
10/2/2018			. ,		132	42.3			173
10/3/2018				381			121	169	
4/1/2019	1.7								
4/2/2019		8.7	0.78 (J)						
4/3/2019		· · ·	0.70 (0)		139	36			
4/4/2019				358	100	00	95.1		185
4/5/2019								141	100
6/17/2019				311	126	30.9		141	162
6/18/2019				311	120	30.3	102	116	102
10/21/2019	1.8						102	110	
10/22/2019	1.0	6.8	0.6 (J)		123	23.2		133	
10/23/2019		0.0	0.0 (3)	249	125	23.2	101	133	160
				248			101		162
1/3/2020									
3/4/2020	1.0							100	
3/24/2020	1.6		<1	054	440	07.0	05.5	129	101
3/25/2020		0.0		251	116	27.9	85.5		161
4/9/2020		6.6							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	1		<1						
9/22/2020		5.3							
9/24/2020				293	126		97		177
9/25/2020						24.7		146	
9/28/2020									
11/10/2020									
11/11/2020									
12/15/2020									

Constituent: Sulfate (mg/L) Analysis Run 2/17/2021 2:50 PM View: Interwell PLs Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-118	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)	
8/30/2016					
8/31/2016	88				
10/20/2016	81				
10/24/2016					
10/25/2016					
1/25/2017					
1/27/2017					
1/31/2017	87				
5/23/2017	84				
5/24/2017					
8/10/2017	78				
11/13/2017	, ,				
11/13/2017	79				
	13				
6/4/2018					
6/5/2018					
6/6/2018	00.4				
6/7/2018	60.1				
10/1/2018					
10/2/2018					
10/3/2018	91.5				
4/1/2019					
4/2/2019					
4/3/2019					
4/4/2019					
4/5/2019	75.1				
6/17/2019					
6/18/2019	77				
10/21/2019					
10/22/2019	80.9				
10/23/2019		<1			
1/3/2020		380			
3/4/2020		400			
3/24/2020		311			
3/25/2020	78.4	011			
4/9/2020	70.4				
		240			
6/18/2020		349			
7/21/2020		378			
8/27/2020		382			
9/18/2020			3.5	9.5	
9/22/2020					
9/24/2020		370			
9/25/2020					
9/28/2020	86				
11/10/2020			2.3		
11/11/2020				4.5	
12/15/2020			2.4	4.2	

Constituent: Total Dissolved Solids (mg/L) Analysis Run 2/17/2021 2:50 PM View: Interwell PLs Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-105	HGWC-107	HGWC-103	HGWC-109	HGWC-101	HGWC-118
8/30/2016	172	77	76						
8/31/2016				389	235	483	182	278	373
10/20/2016	108							165	305
10/24/2016		111	65			517			
10/25/2016				316	223		172		
1/25/2017	345	155	152 (o)						
1/27/2017									
1/31/2017				437	346	516	252	263	361
5/23/2017		74	52			637		190	359
5/24/2017	126			352	234		184		
8/10/2017	174	94	60	356	254	459	208	175	325
11/13/2017	158		75						
11/14/2017		89		375	313	545	252	253	373
6/4/2018	131		70						
6/5/2018		92							
6/6/2018				385	278	559	224	188	
6/7/2018									338
10/1/2018	101	91	76						
10/2/2018				374	274		230		
10/3/2018						582		238	328
4/1/2019	213					002		200	020
4/2/2019	210	94	69						
4/3/2019		34	03		273		210		
4/4/2019				340	273	535	210	149	
4/5/2019				340		333		149	308
				270	272	E1E			306
6/17/2019 6/18/2019				370	272	515			215
	107								213
10/21/2019	187	0.5	01		200		010		254
10/22/2019		95	81	440	308	507	212	004	354
10/23/2019				419		507		221	
1/3/2020									
3/4/2020									
3/24/2020	207		52						
3/25/2020				417	297	507	213	187	347
4/9/2020		48							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	139		62						
9/22/2020		84							
9/24/2020				411	253	517		170	
9/25/2020							188		
9/28/2020									332
11/10/2020									
11/11/2020									
12/15/2020									

Constituent: Total Dissolved Solids (mg/L) Analysis Run 2/17/2021 2:50 PM View: Interwell PLs Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-117	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/30/2016			- (-9)	(-3)
8/31/2016	381			
10/20/2016	319			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017	407			
1/31/2017	•			
5/23/2017	258			
5/24/2017				
8/10/2017	359			
11/13/2017				
11/14/2017	310			
6/4/2018				
6/5/2018				
6/6/2018				
6/7/2018	223			
10/1/2018	220			
10/1/2018				
10/3/2018	337			
4/1/2019	007			
4/1/2019				
4/3/2019				
4/4/2019				
4/5/2019	334			
6/17/2019	JJ4			
6/17/2019	254			
	204			
10/21/2019	240			
10/22/2019	348	726		
10/23/2019		736		
1/3/2020		714		
3/4/2020	224	764		
3/24/2020	331	521		
3/25/2020				
4/9/2020		050		
6/18/2020		652		
7/21/2020		669		
8/27/2020		663		
9/18/2020			224	195
9/22/2020				
9/24/2020		696		
9/25/2020	340			
9/28/2020				
11/10/2020				229
11/11/2020			221	
12/15/2020			239	233

FIGURE E.

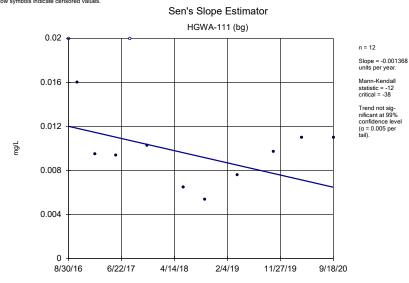
Trend Tests - Prediction Limit Exceedances - Significant Results Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 2/17/2021, 2:57 PM

	Plant Hammond Client: Southern Comp	any Data: Ha	ammona A	P-4 Print	ea 2/1	//2021,	2:57 PI	VI			
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Boron (mg/L)	HGWC-107	0.04564	51	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-105	4.827	48	43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-113 (bg)	-1.886	-54	-38	Yes	12	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-105	-7.78	-45	-43	Yes	13	0	n/a	n/a	0.01	NP

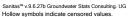
Trend Tests - Prediction Limit Exceedances - All Results

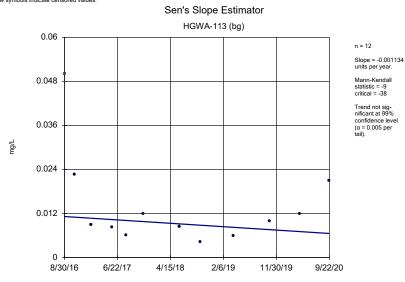
	Plant Hammond	Client: Southern Compa	any Data: H	ammond A	P-4 Prin	ted 2/1	7/2021,	2:57 PI	М			
Constituent	Well		Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Boron (mg/L)	HGWA-111 (bg)		-0.001368	-12	-38	No	12	16.67	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-112 (bg)		-0.001715	-17	-38	No	12	25	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-113 (bg)		-0.001134	-9	-38	No	12	8.333	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-101		0.002421	11	38	No	12	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-102		-0.517	-9	-21	No	8	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-103		0.00835	6	43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-105		0.01191	9	38	No	12	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-107		0.04564	51	43	Yes	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-109		-0.01598	-32	-43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-117		0.06364	30	38	No	12	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-118		-0.01732	-15	-38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-111 (bg)		2.597	6	38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-112 (bg)		0.01309	4	38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-113 (bg)		0.3543	33	38	No	12	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-102		-18.4	-7	-21	No	8	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-103		4.885	36	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-105		4.827	48	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-118		1.704	24	43	No	13	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-111 (bg)		-0.09705	-7	-38	No	12	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-112 (bg)		0.05844	15	38	No	12	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-113 (bg)		-0.09485	-28	-38	No	12	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-102		0.077	2	21	No	8	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-103		0.2451	22	43	No	13	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-117		1.765	31	38	No	12	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-111 (bg)		0	-8	-38	No	12	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-112 (bg)		-0.0171	-22	-38	No	12	16.67	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-113 (bg)		-1.886	-54	-38	Yes	12	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-101		-3.62	-28	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-102		97.63	6	21	No	8	12.5	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-103		3.256	6	43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-105		-7.78	-45	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-107		-0.4916	-17	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-109		-3.13	-30	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-117		-3.325	-12	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-118		-1.393	-16	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-111 (bg)		4.343	6	38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-112 (bg)		0	-1	-34	No	11	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-113 (bg)		-3.149	-9	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-102		-68.87	-6	-21	No	8	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-103		-0.5883	-4	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-105		14.15	16	43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-117		-6.012	-10	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-118		-7.987	-19	-43	No	13	0	n/a	n/a	0.01	NP

Sanitas™ v.9.6.27b Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



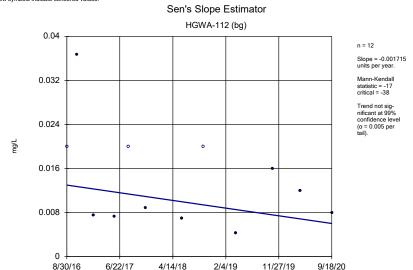
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Plant Hammond Client: Southern Company Data: Hammond AP-4



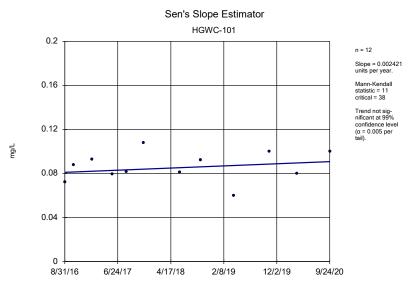


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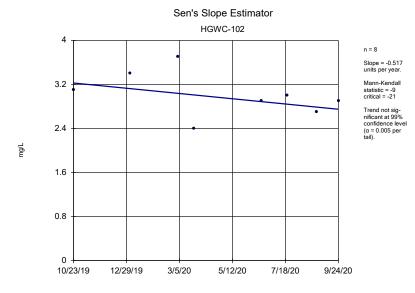
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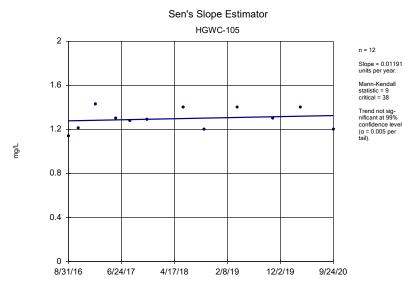
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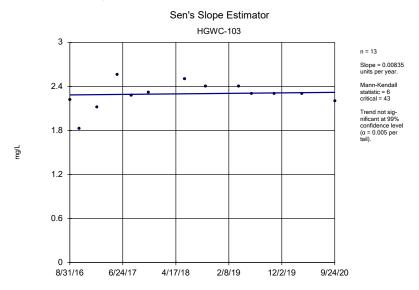
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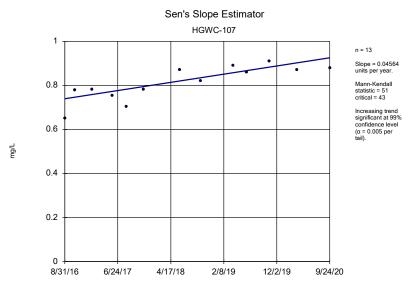
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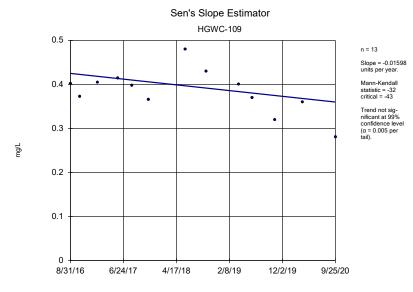
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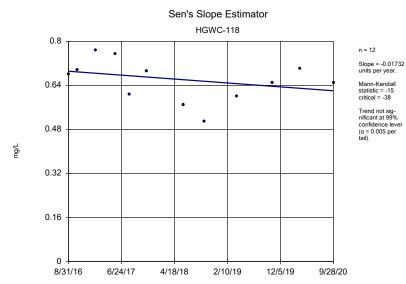
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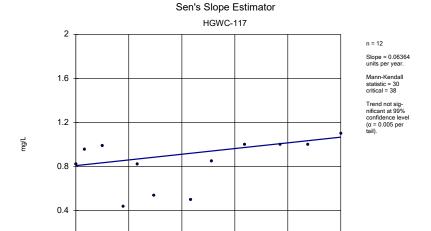
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Constituent: Boron Analysis Run 2/17/2021 2:54 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-4



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2/8/19

12/2/19

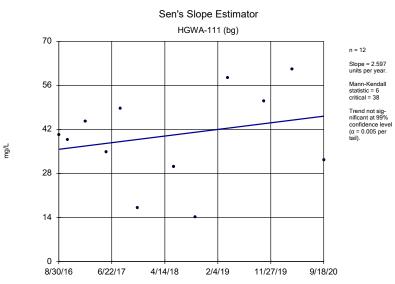
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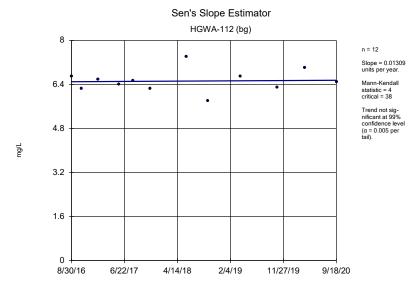
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8/31/16

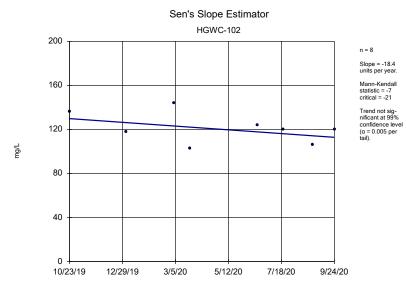
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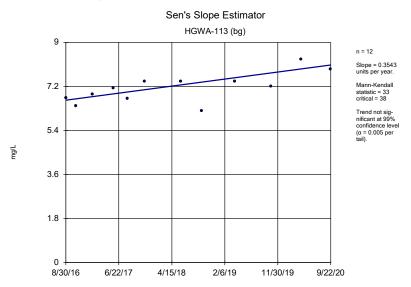
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Plant Hammond Client: Southern Company Data: Hammond AP-4



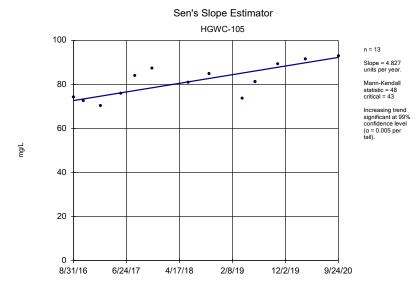
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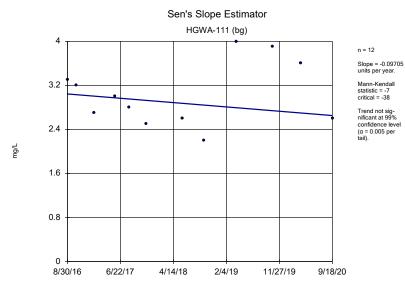
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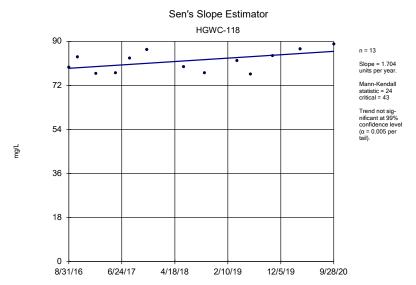
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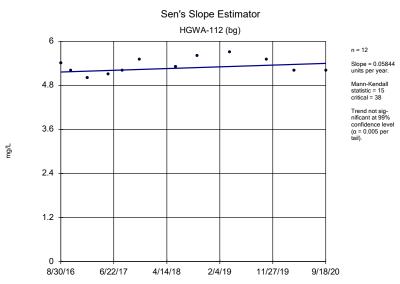
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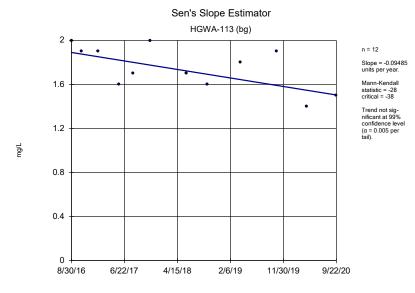
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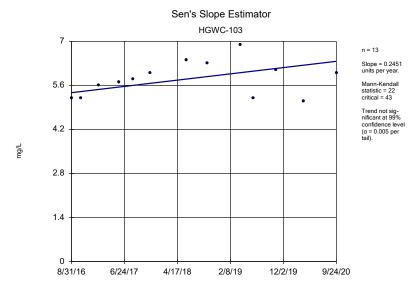
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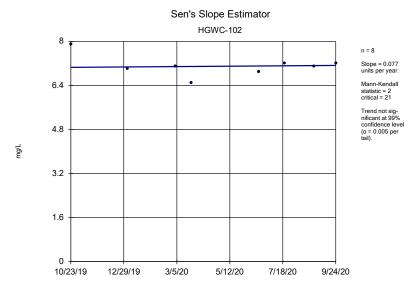
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Plant Hammond Client: Southern Company Data: Hammond AP-4



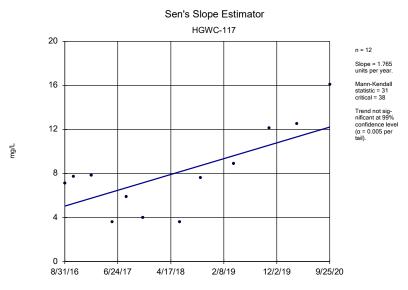
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Plant Hammond Client: Southern Company Data: Hammond AP-4



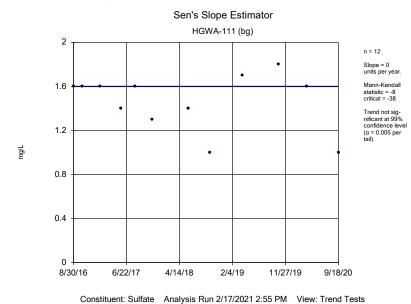
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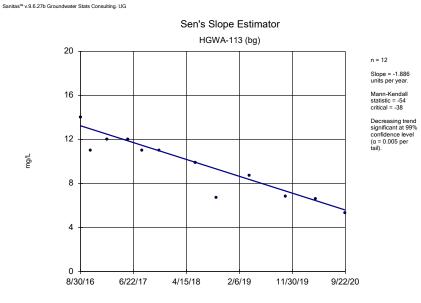


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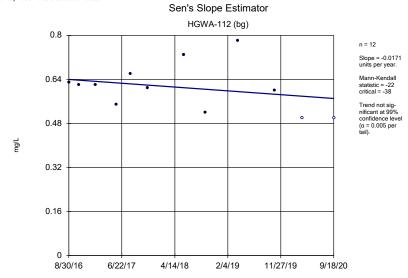


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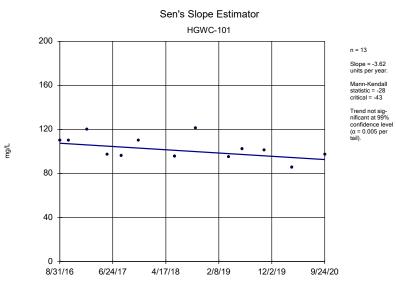


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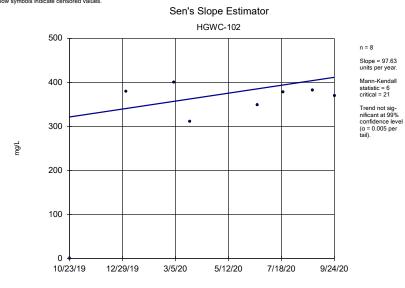
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Plant Hammond

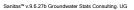


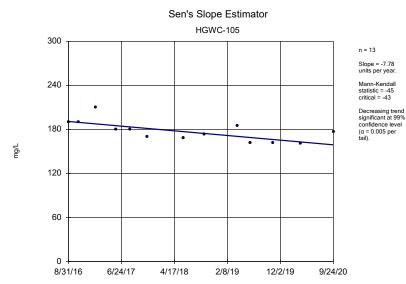
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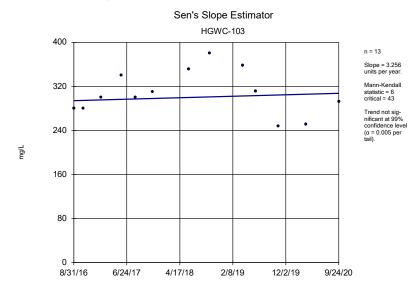
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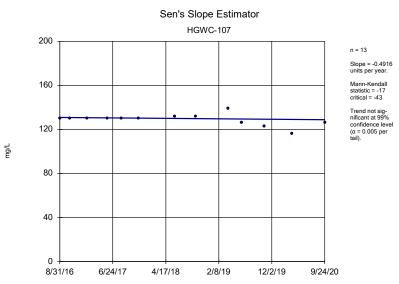




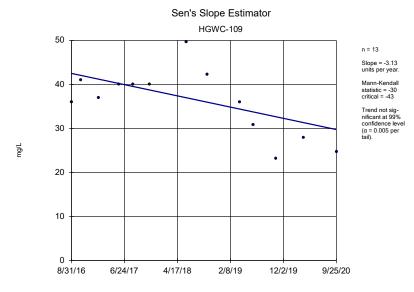
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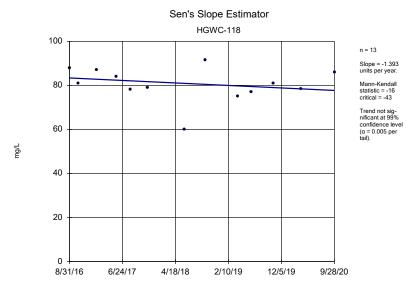
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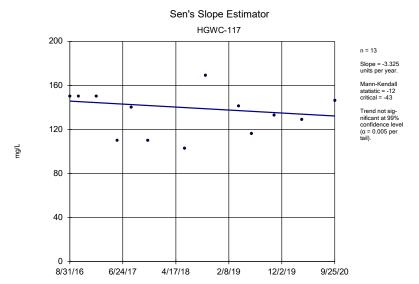
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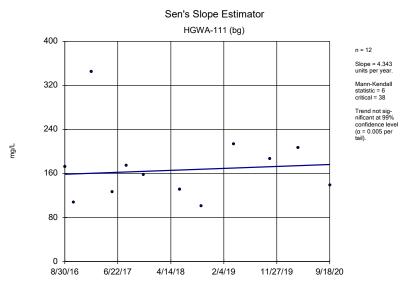
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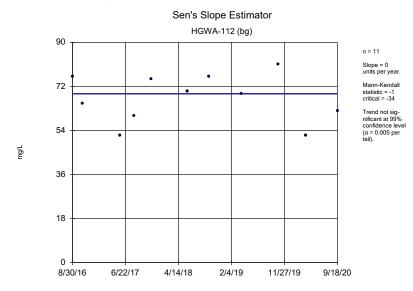
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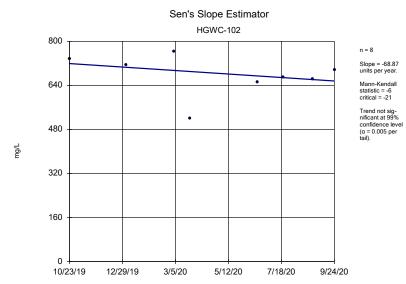
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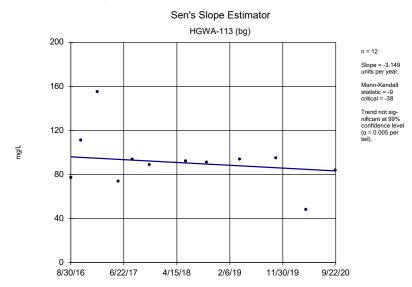
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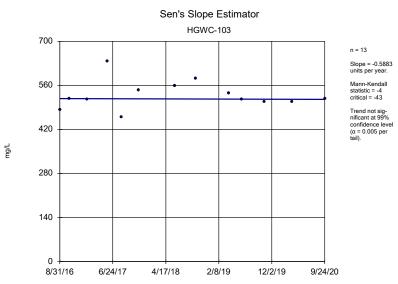
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Plant Hammond Client: Southern Company Data: Hammond AP-4



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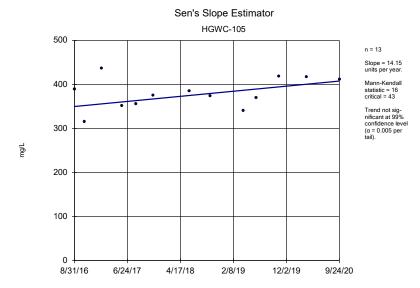


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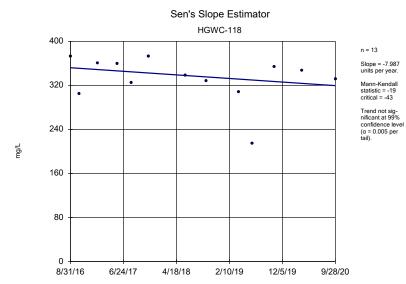
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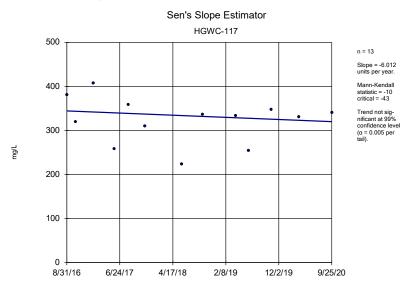


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Plant Hammond Client: Southern Company Data: Hammond AP-4

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Constituent: Total Dissolved Solids Analysis Run 2/17/2021 2:55 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Total Dissolved Solids Analysis Run 2/17/2021 2:55 PM View: Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-4

FIGURE F.

Upper Tolerance Limit Summary Table

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 2/17/2021, 3:03 PM Std. Dev. %NDs ND Adj. <u>Alpha</u> Constituent Upper Lim. Lower Lim. Sig. Bg N Bg Mean Transform Method 0.003 n/a 36 94.44 n/a 0.1578 NP Inter(NDs) Antimony (mg/L) n/a n/a n/a n/a 0.09944 NP Inter(NDs) Arsenic (mg/L) 0.005 n/a n/a 45 n/a n/a 95.56 n/a n/a Barium (mg/L) 0.091 n/a 45 n/a 0 n/a 0.09944 NP Inter(normality) n/a n/a n/a NP Inter(NDs) Beryllium (mg/L) 0.003 n/a 45 91.11 n/a n/a 0.09944 Cadmium (mg/L) 0.09944 NP Inter(NDs) 0.0025 n/a n/a 45 n/a n/a 100 n/a n/a 0.09944 NP Inter(normality) Chromium (mg/L) 0.01 n/a 45 n/a 26.67 n/a NP Inter(NDs) Cobalt (mg/L) 0.09944 0.005 n/a n/a 45 n/a n/a 84.44 n/a n/a Combined Radium 226 & 228 (pCi/L) 1.403 n/a 45 0.6915 0.34 0 None No 0.05 Inter Fluoride (mg/L) 0.0799 0.05086 25 Kaplan-Meier 0.05 0.1855 n/a n/a 48 No Inter Lead (mg/L) 0.005 n/a 66.67 0.09944 NP Inter(NDs) Lithium (mg/L) 0.09944 NP Inter(normality) 0.03 n/a 45 n/a 48.89 n/a n/a n/a n/a Mercury (mg/L) 0.0005 n/a 36 75 0.1578 NP Inter(NDs) Molybdenum (mg/L) 0.1578 NP Inter(NDs) 0.01 n/a n/a n/a 36 n/a n/a 88.89 n/a Selenium (mg/L) 0.01 n/a 36 77.78 n/a 0.1578 NP Inter(NDs) Thallium (mg/L) 0.001 100 0.1578 NP Inter(NDs) n/a n/a 36 n/a n/a n/a n/a

FIGURE G.

PLANT HAMMOND AP-4 GWPS								
Constituent Name	MCL	Background Limit	GWPS					
Antimony, Total (mg/L)	0.006	0.003	0.006					
Arsenic, Total (mg/L)	0.01	0.005	0.01					
Barium, Total (mg/L)	2	0.091	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)		0.005	0.005					
Combined Radium, Total (pCi/L)	5	1.4	5					
Fluoride, Total (mg/L)	4	0.19	4					
Lead, Total (mg/L)		0.005	0.005					
Lithium, Total (mg/L)		0.03	0.03					
Mercury, Total (mg/L)	0.002	0.0005	0.002					
Molybdenum, Total (mg/L)		0.01	0.01					
Selenium, Total (mg/L)	0.05	0.01	0.05					
Thallium, Total (mg/L)	0.002	0.001	0.002					

^{*}MCL = Maximum Contaminant Level

^{*}GWPS = Groundwater Protection Standard

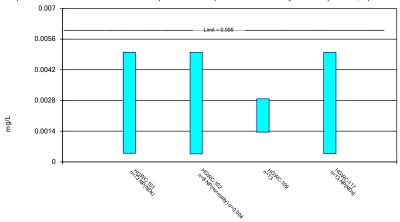
FIGURE H.

State Confidence Interval - All Results (No Significant) Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 12/22/2020, 6:01 AM

	Plant Hammor	nd Client: Soi	d Client: Southern Company		nmond	AP-4	Printed 12	2/22/2020, 6:01 AM	I	
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	<u>N</u>	%NDs	Transform	<u>Alpha</u>	Method
Arsenic (mg/L)	HGWC-101	0.005	0.00039	0.006	No	13	92.31	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-102	0.005	0.00036	0.006	No	8	50	No	0.004	NP (normality)
Arsenic (mg/L)	HGWC-109	0.002875	0.001355	0.006	No	13	0	No	0.01	Param.
Arsenic (mg/L)	HGWC-117	0.005	0.00037	0.006	No	13	92.31	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-101	0.0473	0.04081	2	No	13	0	sqrt(x)	0.01	Param.
Barium (mg/L)	HGWC-102	0.03521	0.02579	2	No	8	0	No	0.01	Param.
Barium (mg/L)	HGWC-103	0.04112	0.03476	2	No	13	0	x^2	0.01	Param.
Barium (mg/L) Barium (mg/L)	HGWC-105 HGWC-107	0.0745 0.03943	0.066 0.03716	2	No No	13 13	0	No x^3	0.01 0.01	NP (normality)
Barium (mg/L)	HGWC-107	0.03943	0.03716	2	No	13	0	No No	0.01	Param. Param.
Barium (mg/L)	HGWC-117	0.05061	0.04064	2	No	13	0	x^2	0.01	Param.
Barium (mg/L)	HGWC-118	0.06333	0.05368	2	No	13	0	No	0.01	Param.
Beryllium (mg/L)	HGWC-101	0.003	0.000057	0.004	No	13	53.85	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-103	0.003	0.000088	0.004	No	13	84.62	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-117	0.003	0.000066	0.004	No	13	69.23	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-101	0.0003	0.0001	0.005	No	13	7.692	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-102	0.0006617	0.0001883	0.005	No	8	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-103	0.0008	0.0006585	0.005	No	13	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-107	0.00125	0.00009	0.005	No	13	46.15	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-117	0.0007915	0.0005593	0.005	No	13	0	No	0.01	Param.
Chromium (mg/L)	HGWC-101	0.01	0.00064	0.1	No	13	76.92	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-102	0.01	0.00051	0.1	No	8	75	No	0.004	NP (NDs)
Chromium (mg/L)	HGWC-103	0.01	0.00063	0.1	No	13	61.54	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-105	0.01	0.00064	0.1	No	13	76.92	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-107	0.01	0.00074	0.1	No	13	92.31	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-109	0.01	0.0014	0.1	No	13	84.62	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-117	0.01	0.00067	0.1	No	13	76.92	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-118	0.01	0.00081	0.1	No	13	69.23	No	0.01	NP (NDs)
Cobalt (mg/L) Cobalt (mg/L)	HGWC-101 HGWC-102	0.002862 0.002645	0.001953 0.0008778	0.005 0.005	No No	13 8	7.692 0	No	0.01 0.01	Param. Param.
Cobalt (mg/L)	HGWC-102	0.002645	0.0008778	0.005	No	13	0	sqrt(x) No	0.01	Param.
Cobalt (mg/L)	HGWC-105	0.0025	0.001719	0.005	No	13	23.08	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-109	0.0020	0.001205	0.005	No	13	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-117	0.002033	0.004754	0.005	No	13	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-118	0.0025	0.0004	0.005	No	13	46.15	No	0.01	NP (normality)
Combined Radium 226 & 228 (pCi/L)	HGWC-101	0.9909	0.4373	5	No	13	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-102	1.418	0.6385	5	No	7	0	x^2	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-103	1.027	0.4663	5	No	13	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-105	0.9844	0.5634	5	No	13	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-107	1.212	0.5578	5	No	13	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-109	0.8708	0.4961	5	No	13	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-117	0.9457	0.4194	5	No	13	0	No	0.01	Param.
Combined Radium 226 & 228 (pCi/L)	HGWC-118	1.303	0.5322	5	No	12	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-101	0.1	0.05	4	No	14	85.71	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-102	0.22	0.1	4	No	8	87.5	No	0.004	NP (NDs)
Fluoride (mg/L)	HGWC-103	0.13	0.06	4	No	14	71.43	No	0.01	NP (NDs)
Fluoride (mg/L)	HGWC-105 HGWC-107	0.13 0.0949	0.07 0.03505	4	No	14	50 50	No	0.01	NP (normality) Param.
Fluoride (mg/L) Fluoride (mg/L)	HGWC-107	0.0949	0.03303		No No	14	14.29	No No	0.01	Param.
Fluoride (mg/L)	HGWC-117	0.120	0.07 136	4	No	14 14	50	No	0.01 0.01	NP (normality)
Fluoride (mg/L)	HGWC-118	0.3	0.072	4	No	15	0	No	0.01	NP (normality)
Lead (mg/L)	HGWC-101	0.005	0.0009	0.005	No	13	92.31	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-102	0.005	0.00011	0.005	No	8	87.5	No	0.004	NP (NDs)
Lead (mg/L)	HGWC-103	0.005	0.00018	0.005	No	13	69.23	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-105	0.005	0.000068	0.005	No	13	76.92	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-107	0.005	0.00021	0.005	No	13	76.92	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-109	0.005	0.000058	0.005	No	13	84.62	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-117	0.005	0.00016	0.005	No	13	69.23	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-118	0.005	0.00022	0.005	No	13	69.23	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-102	0.001312	0.0009955	0.03	No	8	0	x^2	0.01	Param.
Lithium (mg/L)	HGWC-103	0.03	0.0015	0.03	No	13	23.08	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-105	0.004188	0.003797	0.03	No	13	0	No	0.01	Param.
Lithium (mg/L)	HGWC-107	0.03	0.00092	0.03	No	13	61.54	No	0.01	NP (NDs)
Lithium (mg/L)	HGWC-109	0.03	0.0009	0.03	No	13	46.15	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-117	0.03	0.0012	0.03	No	13	23.08	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-118	0.03	0.0015	0.03	No	13	46.15	No	0.01	NP (normality)

Parametric and Non-Parametric (NP) Confidence Interval

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

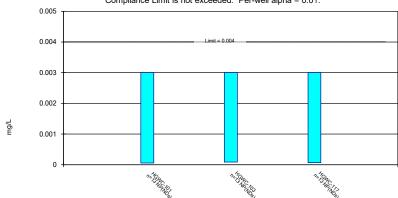


Constituent: Arsenic Analysis Run 12/22/2020 6:00 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

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Non-Parametric Confidence Interval

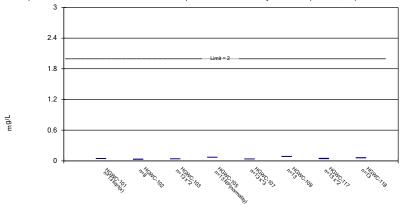
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Beryllium Analysis Run 12/22/2020 6:00 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-4

Parametric and Non-Parametric (NP) Confidence Interval

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

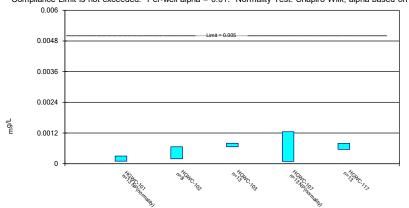


Constituent: Barium Analysis Run 12/22/2020 6:00 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27 . UG

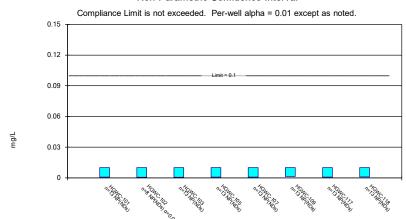
Parametric and Non-Parametric (NP) Confidence Interval

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



Sanitas™ v.9.6.27 . UG

Non-Parametric Confidence Interval

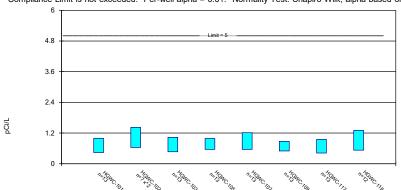


Constituent: Chromium Analysis Run 12/22/2020 6:00 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27 . UG

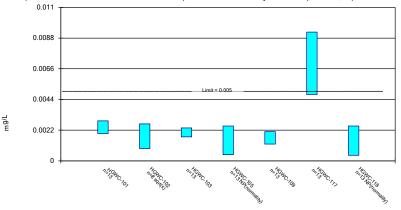
Parametric Confidence Interval





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.

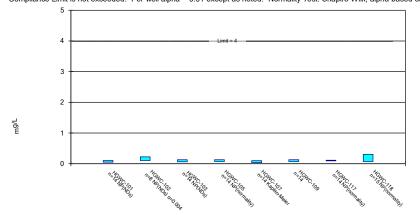


Constituent: Cobalt Analysis Run 12/22/2020 6:00 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27 . UG

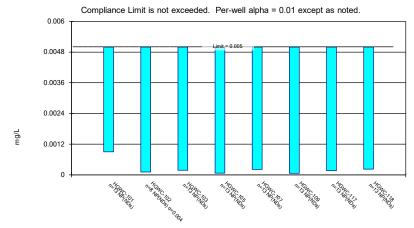
Parametric and Non-Parametric (NP) Confidence Interval

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



Sanitas™ v.9.6.27 . UG

Non-Parametric Confidence Interval

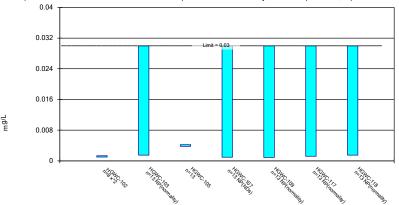


Constituent: Lead Analysis Run 12/22/2020 6:00 AM View: Confidence Interval Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.27 . UG

Parametric and Non-Parametric (NP) Confidence Interval

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



Constituent: Lithium Analysis Run 12/22/2020 6:00 AM View: Confidence Interval
Plant Hammond Client: Southern Company Data: Hammond AP-4

March 2021

GROUNDWATER STATS CONSULTING

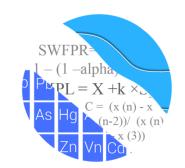
July 27, 2021

Southern Company Services Attn: Ms. Kristen Jurinko 241 Ralph McGill Blvd. NE, Bin 10160 Atlanta, Georgia 30308

Re: Plant Hammond Ash Pond 4 (AP-4)

March 2021 Sample Event – Statistical Analysis

Dear Ms. Jurinko,



Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the March 2021 Semi-Annual Groundwater Detection and Assessment Monitoring Statistical summary of groundwater data for Georgia Power Company's Plant Hammond AP-4. 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 Hammond AP-4 in 2016, and at least 8 background samples have been collected at each of the groundwater monitoring wells analyzed in this report. The monitoring well network, as provided by Southern Company Services, consists of the following:

- Upgradient well: HGWA-47, HGWA-48D, HGWA-111, HGWA-112, and HGWA-113
- o **Downgradient wells:** HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, and HGWC-118

Note that well HGWC-102 was first sampled in October 2019 and currently has at least 8 samples. Upgradient wells HGWA-47 and HGWA-48D were first sampled in September 2020 and currently have a maximum of 5 samples.

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

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of Appendix IV downgradient and delineation 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, antimony, mercury, molybdenum, selenium, and thallium were not detected, and therefore, were not required to be sampled in 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. 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 to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations.

Statistical Methods – Appendix III Parameters

Appendix III parameters are evaluated using interwell prediction limits combined with a 1-of-2 resample plan for all constituents: boron, calcium, chloride, fluoride, pH, sulfate, and TDS.

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits.

- No statistical analyses are required on wells and analytes containing 100% nondetects (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 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% 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 will be 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 April 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, a few outliers were identified. Often, 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 as all other values are similar to remaining measurements within a given well or neighboring wells, or were reported non-detects.

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 were included with the screening and showed a few statistically significant decreasing and increasing trends for the Appendix III parameters. Most trends noted were relatively low in magnitude when compared to average concentrations, and the background period is short; therefore, no adjustments were made to the data sets.

Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells would not be conservative from a regulatory perspective; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified no variation among upgradient well data for boron or fluoride, making these constituents eligible for interwell analyses. Variation was noted for calcium, chloride, pH, sulfate and TDS. While data were further tested for intrawell eligibility during

the screening, interwell methods will be used for all Appendix III constituents in accordance with Georgia EPD requirements.

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 using all historical upgradient well data through March 2021 (Figure D). Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The most recent sample from each downgradient well for the March 2021 sample event is compared to the background limit to determine whether there are statistically significant increases (SSIs).

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When a resample confirms the initial exceedance, a statistically significant increase is identified and further research would be required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result and, therefore, no exceedance is noted and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance. Several prediction limit exceedances were noted for Appendix III parameters. A summary table of the interwell prediction limits follows this letter.

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure E). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. When trends are present in upgradient trends, it is an indication of natural variability in groundwater unrelated to practices at the site. Trend tests require a minimum of 6 samples; therefore, the new upgradient wells HGWA-47 and HGWA-48D were not included in this analysis. A summary of the trend test results follows this letter. Statistically significant trends were noted for the following well/constituent pairs:

913.829.1470

Increasing:

• Boron: HGWC-107

• Calcium: HGWC-105 and HGWCA-113 (upgradient)

Decreasing:

• Sulfate: HGWA-113 (upgradient)

Although not identified by the Sen's Slope/Mann-Kendall test due to stable data earlier in the period of record, it was noted that concentrations in well HGWC-117 for chloride have been steadily increasing since April 2019.

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 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 Georgia EPD Rule 391-3-4-.10(6)(a). Georgia EPD has not incorporated the updated GWPS into the current

Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a); therefore, for sites regulated under Georgia EPD Rules, the GWPS is:

- The MCL or
- The background concentration when an MCL is not established or when the background concentration is higher than the MCL

Following the above Georgia EPD Rule requirements, GWPS were established for statistical comparison of Appendix IV constituents for the March 2021 sample event according to the state rules (Figure G). Note that a GWPS is established for antimony, mercury, molybdenum, selenium, and thallium. However, since these constituents were not sampled during the March 2021 sampling event, no statistical comparisons with confidence intervals were required.

To complete the statistical comparison to GWPS, confidence intervals were constructed for the Appendix IV constituents in each downgradient well (Figure H). The Sanitas software was used to calculate the tolerance limits and the confidence intervals. Those confidence intervals were compared to the GWPS established using the Georgia EPD Rules 391-3-4-.10(6)(a). Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. A summary of the confidence intervals follows this letter. 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

As a result, background limits were lower for these constituents. However, in all cases, 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.

A summary of the confidence intervals follows this letter. An exceedance was identified for the following well/constituent pair:

• Cobalt: HGWC-117

Note that the lower confidence limit of 0.0051~mg/L for cobalt at well HGWC-117 exceeded the GWPS of 0.005~mg/L.

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Hammond AP-4. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,

Tristan Clark

Groundwater Analyst

Tristan Clark

Andrew Collins

Project Manager

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. U

100% Non-Detects: Appendix IV Downgradient & Delineation

Analysis Run 4/21/2021 5:33 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Antimony (mg/L) HGWC-101, HGWC-105, HGWC-109, HGWC-117, HGWC-118

Arsenic (mg/L)

HGWC-103, HGWC-105, HGWC-107

Beryllium (mg/L)

HGWC-102, HGWC-105, HGWC-107, HGWC-109

Cadmium (mg/L)

HGWC-105, HGWC-109, HGWC-118

Cobalt (mg/L)

HGWC-107

Lithium (mg/L) HGWC-101

HGWC-101

Mercury (mg/L)

HGWC-102, HGWC-105, HGWC-107

Molybdenum (mg/L)

HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118

Selenium (mg/L)

HGWC-101, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118

Thallium (mg/L)

HGWC-101, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118

Appendix III Interwell Prediction Limit - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/15/2021, 4:46 PM Constituent <u>Well</u> Upper Lim. Lower Lim. Date Observ. Sig. <u>Bg N</u> Bg Mean Std. Dev. %NDs ND Adj. Method 3/17/2021 0.13 Boron (ma/L) HGWC-101 0.05 49 14.29 0.0007731 NP Inter (normality) 1 of 2 n/a Yes n/a n/a n/a n/a HGWC-102 3/17/2021 2.7 49 NP Inter (normality) 1 of 2 Boron (mg/L) Yes n/a 14.29 n/a 0.0007731 Boron (mg/L) HGWC-103 0.05 n/a 3/18/2021 2.4 Yes 49 n/a n/a 14.29 n/a n/a 0.0007731 NP Inter (normality) 1 of 2 3/18/2021 1.5 49 Boron (mg/L) **HGWC-105** 0.05 Yes n/a 14.29 n/a 0.0007731 NP Inter (normality) 1 of 2 n/a n/a n/a Boron (mg/L) HGWC-107 0.05 3/18/2021 0.92 Yes 49 n/a n/a 0.0007731 NP Inter (normality) 1 of 2 n/a Boron (mg/L) HGWC-109 0.05 n/a 3/17/2021 0.26 Yes 49 n/a n/a 14.29 n/a n/a 0.0007731 NP Inter (normality) 1 of 2 Boron (ma/L) HGWC-117 3/19/2021 1.5 49 NP Inter (normality) 1 of 2 0.05 n/a Yes n/a n/a 14.29 n/a n/a 0.0007731 Boron (mg/L) HGWC-118 0.05 n/a 3/18/2021 0.81 Yes n/a n/a n/a 0.0007731 NP Inter (normality) 1 of 2 Calcium (mg/L) HGWC-102 73.3 3/17/2021 111 Yes 49 n/a n/a 0 n/a n/a 0.0007731 NP Inter (normality) 1 of 2 HGWC-103 3/18/2021 83.7 Yes 49 0 0.0007731 NP Inter (normality) 1 of 2 Calcium (mg/L) 73.3 n/a n/a n/a n/a n/a NP Inter (normality) 1 of 2 Calcium (mg/L) **HGWC-105** 73.3 n/a 3/18/2021 97.7 Yes 49 n/a n/a n/a n/a 0.0007731 Calcium (mg/L) HGWC-117 3/19/2021 87.3 Yes 49 n/a n/a 0 0.0007731 NP Inter (normality) 1 of 2 73.3 n/a Calcium (mg/L) **HGWC-118** 73.3 n/a 3/18/2021 85.4 Yes 49 n/a n/a n/a n/a 0.0007731 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-102 3/17/2021 6.9 Yes 49 0.0007731 NP Inter (normality) 1 of 2 5.7 n/a n/a n/a n/a n/a Chloride (mg/L) HGWC-103 5.7 n/a 3/18/2021 6.2 Yes 49 n/a n/a n/a n/a 0.0007731 NP Inter (normality) 1 of 2 3/19/2021 24.9 49 0 Chloride (mg/L) **HGWC-117** Yes 0.0007731 NP Inter (normality) 1 of 2 5.7 n/a n/a n/a n/a n/a HGWC-101 7.54 5.47 3/17/2021 5.41 Yes 55 n/a n/a 0.001254 NP Inter (normality) 1 of 2 pH (s.u.) n/a Sulfate (mg/L) HGWC-101 14 3/17/2021 107 Yes 49 n/a n/a 4.082 n/a n/a 0.0007731 NP Inter (normality) 1 of 2 NP Inter (normality) 1 of 2 3/17/2021 332 49 Sulfate (mg/L) HGWC-102 14 n/a Yes n/a n/a 4.082 n/a n/a 0.0007731 Sulfate (mg/L) HGWC-103 14 n/a 3/18/2021 286 Yes 49 n/a n/a 4.082 n/a n/a 0.0007731 NP Inter (normality) 1 of 2 Sulfate (mg/L) HGWC-105 3/18/2021 196 Yes 49 n/a n/a 4.082 n/a 0.0007731 NP Inter (normality) 1 of 2 3/18/2021 128 49 4.082 0.0007731 NP Inter (normality) 1 of 2 Sulfate (mg/L) **HGWC-107** 14 n/a Yes n/a n/a n/a n/a HGWC-109 14 3/17/2021 28.3 Yes 49 n/a n/a 4.082 0.0007731 NP Inter (normality) 1 of 2 Sulfate (mg/L) n/a n/a n/a Sulfate (mg/L) HGWC-117 14 3/19/2021 162 Yes 49 n/a 4.082 n/a n/a 0.0007731 NP Inter (normality) 1 of 2 Sulfate (mg/L) **HGWC-118** n/a 3/18/2021 87.8 Yes 49 n/a n/a 4.082 n/a n/a 0.0007731 NP Inter (normality) 1 of 2 Total Dissolved Solids (mg/L) HGWC-102 3/17/2021 626 48 4.769 0.5223 0.0009403 Param Inter 1 of 2 332.6 Yes 0 None In(x) n/a Total Dissolved Solids (mg/L) HGWC-103 3/18/2021 465 Yes 48 4.769 0.5223 None In(x) 0.0009403 Param Inter 1 of 2 Total Dissolved Solids (mg/L) HGWC-105 332.6 n/a 3/18/2021 410 Yes 48 4.769 0.5223 0 None In(x) 0.0009403 Param Inter 1 of 2

3/19/2021 371

n/a

Yes

0.5223

None

In(x)

0.0009403 Param Inter 1 of 2

Total Dissolved Solids (mg/L) HGWC-117

Appendix III Interwell Prediction Limit - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/15/2021, 4:46 PM

Constituent	Well	Unner Lim	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Boron (mg/L)	HGWC-101	0.05	n/a	3/17/2021		Yes	49	n/a	n/a	14.29	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-102	0.05	n/a	3/17/2021		Yes	49	n/a	n/a	14.29	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-103	0.05	n/a	3/18/2021		Yes	49	n/a	n/a	14.29	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-105	0.05	n/a	3/18/2021		Yes	49	n/a	n/a	14.29	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-107	0.05	n/a	3/18/2021		Yes	49	n/a	n/a	14.29	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-109	0.05	n/a	3/17/2021		Yes	49	n/a	n/a	14.29	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-117	0.05	n/a	3/19/2021		Yes	49	n/a	n/a	14.29	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-118	0.05	n/a	3/18/2021		Yes	49	n/a	n/a	14.29	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-101	73.3	n/a	3/17/2021		No	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-102	73.3	n/a	3/17/2021		Yes	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-102	73.3		3/18/2021			49	n/a		0			0.0007731	NP Inter (normality) 1 of 2
	HGWC-105	73.3	n/a n/a	3/18/2021		Yes Yes	49	n/a	n/a n/a	0	n/a n/a	n/a	0.0007731	` ,
Calcium (mg/L)	HGWC-107	73.3		3/18/2021		No	49	n/a		0		n/a	0.0007731	NP Inter (normality) 1 of 2 NP Inter (normality) 1 of 2
Calcium (mg/L)		73.3	n/a				49	n/a	n/a n/a	0	n/a	n/a		NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-109		n/a	3/17/2021		No				0	n/a	n/a	0.0007731	
Calcium (mg/L)	HGWC-117	73.3	n/a	3/19/2021		Yes	49	n/a	n/a	-	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-118	73.3	n/a	3/18/2021		Yes	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-101	5.7	n/a	3/17/2021		No	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-102	5.7	n/a	3/17/2021		Yes	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-103	5.7	n/a	3/18/2021		Yes	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-105	5.7	n/a	3/18/2021		No	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-107	5.7	n/a	3/18/2021		No	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-109		n/a	3/17/2021		No	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-117	5.7	n/a	3/19/2021		Yes	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-118	5.7	n/a	3/18/2021		No	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-101	0.1716	n/a	3/17/2021		No	55	0.07748	0.04777	23.64	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-102		n/a	3/17/2021		No	55	0.07748	0.04777	23.64	Kaplan-Meier		0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-103	0.1716	n/a	3/18/2021		No	55	0.07748	0.04777	23.64	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-105	0.1716	n/a	3/18/2021	0.1ND	No	55	0.07748	0.04777	23.64	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-107	0.1716	n/a	3/18/2021	0.1ND	No	55	0.07748	0.04777	23.64	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-109	0.1716	n/a	3/17/2021	0.089J	No	55	0.07748	0.04777	23.64	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-117	0.1716	n/a	3/19/2021	0.1ND	No	55	0.07748	0.04777	23.64	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-118	0.1716	n/a	3/18/2021	0.079J	No	55	0.07748	0.04777	23.64	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
pH (s.u.)	HGWC-101	7.54	5.47	3/17/2021	5.41	Yes	55	n/a	n/a	0	n/a	n/a	0.001254	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-102	7.54	5.47	3/17/2021	5.78	No	55	n/a	n/a	0	n/a	n/a	0.001254	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-103	7.54	5.47	3/18/2021	5.51	No	55	n/a	n/a	0	n/a	n/a	0.001254	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-105	7.54	5.47	3/18/2021	6.57	No	55	n/a	n/a	0	n/a	n/a	0.001254	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-107	7.54	5.47	3/18/2021	6.2	No	55	n/a	n/a	0	n/a	n/a	0.001254	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-109	7.54	5.47	3/17/2021	6.55	No	55	n/a	n/a	0	n/a	n/a	0.001254	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-117	7.54	5.47	3/19/2021	6.14	No	55	n/a	n/a	0	n/a	n/a	0.001254	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-118	7.54	5.47	3/18/2021	7.11	No	55	n/a	n/a	0	n/a	n/a	0.001254	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-101	14	n/a	3/17/2021	107	Yes	49	n/a	n/a	4.082	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-102	14	n/a	3/17/2021	332	Yes	49	n/a	n/a	4.082	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-103	14	n/a	3/18/2021	286	Yes	49	n/a	n/a	4.082	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-105	14	n/a	3/18/2021	196	Yes	49	n/a	n/a	4.082	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-107	14	n/a	3/18/2021	128	Yes	49	n/a	n/a	4.082	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-109	14	n/a	3/17/2021	28.3	Yes	49	n/a	n/a	4.082	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-117	14	n/a	3/19/2021	162	Yes	49	n/a	n/a	4.082	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-118	14	n/a	3/18/2021	87.8	Yes	49	n/a	n/a	4.082	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-101	332.6	n/a	3/17/2021	213	No	48	4.769	0.5223	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-102	332.6	n/a	3/17/2021	626	Yes	48	4.769	0.5223	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-103	332.6	n/a	3/18/2021		Yes	48	4.769	0.5223	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-105	332.6	n/a	3/18/2021		Yes	48	4.769	0.5223	0	None	In(x)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-107		n/a	3/18/2021		No	48	4.769	0.5223	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-109	332.6	n/a	3/17/2021		No	48	4.769	0.5223	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-117	332.6	n/a	3/19/2021		Yes	48	4.769	0.5223	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-118	332.6	n/a	3/18/2021		No	48	4.769	0.5223	0	None	ln(x)	0.0009403	Param Inter 1 of 2
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Appendix III Trend Test - Prediction Limit Exceedances - Significant Results Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/19/2021, 1:22 PM

	Plant Hammond	Client: Southern C	ompany L	daa: Hammon	d AP-4	Printed	4/19/202	21, 1:22 PM			
Constituent	Well	Slope	Calc.	<u>Critical</u>	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Boron (mg/L)	HGWC-107	0.04373	64	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-113 (bg)	0.3842	45	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-105	5.165	61	48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-113 (bg)	-1.781	-58	-43	Yes	13	0	n/a	n/a	0.01	NP

Appendix III Trend Test - Prediction Limit Exceedances - All Results

	Plant Hammond	Client: Southern C	ompany	Data: Hammor	nd AP-4	Printed	I 4/19/202	21, 1:22 PM			
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Boron (mg/L)	HGWA-111 (bg)	-0.001004	-12	-43	No	13	15.38	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-112 (bg)	-0.00203	-27	-43	No	13	23.08	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-113 (bg)	-0.0003883	-7	-43	No	13	7.692	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-101	0.006042	23	43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-102	-0.4388	-14	-25	No	9	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-103	0.02192	13	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-105	0.03697	21	43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-107	0.04373	64	48	Yes	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-109	-0.02609	-45	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-117	0.09547	42	43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-118	-0.005229	-3	-43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-111 (bg)	2.851	14	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-112 (bg)	0.05064	12	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-113 (bg)	0.3842	45	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-102	-17.65	-11	-25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-103	3.572	33	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-105	5.165	61	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-117	2.328	32	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-118	1.559	31	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-111 (bg)	-0.0137	-1	-43	No	13	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-112 (bg)	0.03351	16	43	No	13	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-113 (bg)	-0.08208	-34	-43	No	13	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-102	-0.04157	-3	-25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-103	0.1966	29	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-117	2.698	43	43	No	13	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-111 (bg)	0.06841	12	53	No	15	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-112 (bg)	-0.02033	-23	-53	No	15	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-113 (bg)	0.02744	30	53	No	15	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWC-101	0.01391	28	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-111 (bg)	0	-10	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-112 (bg)	-0.02244	-29	-43	No	13	15.38	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-113 (bg)	-1.781	-58	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-101	-2.874	-25	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-102	12.25	2	25	No	9	11.11	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-103	0	1	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-105	-5.151	-34	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-107	-0.4844	-22	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-109	-2.891	-37	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-117	0	-1	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-118	-0.2732	-7	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-111 (bg)	6.82	13	43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-112 (bg)	-1.162	-8	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-113 (bg)	-0.8749	-1	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-102	-70.01	-12	-25	No	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-103	-3.687	-15	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-105	12.57	21	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-117	-1.931	-1	-48	No	14	0	n/a	n/a	0.01	NP

Upper Tolerance Limit

	Pla	nt Hammond	Client: 5	Souther	n Company	Data: Hami	mond AP-4	Printed 4/21/2	2021, 3:51 PM		
Constituent	Upper Lim.	Lower Lim.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Antimony (mg/L)	0.003	n/a	n/a	38	n/a	n/a	92.11	n/a	n/a	0.1424	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	n/a	52	n/a	n/a	92.31	n/a	n/a	0.06944	NP Inter(NDs)
Barium (mg/L)	0.1	n/a	n/a	52	n/a	n/a	0	n/a	n/a	0.06944	NP Inter(normality)
Beryllium (mg/L)	0.0019	n/a	n/a	52	n/a	n/a	86.54	n/a	n/a	0.06944	NP Inter(NDs)
Cadmium (mg/L)	0.0005	n/a	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)
Chromium (mg/L)	0.0061	n/a	n/a	52	n/a	n/a	26.92	n/a	n/a	0.06944	NP Inter(normality)
Cobalt (mg/L)	0.005	n/a	n/a	52	n/a	n/a	84.62	n/a	n/a	0.06944	NP Inter(NDs)
Combined Radium 226 & 228 (pCi/L)	1.406	n/a	n/a	52	0.6644	0.3612	0	None	No	0.05	Inter
Fluoride (mg/L)	0.1747	n/a	n/a	55	0.07748	0.04777	23.64	Kaplan-Meier	No	0.05	Inter
Lead (mg/L)	0.0016	n/a	n/a	52	n/a	n/a	59.62	n/a	n/a	0.06944	NP Inter(NDs)
Lithium (mg/L)	0.03	n/a	n/a	52	n/a	n/a	44.23	n/a	n/a	0.06944	NP Inter(normality)
Mercury (mg/L)	0.0005	n/a	n/a	38	n/a	n/a	76.32	n/a	n/a	0.1424	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	38	n/a	n/a	86.84	n/a	n/a	0.1424	NP Inter(NDs)
Selenium (mg/L)	0.01	n/a	n/a	38	n/a	n/a	78.95	n/a	n/a	0.1424	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	38	n/a	n/a	100	n/a	n/a	0.1424	NP Inter(NDs)

PLANT HAMMOND AP-4 GWPS										
Constituent Name	MCL	Background Limit	GWPS							
Antimony, Total (mg/L)	0.006	0.003	0.006							
Arsenic, Total (mg/L)	0.01	0.005	0.01							
Barium, Total (mg/L)	2	0.1	2							
Beryllium, Total (mg/L)	0.004	0.0019	0.004							
Cadmium, Total (mg/L)	0.005	0.005	0.005							
Chromium, Total (mg/L)	0.1	0.0061	0.1							
Cobalt, Total (mg/L)		0.005	0.005							
Combined Radium, Total (pCi/L)	5	1.41	5							
Fluoride, Total (mg/L)	4	0.18	4							
Lead, Total (mg/L)		0.0016	0.0016							
Lithium, Total (mg/L)		0.03	0.03							
Mercury, Total (mg/L)	0.002	0.0005	0.002							
Molybdenum, Total (mg/L)		0.01	0.01							
Selenium, Total (mg/L)	0.05	0.01	0.05							
Thallium, Total (mg/L)	0.002	0.001	0.002							

^{*}MCL = Maximum Contaminant Level

^{*}GWPS = Groundwater Protection Standard

Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/27/2021, 10:27 AM

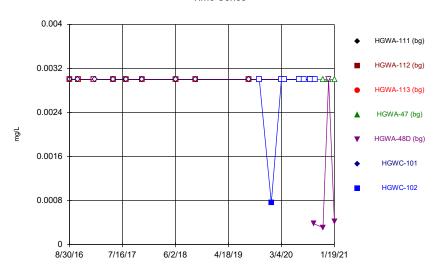
Constituent Well Upper Lim. Lower Lim. Compliance Sig. N <u>%NDs</u> <u>Transform</u> <u>Alpha</u> Method HGWC-117 0.009463 0.005094 0.005 Yes 14 0 0.01 Cobalt (mg/L) Param. No

Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/27/2021, 10:27 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	<u>Alpha</u>	Method
Arsenic (mg/L)	HGWC-101	0.005	0.00039	0.01	No	14	92.86	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-102	0.005	0.00036	0.01	No	9	55.56	No	0.002	NP (NDs)
Arsenic (mg/L)	HGWC-109	0.002693	0.001421	0.01	No	14	0	sqrt(x)	0.01	Param.
Arsenic (mg/L)	HGWC-117	0.005	0.00037	0.01	No	14	92.86	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-118	0.005	0.001	0.01	No	14	92.86	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-101	0.04678	0.04071	2	No	14	0	x^(1/3)	0.01	Param.
Barium (mg/L)	HGWC-102	0.03457	0.02654	2	No	9	0	No	0.01	Param.
Barium (mg/L)	HGWC-103	0.04124	0.03526	2	No	14	0	x^2	0.01	Param.
Barium (mg/L)	HGWC-105	0.0745	0.066	2	No	14	0	No	0.01	NP (normality)
Barium (mg/L)	HGWC-107	0.03966	0.0373	2	No	14	0	x^2	0.01	Param.
Barium (mg/L)	HGWC-109	0.08872	0.08207	2	No	14	0	No	0.01	Param.
Barium (mg/L)	HGWC-117	0.05161	0.04101	2	No	14	0	No	0.01	Param.
Barium (mg/L)	HGWC-118	0.06381	0.05441	2	No	14	0	No No	0.01	Param.
Beryllium (mg/L)	HGWC-101 HGWC-103	0.003 0.003	0.000057 0.000088	0.004 0.004	No	14 14	50 79 57	No No	0.01 0.01	NP (normality) NP (NDs)
Beryllium (mg/L) Beryllium (mg/L)	HGWC-103	0.003	0.000068	0.004	No No	14	78.57 64.29	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-117	0.003	0.000008	0.004	No	14	92.86	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-101	0.0002259	0.000033	0.005	No	14	14.29	No	0.01	Param.
Cadmium (mg/L)	HGWC-102	0.0007433	0.0001404	0.005	No	9	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-103	0.0007911	0.0006603	0.005	No	14	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-107	0.00025	0.00009	0.005	No	14	50	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-117	0.0008213	0.0005758	0.005	No	14	0	No	0.01	Param.
Chromium (mg/L)	HGWC-101	0.005	0.00075	0.1	No	14	71.43	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-102	0.005	0.00051	0.1	No	9	77.78	No	0.002	NP (NDs)
Chromium (mg/L)	HGWC-103	0.005	0.00069	0.1	No	14	57.14	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-105	0.005	0.00064	0.1	No	14	71.43	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-107	0.005	0.00074	0.1	No	14	92.86	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-109	0.005	0.0014	0.1	No	14	85.71	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-117	0.005	0.001	0.1	No	14	71.43	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-118	0.005	0.00098	0.1	No	14	64.29	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-101	0.002817	0.001983	0.005	No	14	7.143	No	0.01	Param.
Cobalt (mg/L)	HGWC-102	0.002337	0.0009837	0.005	No	9	0	ln(x)	0.01	Param.
Cobalt (mg/L)	HGWC-103	0.002335	0.001751	0.005	No	14	0	No	0.01	Param.
Cobalt (mg/L)	HGWC-105	0.0025	0.00045	0.005	No	14	21.43	No	0.01	NP (normality)
Cobait (mg/L)	110110 100		0.00010							(),
Cobalt (mg/L)	HGWC-109	0.00223	0.001266	0.005	No	14	0	No	0.01	Param.
Cobalt (mg/L) Cobalt (mg/L)	HGWC-109 HGWC-117	0.00223 0.009463	0.001266 0.005094	0.005 0.005	No Yes	14	0 0	No No	0.01 0.01	Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L)	HGWC-109 HGWC-117 HGWC-118	0.00223 0.009463 0.0025	0.001266 0.005094 0.0004	0.005 0.005 0.005	No Yes No	14 14	0 0 42.86	No No	0.01 0.01 0.01	Param. Param. NP (normality)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101	0.00223 0.009463 0.0025 0.9491	0.001266 0.005094 0.0004 0.4125	0.005 0.005 0.005 5	No Yes No No	14 14 14	0 0 42.86 0	No No No	0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102	0.00223 0.009463 0.0025 0.9491 1.438	0.001266 0.005094 0.0004 0.4125 0.4452	0.005 0.005 0.005 5	No Yes No No No	14 14 14 8	0 0 42.86 0	No No No No	0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103	0.00223 0.009463 0.0025 0.9491 1.438 0.9845	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412	0.005 0.005 0.005 5 5	No Yes No No No	14 14 14 8 14	0 0 42.86 0 0	No No No No No	0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201	0.005 0.005 0.005 5 5 5	No Yes No No No No	14 14 14 8 14 14	0 0 42.86 0 0 0	No No No No No No	0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015	0.005 0.005 0.005 5 5 5 5	No Yes No No No No No	14 14 14 8 14 14	0 0 42.86 0 0 0	No No No No No No No No No	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012	0.005 0.005 0.005 5 5 5 5 5	No Yes No No No No No No	14 14 14 8 14 14 14	0 0 42.86 0 0 0 0 0	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041	0.005 0.005 0.005 5 5 5 5 5 5	No Yes No No No No No No No No No No No No No	14 14 8 14 14 14 14 14	0 0 42.86 0 0 0 0 0 0	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-117	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013	0.005 0.005 0.005 5 5 5 5 5 5 5	No Yes No No No No No No No No No No No No No	14 14 14 8 14 14 14 14 14 13	0 0 42.86 0 0 0 0 0 0	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05	0.005 0.005 0.005 5 5 5 5 5 5 5 5 4	No Yes No No No No No No No No No No No No No	14 14 14 8 14 14 14 14 14 13 15	0 0 42.86 0 0 0 0 0 0 0 0	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1	0.005 0.005 0.005 5 5 5 5 5 5 5 4	No Yes No No No No No No No No No No No No No	14 14 14 8 14 14 14 14 14 13 15	0 0 42.86 0 0 0 0 0 0 0 0 0 0 86.67 88.89	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Poron. Param. Poron. Poron.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1	0.005 0.005 0.005 5 5 5 5 5 5 5 5 4	No Yes No No No No No No No No No No No No No	14 14 14 8 14 14 14 14 14 13 15	0 0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-102	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4	No Yes No No No No No No No No No No No No No	14 14 8 14 14 14 14 14 13 15 9	0 0 42.86 0 0 0 0 0 0 0 0 0 0 86.67 88.89	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Poron. Param. Poron. Poron.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-103	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4	No Yes No No No No No No No No No No No No No	14 14 8 14 14 14 14 14 13 15 9 15	0 42.86 0 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) NP (NDs) NP (NDs) NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4	No Yes No No No No No No No No No No No No No	14 14 14 8 14 14 14 14 13 15 9 15 15	0 0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Poram. Param. Param. Param. NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4 4	No Yes No No No No No No No No No No No No No	14 14 8 14 14 14 14 14 13 15 9 15 15	0 0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 13.33	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-109	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4 4 4	No Yes No No No No No No No No No No No No No	14 14 8 14 14 14 14 14 13 15 9 15 15 15	0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 13.33 53.33	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-117	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4 4 4 4	No Yes No No No No No No No No No No No No No	14 14 14 8 14 14 14 14 13 15 9 15 15 15 15 15	0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33 13.33 53.33	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Poram. Poram. NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009	0.005 0.005 0.005 5 5 5 5 5 5 4 4 4 4 4 4 4 4 4 4 4 4 4	No Yes No No No No No No No No No No No No No	14 14 14 8 14 14 14 14 13 15 9 15 15 15 15 16 14	0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33 13.33 53.33 0 92.86	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-105 HGWC-107 HGWC-107 HGWC-107 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.00011	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4 4 4 4 4 4 4 0.0016 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 8 14 14 14 14 14 13 15 9 15 15 15 15 15 16 14 9	0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 13.33 53.33 0 92.86 88.89	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-105 HGWC-107 HGWC-107 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-101 HGWC-101 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.16 0.1233 0.11 0.3 0.001 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.00011 0.00024	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4 4 4 4 4 4 4 0.0016 0.0016 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 8 14 14 14 14 14 15 9 15 15 15 16 14 9 14	0 42.86 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 13.33 53.33 0 92.86 88.89 64.29	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-105 HGWC-107 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001 0.001 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.00011 0.00024 0.000068 0.00021 0.000058	0.005 0.005 0.005 5 5 5 5 5 4 4 4 4 4 4 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 8 14 14 14 14 14 13 15 9 15 15 15 16 14 9 14 14	0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33 0 92.86 88.89 64.29 71.43 71.43 85.71	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-107 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.00011 0.00024 0.000068 0.00021 0.000058 0.00019	0.005 0.005 0.005 5 5 5 5 5 5 4 4 4 4 4 4 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 8 14 14 14 14 14 13 15 9 15 15 15 16 14 9 14 14 14	0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 13.33 53.33 0 92.86 88.89 64.29 71.43 71.43 85.71 64.29	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-107 HGWC-103 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-107	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.00011 0.00024 0.000068 0.00021 0.000058 0.00019 0.00025	0.005 0.005 0.005 5 5 5 5 5 5 4 4 4 4 4 4 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 8 14 14 14 14 14 13 15 9 15 15 15 15 16 14 9 14 14 14 14 14	0 42.86 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33 0 92.86 88.89 64.29 71.43 71.43 85.71 64.29 64.29	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-107 HGWC-109 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.001266 0.005094 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.0011 0.00024 0.00068 0.00021 0.000058 0.00019 0.00025 0.001026	0.005 0.005 0.005 5 5 5 5 5 5 4 4 4 4 4 4 4 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 15 9 15 15 15 16 14 9 14 14 14 14 14 19	0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 0 92.86 88.89 64.29 71.43 71.43 85.71 64.29 64.29 0	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-107 HGWC-109 HGWC-107 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-101 HGWC-101 HGWC-102 HGWC-107 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-117	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.001266 0.005094 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.0011 0.00024 0.00068 0.00021 0.00058 0.00019 0.00025 0.001026 0.0015	0.005 0.005 0.005 5 5 5 5 5 5 4 4 4 4 4 4 4 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 15 9 15 15 15 16 14 9 14 14 14 14 14 14 14 14 14 14	0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33 0 92.86 88.89 64.29 71.43 71.43 85.71 64.29 64.29 0 21.43	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-105 HGWC-107 HGWC-109 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.16 0.1233 0.11 0.3 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.0011 0.00024 0.00068 0.00021 0.00058 0.00019 0.00025 0.001026 0.0015 0.003824	0.005 0.005 0.005 5 5 5 5 5 5 4 4 4 4 4 4 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 15 9 15 15 15 16 14 9 14 14 14 14 14 14 14 14 14 14	0 42.86 0 0 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33 0 92.86 88.89 71.43 71.43 85.71 64.29 64.29 0 21.43 0	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) Param. NP (normality) Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-105 HGWC-107 HGWC-109 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-107 HGWC-107 HGWC-109 HGWC-107 HGWC-101 HGWC-101 HGWC-105 HGWC-107 HGWC-101 HGWC-105 HGWC-107 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001	0.001266 0.005094 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.00011 0.00024 0.000068 0.00021 0.000058 0.00019 0.00025 0.001026 0.0015 0.003824 0.00094	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4 4 4 4 4 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 15 9 15 15 15 16 14 9 14 14 14 14 14 14 14 14 14 14	0 42.86 0 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 13.33 53.33 0 92.86 88.89 71.43 71.43 85.71 64.29 0 21.43 0 57.14	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) Param. NP (NDs) Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-105 HGWC-107 HGWC-107 HGWC-109 HGWC-107 HGWC-101 HGWC-102 HGWC-103 HGWC-101 HGWC-102 HGWC-101 HGWC-102 HGWC-103 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-105 HGWC-107 HGWC-101 HGWC-102 HGWC-107 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.0072 0.0009 0.00011 0.00024 0.000068 0.00021 0.000058 0.00019 0.00025 0.001026 0.0015 0.003824 0.00094 0.001	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4 4 4 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.003 0.03 0.03 0.03	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 13 15 9 15 15 15 16 14 19 14 14 14 14 14 14 14 14 14 14	0 42.86 0 0 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33 13.33 53.33 71.43 85.71 64.29 0 21.43 0 57.14 50	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) Param. NP (NDs) Param. NP (NDs) NP (NDs) Param. NP (NDs) NP (NDs) NP (NDs) NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-105 HGWC-107 HGWC-109 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-107 HGWC-107 HGWC-109 HGWC-107 HGWC-101 HGWC-101 HGWC-105 HGWC-107 HGWC-101 HGWC-105 HGWC-107 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001	0.001266 0.005094 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.00011 0.00024 0.000068 0.00021 0.000058 0.00019 0.00025 0.001026 0.0015 0.003824 0.00094	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4 4 4 4 4 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 15 9 15 15 15 16 14 9 14 14 14 14 14 14 14 14 14 14	0 42.86 0 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 13.33 53.33 0 92.86 88.89 71.43 71.43 85.71 64.29 0 21.43 0 57.14	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) Param. NP (NDs) Param. NP (NDs)

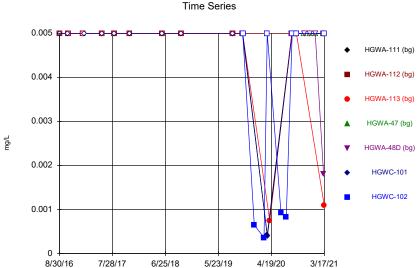
FIGURE A.



Constituent: Antimony Analysis Run 4/26/2021 5:20 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

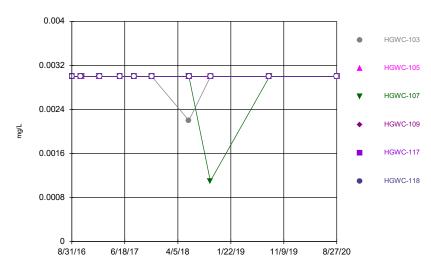
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

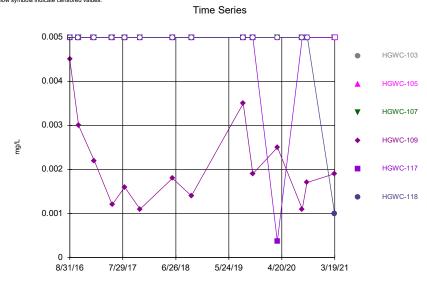


Constituent: Arsenic Analysis Run 4/26/2021 5:20 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

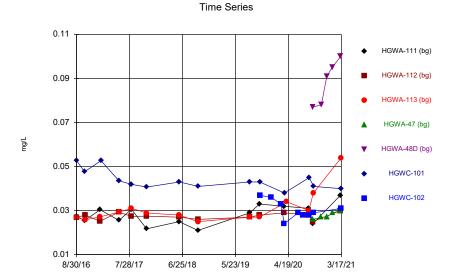
Time Series



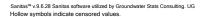
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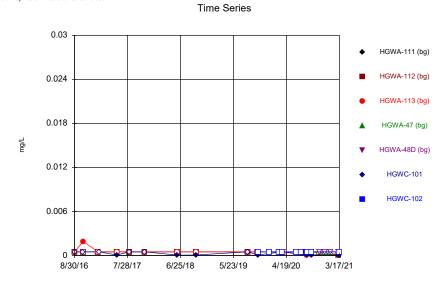


Constituent: Arsenic Analysis Run 4/26/2021 5:20 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

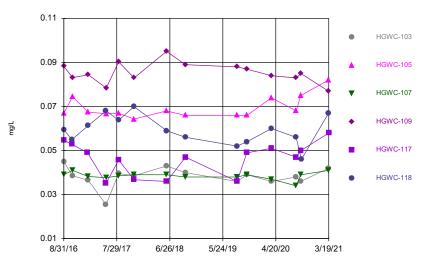


Constituent: Barium Analysis Run 4/26/2021 5:20 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

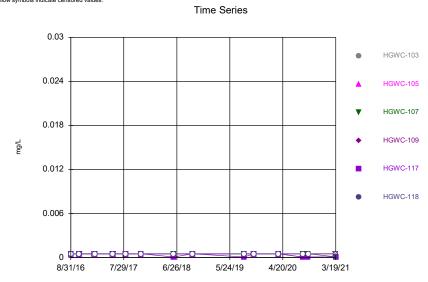




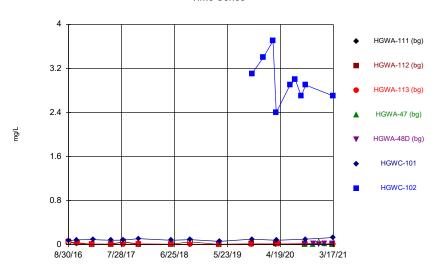
Constituent: Beryllium Analysis Run 4/26/2021 5:20 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Barium Analysis Run 4/26/2021 5:20 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



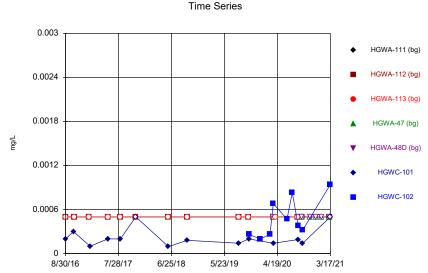
Constituent: Beryllium Analysis Run 4/26/2021 5:20 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Boron Analysis Run 4/26/2021 5:20 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

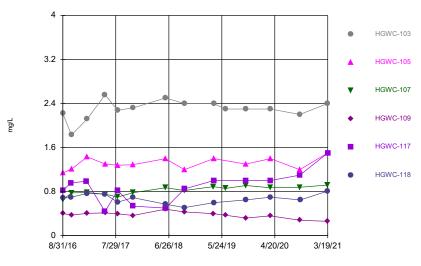
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.



Constituent: Cadmium Analysis Run 4/26/2021 5:20 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series

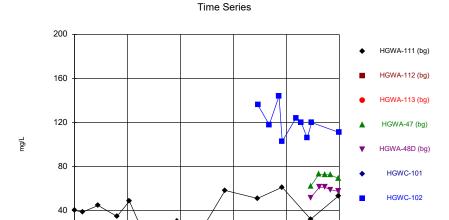


Constituent: Boron Analysis Run 4/26/2021 5:20 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

Time Series 0.003 HGWC-103 0.0024 **HGWC-105** HGWC-107 0.0018 HGWC-109 0.0012 **HGWC-117** HGWC-118 0.0006 8/31/16 7/29/17 6/26/18 5/24/19 4/20/20 3/19/21

Constituent: Cadmium Analysis Run 4/26/2021 5:20 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Calcium Analysis Run 4/26/2021 5:20 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

5/23/19

6/25/18

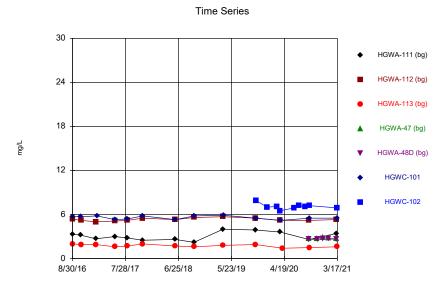
4/19/20

3/17/21

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

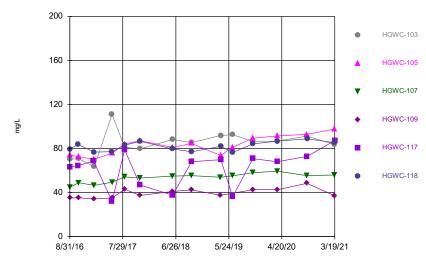
8/30/16

7/28/17



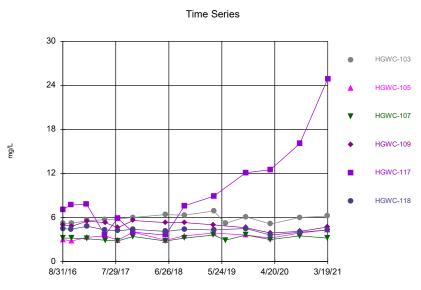
Constituent: Chloride Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series

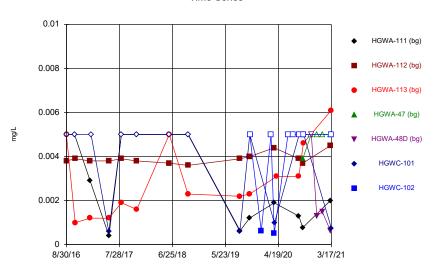


Constituent: Calcium Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

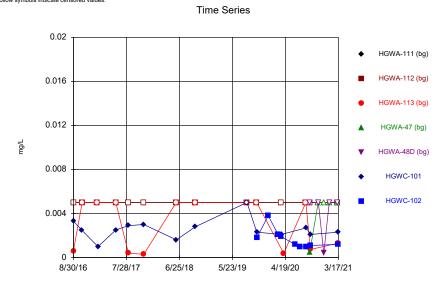


Constituent: Chloride Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



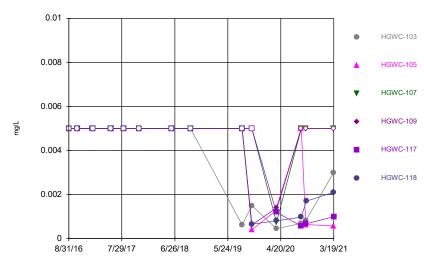
Constituent: Chromium Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.



Constituent: Cobalt Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



Constituent: Chromium Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

Time Series 0.02 HGWC-103 0.016 **HGWC-105** HGWC-107 0.012 **HGWC-109** mg/L 0.008 **HGWC-117** HGWC-118 0.004 8/31/16 7/29/17 6/26/18 5/24/19 4/20/20 3/19/21

Constituent: Cobalt Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

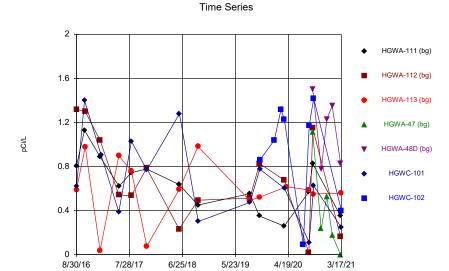
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

0.18

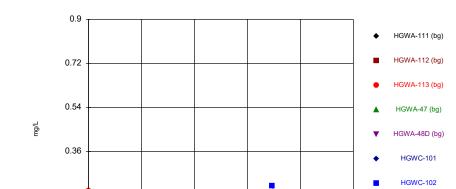
8/30/16

7/28/17



Constituent: Combined Radium 226 & 228 Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



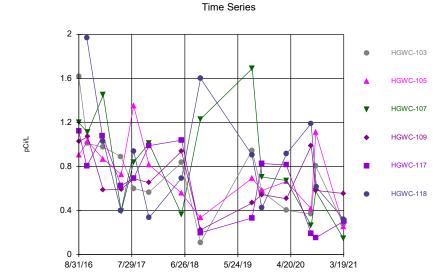
Constituent: Fluoride Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

5/23/19

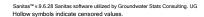
4/19/20

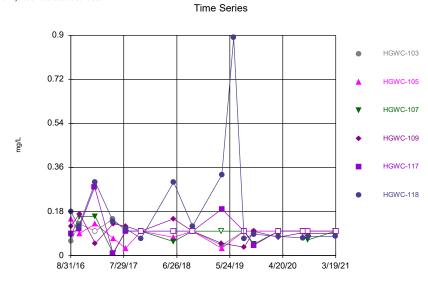
3/17/21

6/25/18

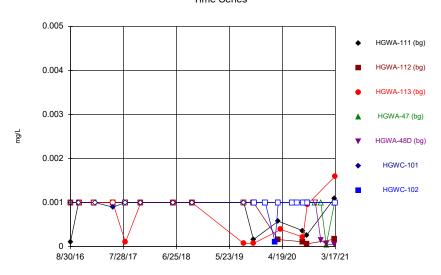


Constituent: Combined Radium 226 & 228 Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



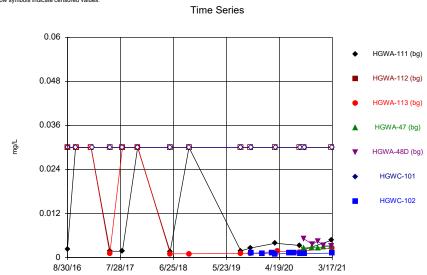


Constituent: Fluoride Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



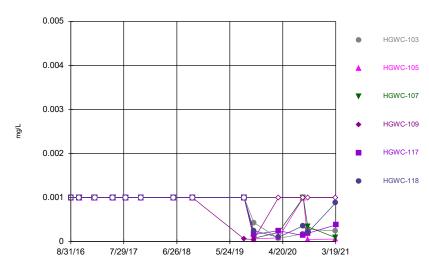
Constituent: Lead Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

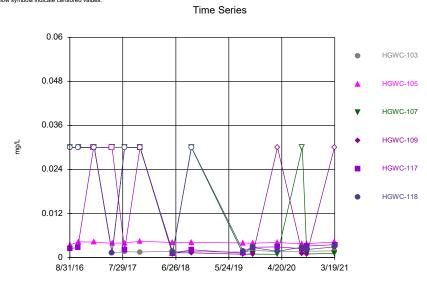


Constituent: Lithium Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

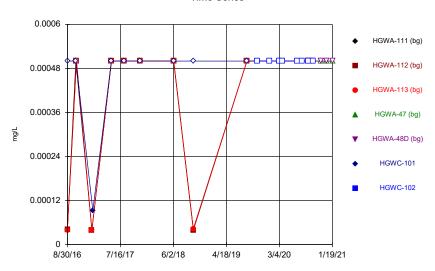
Time Series



Constituent: Lead Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

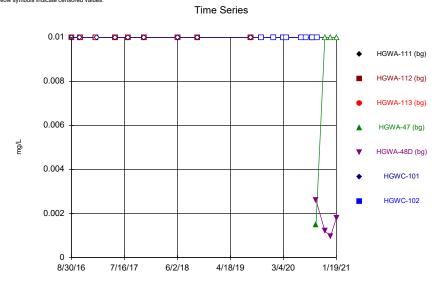


Constituent: Lithium Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



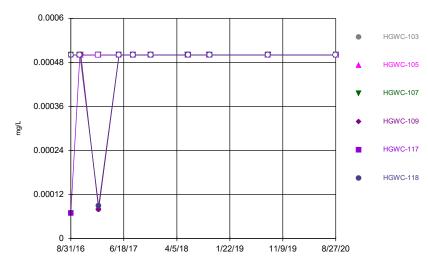
Constituent: Mercury Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

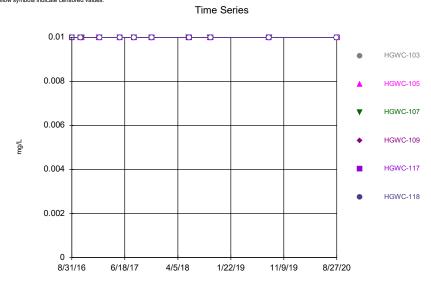


Constituent: Molybdenum Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series

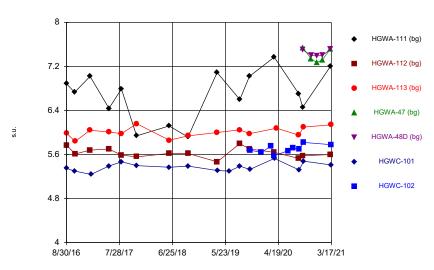


Constituent: Mercury Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Molybdenum Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4





Constituent: pH Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

8/30/16

7/16/17



Constituent: Selenium Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

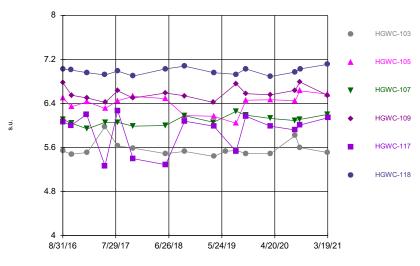
4/18/19

3/4/20

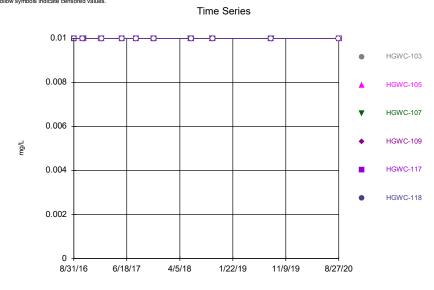
1/19/21

6/2/18

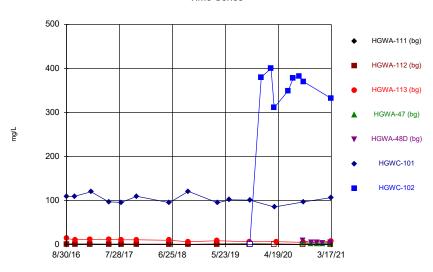
Time Series



Constituent: pH Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Selenium Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

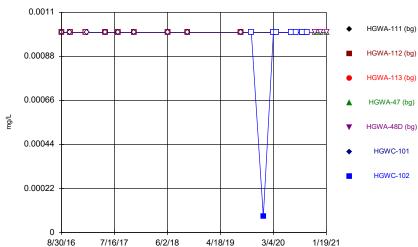


Constituent: Sulfate Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

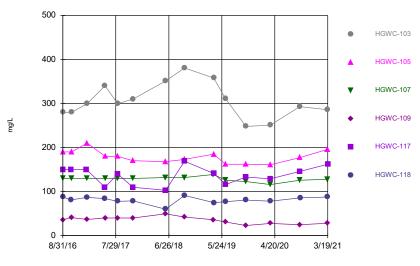
Hollow symbols indicate censored values.





Constituent: Thallium Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

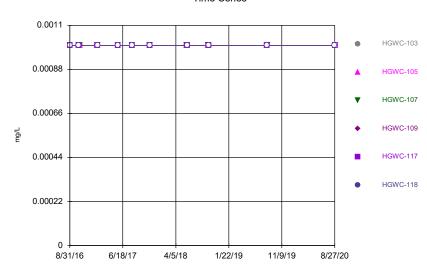
Time Series



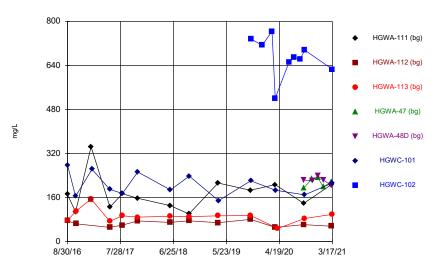
Constituent: Sulfate Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

Time Series

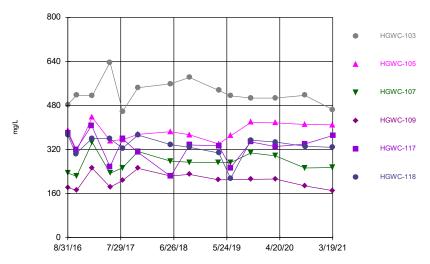


Constituent: Thallium Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Total Dissolved Solids Analysis Run 4/26/2021 5:21 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Time Series



Constituent: Total Dissolved Solids Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Constituent: Antimony (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.003	<0.003	<0.003				
8/31/2016						<0.003	
10/20/2016	<0.003					<0.003	
10/24/2016		<0.003	<0.003				
1/25/2017	<0.003	<0.003	<0.003				
1/31/2017						<0.003	
5/23/2017		<0.003	<0.003			<0.003	
5/24/2017	<0.003						
8/10/2017	<0.003	<0.003	<0.003			<0.003	
11/13/2017	<0.003	<0.003					
11/14/2017			<0.003			<0.003	
6/4/2018	<0.003	<0.003					
6/5/2018			<0.003				
6/6/2018						<0.003	
10/1/2018	<0.003	<0.003	<0.003				
10/3/2018						<0.003	
8/21/2019	<0.003	<0.003	<0.003				
8/22/2019						<0.003	
10/23/2019							<0.003
1/3/2020							0.00076 (J)
3/4/2020							<0.003
3/24/2020							<0.003
6/18/2020							<0.003
7/21/2020							<0.003
8/25/2020	<0.003	<0.003	<0.003				
8/27/2020						<0.003	<0.003
9/18/2020				<0.003	0.00038 (J)		
9/24/2020							<0.003
11/10/2020				<0.003			
11/11/2020					0.00031 (J)		
12/15/2020				<0.003	<0.003		
1/19/2021				<0.003	0.00042 (J)		

Constituent: Antimony (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
10/20/2016					<0.003	<0.003
10/24/2016	<0.003					
10/25/2016		<0.003	<0.003	<0.003		
1/27/2017					<0.003	
1/31/2017	<0.003	<0.003	<0.003	<0.003		<0.003
5/23/2017	<0.003				<0.003	<0.003
5/24/2017		<0.003	<0.003	<0.003		
8/10/2017	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
11/14/2017	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
6/6/2018	0.0022 (J)	<0.003	<0.003	<0.003		
6/7/2018					<0.003	<0.003
10/2/2018		<0.003	0.0011 (J)	<0.003		
10/3/2018	<0.003				<0.003	<0.003
8/22/2019	<0.003	<0.003			<0.003	<0.003
8/23/2019			<0.003	<0.003		
8/26/2020						<0.003
8/27/2020	<0.003	<0.003	<0.003	<0.003	<0.003	

Constituent: Arsenic (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	<0.005	<0.005				
8/31/2016						<0.005	
10/20/2016	<0.005					<0.005	
10/24/2016		<0.005	<0.005				
1/25/2017	<0.005	<0.005	<0.005				
1/31/2017						<0.005	
5/23/2017		<0.005	<0.005			<0.005	
5/24/2017	<0.005						
8/10/2017	<0.005	<0.005	<0.005			<0.005	
11/13/2017	<0.005	<0.005					
11/14/2017			<0.005			<0.005	
6/4/2018	<0.005	<0.005					
6/5/2018			<0.005				
6/6/2018						<0.005	
10/1/2018	<0.005	<0.005	<0.005				
10/3/2018						<0.005	
8/21/2019	<0.005	<0.005	<0.005				
8/22/2019						<0.005	
10/21/2019	<0.005						
10/22/2019		<0.005	<0.005				
10/23/2019						<0.005	<0.005
1/3/2020							0.00065 (J)
3/4/2020							0.00036 (J)
3/24/2020	0.00042 (J)	<0.005					<0.005
3/25/2020						0.00039 (J)	
4/9/2020			0.00074 (J)				
6/18/2020							0.00092 (J)
7/21/2020							0.00083 (J)
8/25/2020	<0.005	<0.005	<0.005				
8/27/2020						<0.005	<0.005
9/18/2020	<0.005	<0.005		<0.005	<0.005		
9/22/2020			<0.005				
9/24/2020						<0.005	<0.005
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	<0.005		
1/19/2021				<0.005	<0.005		
3/11/2021	<0.005						
3/12/2021		<0.005		<0.005	0.0018 (J)		
3/16/2021			0.0011 (J)				
3/17/2021						<0.005	<0.005

Constituent: Arsenic (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.005	<0.005	<0.005	0.0045 (J)	<0.005	<0.005
10/20/2016					<0.005	<0.005
10/24/2016	<0.005					
10/25/2016		<0.005	<0.005	0.003 (J)		
1/27/2017					<0.005	
1/31/2017	<0.005	<0.005	<0.005	0.0022 (J)		<0.005
5/23/2017	<0.005				<0.005	<0.005
5/24/2017		<0.005	<0.005	0.0012 (J)		
8/10/2017	<0.005	<0.005	<0.005	0.0016 (J)	<0.005	<0.005
11/14/2017	<0.005	<0.005	<0.005	0.0011 (J)	<0.005	<0.005
6/6/2018	<0.005	<0.005	<0.005	0.0018 (J)		
6/7/2018					<0.005	<0.005
10/2/2018		<0.005	<0.005	0.0014 (J)		
10/3/2018	<0.005				<0.005	<0.005
8/22/2019	<0.005	<0.005			<0.005	<0.005
8/23/2019			<0.005	0.0035 (J)		
10/22/2019			<0.005	0.0019 (J)	<0.005	<0.005
10/23/2019	<0.005	<0.005				
3/24/2020					0.00037 (J)	
3/25/2020	<0.005	<0.005	<0.005	0.0025 (J)		<0.005
8/26/2020						<0.005
8/27/2020	<0.005	<0.005	<0.005	0.0011 (J)	<0.005	
9/24/2020	<0.005	<0.005	<0.005			
9/25/2020				0.0017 (J)	<0.005	
9/28/2020						<0.005
3/17/2021				0.0019 (J)		
3/18/2021	<0.005	<0.005	<0.005			0.001 (J)
3/19/2021					<0.005	

Constituent: Barium (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.0275	0.0269	0.0269				
8/31/2016						0.0527	
10/20/2016	0.0255					0.0477	
10/24/2016		0.028	0.0258				
1/25/2017	0.0304	0.0252	0.0272				
1/31/2017						0.0527	
5/23/2017		0.0293	0.0293			0.0436	
5/24/2017	0.0256						
8/10/2017	0.0306	0.0274	0.031			0.0419	
11/13/2017	0.0217	0.0275					
11/14/2017			0.0289			0.0407	
6/4/2018	0.025	0.027					
6/5/2018			0.028				
6/6/2018						0.043	
10/1/2018	0.021	0.026	0.025				
10/3/2018						0.041	
8/21/2019	0.029	0.027	0.027				
8/22/2019						0.043	
10/21/2019	0.033						
10/22/2019		0.028	0.027				
10/23/2019						0.043	0.037
1/3/2020							0.036
3/4/2020							0.033
3/24/2020	0.032	0.029					0.024
3/25/2020						0.038	
4/9/2020			0.034				
6/18/2020							0.029
7/21/2020							0.028
8/25/2020	0.031	0.028	0.03				
8/27/2020						0.045	0.028
9/18/2020	0.024	0.025		0.026	0.077		
9/22/2020			0.038				
9/24/2020						0.041	0.029
11/10/2020				0.027			
11/11/2020					0.078		
12/15/2020				0.027	0.091		
1/19/2021				0.029	0.095		
3/11/2021	0.037						
3/12/2021		0.03		0.03	0.1		
3/16/2021			0.054				
3/17/2021						0.04	0.031

Constituent: Barium (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	0.045	0.067	0.0391	0.0883	0.0547	0.0595
10/20/2016					0.0529	0.055
10/24/2016	0.0386					
10/25/2016		0.0745	0.041	0.0831		
1/27/2017					0.049	
1/31/2017	0.0365	0.0674	0.0382	0.0844		0.0613
5/23/2017	0.0254				0.0352	0.068
5/24/2017		0.0668	0.0377	0.0784		
8/10/2017	0.0396	0.067	0.0385	0.0903	0.0457	0.0638
11/14/2017	0.0385	0.0643	0.039	0.083	0.0368	0.07
6/6/2018	0.043	0.068	0.039	0.095		
6/7/2018					0.036	0.059
10/2/2018		0.066	0.038	0.089		
10/3/2018	0.04				0.047	0.056
8/22/2019	0.036	0.066			0.036	0.052
8/23/2019			0.038	0.088		
10/22/2019			0.039	0.087	0.049	0.054
10/23/2019	0.039	0.066				
3/24/2020					0.051	
3/25/2020	0.036	0.074	0.037	0.084		0.06
8/26/2020						0.056
8/27/2020	0.038	0.068	0.034	0.083	0.047	
9/24/2020	0.036	0.075	0.039			
9/25/2020				0.085	0.05	
9/28/2020						0.046
3/17/2021				0.077		
3/18/2021	0.042	0.082	0.041			0.067
3/19/2021					0.058	

Constituent: Beryllium (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.0005	<0.0005	<0.0005				
8/31/2016						<0.0005	
10/20/2016	<0.0005					<0.0005	
10/24/2016		<0.0005	0.0019 (J)				
1/25/2017	<0.0005	<0.0005	<0.0005				
1/31/2017						<0.0005	
5/23/2017		<0.0005	<0.0005			7E-05 (J)	
5/24/2017	<0.0005						
8/10/2017	<0.0005	<0.0005	<0.0005			<0.0005	
11/13/2017	<0.0005	<0.0005					
11/14/2017			<0.0005			<0.0005	
6/4/2018	<0.0005	<0.0005					
6/5/2018			<0.0005				
6/6/2018						5.9E-05 (J)	
10/1/2018	<0.0005	<0.0005	<0.0005				
10/3/2018						6.5E-05 (J)	
8/21/2019	<0.0005	<0.0005	<0.0005				
8/22/2019						<0.0005	
10/21/2019	<0.0005						
10/22/2019		<0.0005	<0.0005				
10/23/2019						7.5E-05 (J)	<0.0005
1/3/2020							<0.0005
3/4/2020							<0.0005
3/24/2020	<0.0005	<0.0005					<0.0005
3/25/2020						<0.0005	
4/9/2020			<0.0005				
6/18/2020							<0.0005
7/21/2020							<0.0005
8/25/2020	4.7E-05 (J)	<0.0005	4.6E-05 (J)				
8/27/2020						5.7E-05 (J)	<0.0005
9/18/2020	<0.0005	<0.0005		<0.0005	<0.0005		
9/22/2020			9.9E-05 (J)				
9/24/2020						4.8E-05 (J)	<0.0005
11/10/2020				<0.0005			
11/11/2020					<0.0005		
12/15/2020				<0.0005	<0.0005		
1/19/2021				<0.0005	<0.0005		
3/11/2021	0.00014 (J)						
3/12/2021		5.4E-05 (J)		<0.0005	<0.0005		
3/16/2021			0.00018 (J)				
3/17/2021						5.9E-05 (J)	<0.0005

Constituent: Beryllium (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10/20/2016					<0.0005	<0.0005
10/24/2016	<0.0005					
10/25/2016		<0.0005	<0.0005	<0.0005		
1/27/2017					<0.0005	
1/31/2017	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
5/23/2017	<0.0005				<0.0005	<0.0005
5/24/2017		<0.0005	<0.0005	<0.0005		
8/10/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
11/14/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6/6/2018	<0.0005	<0.0005	<0.0005	<0.0005		
6/7/2018					6.8E-05 (J)	<0.0005
10/2/2018		<0.0005	<0.0005	<0.0005		
10/3/2018	<0.0005				<0.0005	<0.0005
8/22/2019	<0.0005	<0.0005			7.9E-05 (J)	<0.0005
8/23/2019			<0.0005	<0.0005		
10/22/2019			<0.0005	<0.0005	<0.0005	<0.0005
10/23/2019	<0.0005	<0.0005				
3/24/2020					<0.0005	
3/25/2020	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005
8/26/2020						<0.0005
8/27/2020	5E-05 (J)	<0.0005	<0.0005	<0.0005	4.9E-05 (J)	
9/24/2020	8.8E-05 (J)	<0.0005	<0.0005			
9/25/2020				<0.0005	6.6E-05 (J)	
9/28/2020						<0.0005
3/17/2021				<0.0005		
3/18/2021	6.1E-05 (J)	<0.0005	<0.0005			9.3E-05 (J)
3/19/2021					8.1E-05 (J)	

Constituent: Boron (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.1	<0.1	<0.1				
8/31/2016						0.0724 (J)	
10/20/2016	0.016 (J)					0.0877 (J)	
10/24/2016		0.0367 (J)	0.0226 (J)				
1/25/2017	0.0095 (J)	0.0075 (J)	0.009 (J)				
1/31/2017						0.0928	
5/23/2017		0.0073 (J)	0.0082 (J)			0.0795	
5/24/2017	0.0094 (J)						
8/10/2017	<0.1	<0.1	0.0061 (J)			0.0814	
11/13/2017	0.0103 (J)	0.0089 (J)					
11/14/2017			0.012 (J)			0.108	
6/4/2018	0.0065 (J)	0.007 (J)					
6/5/2018			0.0085 (J)				
6/6/2018						0.081	
10/1/2018	0.0054 (J)	<0.1	0.0042 (J)				
10/3/2018						0.092	
4/1/2019	0.0076 (J)						
4/2/2019		0.0043 (J)	0.0059 (J)				
4/4/2019						0.06 (X)	
10/21/2019	0.0097 (J)						
10/22/2019		0.016 (J)	0.01 (J)				
10/23/2019						0.1	3.1
1/3/2020							3.4
3/4/2020							3.7
3/24/2020	0.011 (J)	0.012 (J)					2.4
3/25/2020						0.08 (J)	
4/9/2020			0.012 (J)				
6/18/2020							2.9
7/21/2020							3
8/27/2020							2.7
9/18/2020	0.011 (J)	0.008 (J)		0.0082 (J)	0.015 (J)		
9/22/2020			0.021 (J)				
9/24/2020						0.1	2.9
11/10/2020				0.0064 (J)			
11/11/2020					0.014 (J)		
12/15/2020				<0.1	0.0083 (J)		
1/19/2021				0.015 (J)	0.015 (J)		
3/11/2021	0.01 (J)						
3/12/2021		0.0061 (J)		0.0067 (J)	0.012 (J)		
3/16/2021			0.011 (J)				
3/17/2021						0.13	2.7

Constituent: Boron (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	2.22	1.14	0.651	0.402	0.821	0.681
10/20/2016					0.956	0.697
10/24/2016	1.83					
10/25/2016		1.21	0.778	0.372		
1/27/2017					0.99	
1/31/2017	2.12	1.43	0.782	0.404		0.768
5/23/2017	2.56				0.438	0.754
5/24/2017		1.3	0.753	0.415		
8/10/2017	2.28	1.28	0.702	0.397	0.821	0.608
11/14/2017	2.32	1.29	0.78	0.366	0.536	0.691
6/6/2018	2.5	1.4	0.87	0.48		
6/7/2018					0.5	0.57
10/2/2018		1.2	0.82	0.43		
10/3/2018	2.4				0.85	0.51
4/3/2019			0.89	0.4		
4/4/2019	2.4	1.4 (X)				
4/5/2019					1 (X)	0.6 (X)
6/17/2019	2.3		0.86	0.37		
10/22/2019			0.91	0.32	1	0.65
10/23/2019	2.3	1.3				
3/24/2020					1	
3/25/2020	2.3	1.4	0.87	0.36		0.7
9/24/2020	2.2	1.2	0.88			
9/25/2020				0.28	1.1	
9/28/2020						0.65
3/17/2021				0.26		
3/18/2021	2.4	1.5	0.92			0.81
3/19/2021					1.5	

Constituent: Cadmium (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.0005	<0.0005	<0.0005				
8/31/2016						0.0002 (J)	
10/20/2016	<0.0005					0.0003 (J)	
10/24/2016		<0.0005	<0.0005				
1/25/2017	<0.0005	<0.0005	<0.0005				
1/31/2017						0.0001 (J)	
5/23/2017		<0.0005	<0.0005			0.0002 (J)	
5/24/2017	<0.0005						
8/10/2017	<0.0005	<0.0005	<0.0005			0.0002 (J)	
11/13/2017	<0.0005	<0.0005					
11/14/2017			<0.0005			<0.0005	
6/4/2018	<0.0005	<0.0005					
6/5/2018			<0.0005				
6/6/2018						9.5E-05 (J)	
10/1/2018	<0.0005	<0.0005	<0.0005				
10/3/2018						0.00018 (J)	
8/21/2019	<0.0005	<0.0005	<0.0005				
8/22/2019						0.00014 (J)	
10/21/2019	<0.0005						
10/22/2019		<0.0005	<0.0005				
10/23/2019						0.0002 (J)	0.00026 (J)
1/3/2020							0.0002 (J)
3/4/2020							0.00026 (J)
3/24/2020	<0.0005	<0.0005					0.00068 (J)
3/25/2020						0.00014 (J)	
4/9/2020			<0.0005				
6/18/2020							0.00047 (J)
7/21/2020							0.00083 (J)
8/25/2020	<0.0005	<0.0005	<0.0005				
8/27/2020						0.00019 (J)	0.00038 (J)
9/18/2020	<0.0005	<0.0005		<0.0005	<0.0005		
9/22/2020			<0.0005				
9/24/2020						0.00014 (J)	0.00032 (J)
11/10/2020				<0.0005			
11/11/2020					<0.0005		
12/15/2020				<0.0005	<0.0005		
1/19/2021				<0.0005	<0.0005		
3/11/2021	<0.0005						
3/12/2021		<0.0005		<0.0005	<0.0005		
3/16/2021			<0.0005				
3/17/2021						<0.0005	0.00094
	8/31/2016 10/24/2016 10/24/2016 10/24/2016 1/25/2017 1/31/2017 5/23/2017 5/23/2017 5/24/2017 8/10/2017 11/13/2017 11/14/2018 6/6/2018 10/1/2018 10/3/2018 8/21/2019 10/21/2019 10/21/2019 10/23/2019 10/23/2019 10/23/2019 10/23/2019 1/3/2020 3/4/2020 3/4/2020 3/25/2020 4/9/2020 6/18/2020 7/21/2020 8/25/2020 8/27/2020 9/24/2020 11/10/2020 11/11/2020 11/11/2020 11/11/2020 11/11/2021 3/11/2021 3/11/2021	8/30/2016 <0.0005 8/31/2016 10/20/2016 <0.0005 10/24/2016 11/25/2017 <0.0005 1/31/2017 5/23/2017 5/24/2017 <0.0005 8/10/2017 <0.0005 11/13/2017 <0.0005 11/13/2017 <0.0005 11/14/2018 6/6/2018 10/1/2018 <0.0005 10/3/2018 8/21/2019 <0.0005 10/22/2019 10/21/2019 <0.0005 10/22/2019 10/23/2019 1/3/2020 3/4/2020 3/24/2020 3/25/2020 4/9/2020 6/18/2020 9/18/2020 9/18/2020 9/18/2020 11/10/2020 11/11/2020 11/11/2020 11/11/2020 11/11/2020 11/11/2020 11/11/2021 3/11/2021 3/11/2021 3/11/2021 3/11/2021 3/11/2021 3/11/2021 3/11/2021 3/11/2021	8/30/2016	8/30/2016	8/30/2016	8/30/2016	8302016

Constituent: Cadmium (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	0.0006 (J)	<0.0005	0.0001 (J)	<0.0005	0.0008 (J)	<0.0005
10/20/2016					0.0008 (J)	<0.0005
10/24/2016	0.0008 (J)					
10/25/2016		<0.0005	8E-05 (J)	<0.0005		
1/27/2017					0.0007 (J)	
1/31/2017	0.0006 (J)	<0.0005	9E-05 (J)	<0.0005		<0.0005
5/23/2017	0.0006 (J)				0.0005 (J)	<0.0005
5/24/2017		<0.0005	0.0001 (J)	<0.0005		
8/10/2017	0.0007 (J)	<0.0005	<0.0005	<0.0005	0.0004 (J)	<0.0005
11/14/2017	0.0007 (J)	<0.0005	<0.0005	<0.0005	0.0005 (J)	<0.0005
6/6/2018	0.00073 (J)	<0.0005	0.00012 (J)	<0.0005		
6/7/2018					0.00049 (J)	<0.0005
10/2/2018		<0.0005	0.0001 (J)	<0.0005		
10/3/2018	0.00078 (J)				0.00079 (J)	<0.0005
8/22/2019	0.0008 (J)	<0.0005			0.00064 (J)	<0.0005
8/23/2019			0.00011 (J)	<0.0005		
10/22/2019			<0.0005	<0.0005	0.00068 (J)	<0.0005
10/23/2019	0.00091 (J)	<0.0005				
3/24/2020					0.00079 (J)	
3/25/2020	0.00068 (J)	<0.0005	<0.0005	<0.0005		<0.0005
8/26/2020						<0.0005
8/27/2020	0.00082 (J)	<0.0005	<0.0005	<0.0005	0.0008 (J)	
9/24/2020	0.00076 (J)	<0.0005	<0.0005			
9/25/2020				<0.0005	0.00089 (J)	
9/28/2020						<0.0005
3/17/2021				<0.0005		
3/18/2021	0.00068	<0.0005	<0.0005			<0.0005
3/19/2021					0.001	

Constituent: Calcium (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	40.3	6.69	6.72				
8/31/2016						19.4	
10/20/2016	38.7					19.3	
10/24/2016		6.25	6.4				
1/25/2017	44.6	6.58	6.87				
1/31/2017						19.1	
5/23/2017		6.4	7.13			18.3	
5/24/2017	34.8						
8/10/2017	48.6	6.54	6.71			20.9	
11/13/2017	17.1	6.26					
11/14/2017			7.4			21.7	
6/4/2018	30.1	7.4					
6/5/2018			7.4				
6/6/2018						17	
10/1/2018	14.2 (J)	5.8	6.2				
10/3/2018						19.1 (J)	
4/1/2019	58.4						
4/2/2019		6.7	7.4				
4/4/2019						16.9	
10/21/2019	51						
10/22/2019		6.3	7.2				
10/23/2019						21.9	136
1/3/2020							118
3/4/2020							144
3/24/2020	61.2	7					103
3/25/2020						18.4	
4/9/2020			8.3				
6/18/2020							124
7/21/2020							120
8/27/2020							106
9/18/2020	32.2	6.5		62.2	51.8		
9/22/2020			7.9				
9/24/2020						20.3	120
11/10/2020				73.3			
11/11/2020					61.3		
12/15/2020				72.5	61.3		
1/19/2021				72.5	58.9		
3/11/2021	53.2						
3/12/2021		6.9		69.2	57.5		
3/16/2021			8.6				
3/17/2021						21.8	111

Constituent: Calcium (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	70.4	74.2	44.7	35.1	63.4	79.3
10/20/2016					64.4	83.7
10/24/2016	70.9					
10/25/2016		72.5	49	35.4		
1/27/2017					68.6	
1/31/2017	63.6	70.3	46.6	34.2		76.8
5/23/2017	111				32	77.2
5/24/2017		75.9	49.5	35.3		
8/10/2017	81.2	84	54.2	43.1	78.9	83.1
11/14/2017	79.7	87.2	53.2	37.4	46.9	86.7
6/6/2018	88.3	81	55	41.1		
6/7/2018					37.7	79.7
10/2/2018		84.7	55.4	42.5		
10/3/2018	85.3				68	77.1
4/3/2019			54	37.5		
4/4/2019	91.9	73.8				
4/5/2019					70	82
6/17/2019	92.6	81.2	55.3			
6/18/2019					36.3	76.5
10/22/2019			58.1	42.6	70.9	84.2
10/23/2019	86.5	89.4				
3/24/2020					68	
3/25/2020	86.8	91.4	59.5	42.6		86.8
9/24/2020	91.3	92.9	55.4			
9/25/2020				48.5	72.8	
9/28/2020						88.9
3/17/2021				37.3		
3/18/2021	83.7	97.7	56			85.4
3/19/2021					87.3	

Constituent: Chloride (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	3.3	5.4	2				
8/31/2016						5.7	
10/20/2016	3.2					5.7	
10/24/2016		5.2	1.9				
1/25/2017	2.7	5	1.9				
1/31/2017						5.8	
5/23/2017		5.1	1.6			5.3	
5/24/2017	3						
8/10/2017	2.8	5.2	1.7			5.4	
11/13/2017	2.5	5.5					
11/14/2017			2			5.8	
6/4/2018	2.6	5.3					
6/5/2018			1.7				
6/6/2018						5.3	
10/1/2018	2.2	5.6	1.6				
10/3/2018						5.8	
4/1/2019	4						
4/2/2019		5.7	1.8				
4/4/2019						5.9	
10/21/2019	3.9						
10/22/2019		5.5	1.9				
10/23/2019						5.5	7.9
1/3/2020							7
3/4/2020							7.1
3/24/2020	3.6	5.2					6.5
3/25/2020						5.2	
4/9/2020			1.4				
6/18/2020							6.9
7/21/2020							7.2
8/27/2020							7.1
9/18/2020	2.6	5.2		2.7	2.6		
9/22/2020			1.5				
9/24/2020						5.5	7.2
11/10/2020				2.7			
11/11/2020					2.6		
12/15/2020				2.9	2.7		
1/19/2021				2.8	2.7		
3/11/2021	3.4						
3/12/2021		5.3		2.7	2.6		
3/16/2021			1.6				
3/17/2021						5.5	6.9

Constituent: Chloride (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	5.2	3	3.2	5	7.1	4.5
10/20/2016					7.7	4.4
10/24/2016	5.2					
10/25/2016		2.8	3.2	4.8		
1/27/2017					7.8	
1/31/2017	5.6	3.3	3.1	5.5		4.8
5/23/2017	5.7				3.6	4.3
5/24/2017		3.5	2.9	5.3		
8/10/2017	5.8	2.9	2.8	4.6	5.9	4.2
11/14/2017	6	4	3.4	5.6	4	4.4
6/6/2018	6.4	2.9	2.8	5.3		
6/7/2018					3.6	4.1
10/2/2018		3.5	3.2	5.3		
10/3/2018	6.3				7.6	4.4
4/3/2019			3.6	5		
4/4/2019	6.9	3.9				
4/5/2019					8.9	4.3
6/17/2019	5.2		2.9			
10/22/2019			3.6	4.6	12.1	4.5
10/23/2019	6.1	3.6				
3/24/2020					12.5	
3/25/2020	5.1	3.2	3	3.9		3.6
9/24/2020	6	3.9	3.5			
9/25/2020				4.1	16.1	
9/28/2020						4
3/17/2021				4.7		
3/18/2021	6.2	4.3	3.2			4.3
3/19/2021					24.9	

Constituent: Chromium (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	0.0038 (J)	<0.005				
8/31/2016						<0.005	
10/20/2016	<0.005					<0.005	
10/24/2016		0.0039 (J)	0.001 (J)				
1/25/2017	0.0029 (J)	0.0038 (J)	0.0012 (J)				
1/31/2017						<0.005	
5/23/2017		0.0038 (J)	0.0012 (J)			0.0006 (J)	
5/24/2017	0.0004 (J)						
8/10/2017	<0.005	0.0039 (J)	0.0019 (J)			<0.005	
11/13/2017	<0.005	0.0038 (J)					
11/14/2017			0.0016 (J)			<0.005	
6/4/2018	<0.005	0.0037 (J)					
6/5/2018			<0.005				
6/6/2018						<0.005	
10/1/2018	<0.005	0.0036 (J)	0.0023 (J)				
10/3/2018						<0.005	
8/21/2019	0.00061 (J)	0.0039 (J)	0.0022 (J)				
8/22/2019						0.00064 (J)	
10/21/2019	0.0012 (J)						
10/22/2019		0.004 (J)	0.0023 (J)				
10/23/2019						<0.005	<0.005
1/3/2020							0.00063 (J)
3/4/2020							<0.005
3/24/2020	0.0019 (J)	0.0044 (J)					0.00051 (J)
3/25/2020						0.00098 (J)	
4/9/2020			0.0031 (J)				
6/18/2020							<0.005
7/21/2020							<0.005
8/25/2020	0.0013 (J)	0.0039 (J)	0.0031 (J)				
8/27/2020						<0.005	<0.005
9/18/2020	0.00077 (J)	0.0037 (J)		0.0039 (J)	<0.005		
9/22/2020			0.0046 (J)				
9/24/2020						<0.005	<0.005
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	0.0013 (J)		
1/19/2021				<0.005	0.0015 (J)		
3/11/2021	0.002 (J)						
3/12/2021		0.0045 (J)		<0.005	0.00062 (J)		
3/16/2021			0.0061				
3/17/2021						0.00075 (J)	<0.005

Constituent: Chromium (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	110/4/0 100	110/4/0 105	110000 107	110000 100	110/4/0 117	110000 110
0/04/0040	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
10/20/2016					<0.005	<0.005
10/24/2016	<0.005					
10/25/2016		<0.005	<0.005	<0.005		
1/27/2017					<0.005	
1/31/2017	<0.005	<0.005	<0.005	<0.005		<0.005
5/23/2017	<0.005				<0.005	<0.005
5/24/2017		<0.005	<0.005	<0.005		
8/10/2017	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
11/14/2017	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
6/6/2018	<0.005	<0.005	<0.005	<0.005		
6/7/2018					<0.005	<0.005
10/2/2018		<0.005	<0.005	<0.005		
10/3/2018	<0.005				<0.005	<0.005
8/22/2019	0.00063 (J)	<0.005			<0.005	<0.005
8/23/2019			<0.005	<0.005		
10/22/2019			<0.005	0.00062 (J)	<0.005	0.00066 (J)
10/23/2019	0.0015 (J)	0.0004 (J)				
3/24/2020					0.0012 (J)	
3/25/2020	0.00045 (J)	0.0013 (J)	0.00074 (J)	0.0014 (J)		0.00081 (J)
8/26/2020						0.00098 (J)
8/27/2020	0.00069 (J)	<0.005	<0.005	<0.005	0.00057 (J)	
9/24/2020	0.00081 (J)	0.00064 (J)	<0.005			
9/25/2020				<0.005	0.00067 (J)	
9/28/2020						0.0017 (J)
3/17/2021				<0.005		. ,
3/18/2021	0.003 (J)	0.00058 (J)	<0.005			0.0021 (J)
3/19/2021	(-,	(0)			0.001 (J)	
3/13/2021					0.001 (0)	

Constituent: Cobalt (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.005	<0.005	0.0006 (J)				
8/31/2016						0.0033 (J)	
10/20/2016	<0.005					0.0025 (J)	
10/24/2016		<0.005	<0.005				
1/25/2017	<0.005	<0.005	<0.005				
1/31/2017						0.001 (J)	
5/23/2017		<0.005	<0.005			0.0025 (J)	
5/24/2017	<0.005						
8/10/2017	<0.005	<0.005	0.0004 (J)			0.0029 (J)	
11/13/2017	<0.005	<0.005					
11/14/2017			0.0003 (J)			0.003 (J)	
6/4/2018	<0.005	<0.005					
6/5/2018			<0.005				
6/6/2018						0.0016 (J)	
10/1/2018	<0.005	<0.005	<0.005				
10/3/2018						0.0028 (J)	
8/21/2019	<0.005	<0.005	<0.005				
8/22/2019						<0.005	
10/21/2019	<0.005						
10/22/2019		<0.005	<0.005				
10/23/2019						0.0023 (J)	0.0018 (J)
1/3/2020							0.0038 (J)
3/4/2020							0.0021 (J)
3/24/2020	<0.005	<0.005					0.0019 (J)
3/25/2020						0.0021 (J)	
4/9/2020			0.00037 (J)				
6/18/2020							0.0012 (J)
7/21/2020							0.00098 (J)
8/25/2020	<0.005	<0.005	<0.005				
8/27/2020						0.0027 (J)	0.001 (J)
9/18/2020	<0.005	<0.005		0.00049 (J)	<0.005		
9/22/2020			0.00074 (J)				
9/24/2020						0.0021 (J)	0.0011 (J)
11/10/2020				<0.005			
11/11/2020					<0.005		
12/15/2020				<0.005	0.00039 (J)		
1/19/2021				<0.005	<0.005		
3/11/2021	<0.005						
3/12/2021		<0.005		<0.005	<0.005		
3/16/2021			0.0013 (J)				
3/17/2021						0.0023 (J)	0.0012 (J)

Constituent: Cobalt (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV

			Plant Ha	mmond	Client: Sou	uthern Company	Data: Hammond AP-4	
	HGWC-103	HGWC-105	HGWC-107	HGWC	C-109	HGWC-117	HGWC-118	
8/31/2016	0.0018 (J)	0.0014 (J)	<0.005	0.0023	3 (J)	0.0035 (J)	<0.005	
10/20/2016						0.0045 (J)	<0.005	
10/04/0010	0.0010 (1)							

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-116
8/31/2016	0.0018 (J)	0.0014 (J)	<0.005	0.0023 (J)	0.0035 (J)	<0.005
10/20/2016					0.0045 (J)	<0.005
10/24/2016	0.0018 (J)					
10/25/2016		0.0013 (J)	<0.005	0.0017 (J)		
1/27/2017					0.0041 (J)	
1/31/2017	0.0016 (J)	0.0006 (J)	<0.005	0.0017 (J)		<0.005
5/23/2017	0.0014 (J)				0.0071 (J)	0.0005 (J)
5/24/2017		0.0007 (J)	<0.005	0.002 (J)		
8/10/2017	0.0025 (J)	0.0006 (J)	<0.005	0.0012 (J)	0.0031 (J)	0.0003 (J)
11/14/2017	0.002 (J)	0.0005 (J)	<0.005	0.0014 (J)	0.0062 (J)	0.0004 (J)
6/6/2018	0.0031 (J)	0.00056 (J)	<0.005	0.0014 (J)		
6/7/2018					0.0083 (J)	<0.005
10/2/2018		<0.005	<0.005	0.00081 (J)		
10/3/2018	0.0023 (J)				0.005 (J)	<0.005
8/22/2019	0.0019 (J)	<0.005			0.012	0.0003 (J)
8/23/2019			<0.005	0.0027 (J)		
10/22/2019			<0.005	0.0022 (J)	0.0064	0.00061 (J)
10/23/2019	0.0021 (J)	0.00038 (J)				
3/24/2020					0.0087	
3/25/2020	0.0022 (J)	0.00047 (J)	<0.005	0.0022 (J)		<0.005
8/26/2020						0.00061 (J)
8/27/2020	0.0019 (J)	<0.005	<0.005	0.00086 (J)	0.011	
9/24/2020	0.0019 (J)	0.00044 (J)	<0.005			
9/25/2020				0.001 (J)	0.011	
9/28/2020						0.00048 (J)
3/17/2021				0.003 (J)		
3/18/2021	0.0021 (J)	0.00045 (J)	<0.005			0.0012 (J)
3/19/2021					0.011	

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.804 (U)	1.32 (U)	0.587 (U)				
8/31/2016						0.621 (U)	
10/20/2016	1.13 (U)					1.4	
10/24/2016		1.3 (U)	0.979 (U)				
1/25/2017	0.888 (U)	1.04 (U)	0.038 (U)				
1/31/2017						0.906 (U)	
5/23/2017		0.541 (U)	0.898 (U)			0.388 (U)	
5/24/2017	0.622 (U)						
8/10/2017	0.745 (U)	0.536 (U)	0.759 (U)			1.03 (U)	
11/13/2017	0.778 (U)	0.786 (U)					
11/14/2017			0.0762 (U)			0.769 (U)	
6/4/2018	0.637 (U)	0.233 (U)					
6/5/2018			0.594 (U)				
6/6/2018						1.28 (U)	
10/1/2018	0.451 (U)	0.494 (U)	0.982				
10/3/2018						0.302 (U)	
8/21/2019	0.553 (U)	0.514 (U)	0.492 (U)				
8/22/2019						0.474 (U)	
10/21/2019	0.351 (U)						
10/22/2019		0.828 (U)	0.523 (U)				
10/23/2019						0.776 (U)	0.858 (U)
1/22/2020							1.04 (U)
3/4/2020							1.32
3/24/2020	0.26 (U)	0.677 (U)					1.23 (U)
3/25/2020						0.603 (U)	
4/9/2020			0.617 (U)				
7/21/2020							0.0938 (U)
8/25/2020	0.57 (U)	0.0182 (U)	0.587 (U)				
8/27/2020						0.109 (U)	1.17 (U)
9/18/2020	0.828 (U)	1.15 (U)		1.11 (U)	1.5 (U)		
9/22/2020			0.551 (U)				
9/24/2020						0.625 (U)	1.42
11/10/2020				0.234 (U)			
11/11/2020					0.776 (U)		
12/15/2020				0.529 (U)	1.23 (U)		
1/19/2021				0.176 (U)	1.35 (U)		
3/11/2021	0.354 (U)						
3/12/2021		0.164 (U)		0 (U)	0.829 (U)		
3/16/2021			0.559 (U)				
3/17/2021						0.248 (U)	0.401 (U)

Constituent: Combined Radium 226 & 228 (pCi/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	1.62	0.906 (U)	1.2	1.03	1.12	
10/20/2016					0.803 (U)	1.97
10/24/2016	1.01 (U)					
10/25/2016		1.03	1.11 (U)	1.07		
1/27/2017					1.08 (U)	
1/31/2017	0.976 (U)	0.868 (U)	1.45	0.588 (U)		1.03
5/23/2017	0.891 (U)				0.624 (U)	0.398 (U)
5/24/2017		0.728 (U)	0.393 (U)	0.593 (U)		
8/10/2017	0.601 (U)	1.35	0.84 (U)	0.691 (U)	0.695 (U)	0.938 (U)
11/14/2017	0.567 (U)	0.817 (U)	1.01 (U)	0.653 (U)	0.99 (U)	0.335 (U)
6/6/2018	0.836 (U)	0.559 (U)	0.365 (U)	0.939 (U)		
6/7/2018					1.04 (U)	0.696 (U)
10/2/2018		0.336 (U)	1.23	0.225 (U)		
10/3/2018	0.111 (U)				0.198 (U)	1.6 (U)
8/22/2019	0.946 (U)	0.694 (U)			0.333 (U)	0.904 (U)
8/23/2019			1.69	0.47 (U)		
10/22/2019			0.705 (U)	0.545 (U)	0.827 (U)	0.424 (U)
10/23/2019	0.571 (U)	0.584 (U)				
3/24/2020					0.815 (U)	
3/25/2020	0.403 (U)	0.663 (U)	0.673 (U)	0.508 (U)		0.915 (U)
8/26/2020						1.19
8/27/2020	0.37 (U)	0.416 (U)	0.264 (U)	0.989 (U)	0.193 (U)	
9/24/2020	0.804 (U)	1.11 (U)	0.576 (U)			
9/25/2020				0.584 (U)	0.155 (U)	
9/28/2020						0.613 (U)
3/17/2021				0.556 (U)		
3/18/2021	0.274 (U)	0.252 (U)	0.145 (U)			0.323 (U)
3/19/2021					0.303 (U)	

Constituent: Fluoride (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.07 (J)	0.04 (J)	0.2 (J)				
8/31/2016						0.05 (J)	
10/20/2016	0.07 (J)					0.03 (J)	
10/24/2016		0.05 (J)	0.16 (J)				
1/25/2017	0.14 (J)	<0.1	0.15 (J)				
1/31/2017						<0.1	
5/23/2017		0.004 (J)	0.18 (J)			<0.1	
5/24/2017	0.02 (J)						
8/10/2017	0.06 (J)	0.03 (J)	0.19 (J)			<0.1	
11/13/2017	<0.1	<0.1					
11/14/2017			0.16 (J)			<0.1	
6/4/2018	0.032 (J)	<0.1					
6/5/2018			0.18 (J)				
6/6/2018						<0.1	
10/1/2018	<0.1	<0.1	0.078 (J)				
10/3/2018						<0.1	
4/1/2019	0.042 (J)						
4/2/2019		<0.1	0.18 (J)				
4/4/2019						<0.1	
8/21/2019	0.048 (J)	<0.1	0.11 (J)				
8/22/2019						<0.1	
10/21/2019	0.12 (J)						
10/22/2019		0.05 (J)	0.18 (J)				
10/23/2019						<0.1	0.22 (J)
1/3/2020							<0.1
3/4/2020							<0.1
3/24/2020	0.076 (J)	<0.1					<0.1
3/25/2020						<0.1	
4/9/2020			0.14 (J)				
6/18/2020							<0.1
7/21/2020							<0.1
8/25/2020	0.052 (J)	<0.1	0.17				
8/27/2020						<0.1	<0.1
9/18/2020	<0.1	<0.1		0.067 (J)	0.098 (J)		
9/22/2020			0.16				
9/24/2020						<0.1	<0.1
11/10/2020				0.065 (J)			
11/11/2020					0.083 (J)		
12/15/2020				0.064 (J)	0.081 (J)		
1/19/2021				0.057 (J)	0.079 (J)		
3/11/2021	0.057 (J)						
3/12/2021		<0.1		0.062 (J)	0.085 (J)		
3/16/2021			0.18				
3/17/2021						<0.1	<0.1

Constituent: Fluoride (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118	
8/31/2016	0.06 (J)	0.15 (J)	0.08 (J)	0.12 (J)	0.09 (J)	0.18 (J)	
10/20/2016					0.11 (J)	0.12 (J)	
10/24/2016	0.13 (J)						
10/25/2016		0.09 (J)	0.16 (J)	0.17 (J)			
1/27/2017					0.28 (J)		
1/31/2017	<0.1	0.13 (J)	0.16 (J)	0.05 (J)		0.3	
5/23/2017	0.15 (J)				0.01 (J)	0.14 (J)	
5/24/2017		0.07 (J)	0.009 (J)	0.13 (J)			
8/10/2017	<0.1	0.03 (J)	<0.1	0.12 (J)	0.1 (J)	0.11 (J)	
11/14/2017	<0.1	<0.1	<0.1	<0.1	<0.1	0.07 (J)	
6/6/2018	<0.1	0.074 (J)	0.057 (J)	0.15 (J)			
6/7/2018					<0.1	0.3	
10/2/2018		<0.1	<0.1	<0.1			
10/3/2018	<0.1				<0.1	0.12 (J)	
4/3/2019			<0.1	0.05 (J)			
4/4/2019	0.042 (J)	0.03 (J)					
4/5/2019					0.19 (J)	0.33	
6/18/2019						0.89	
8/22/2019	<0.1	<0.1			<0.1	0.07 (J)	
8/23/2019			<0.1	0.034 (J)			
10/22/2019			0.047 (J)	0.099 (J)	0.042 (J)	0.087 (J)	
10/23/2019	<0.1	<0.1					
3/24/2020					<0.1		
3/25/2020	<0.1	<0.1	<0.1	0.075 (J)		0.078 (J)	
8/26/2020						0.072 (J)	
8/27/2020	<0.1	<0.1	<0.1	0.094 (J)	<0.1		
9/24/2020	<0.1	<0.1	0.064 (J)				
9/25/2020				0.091 (J)	<0.1		
9/28/2020						0.078 (J)	
3/17/2021				0.089 (J)			
3/18/2021	<0.1	<0.1	<0.1			0.079 (J)	
3/19/2021					<0.1		

Constituent: Lead (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.0001 (J)	<0.001	<0.001				
8/31/2016						<0.001	
10/20/2016	<0.001					<0.001	
10/24/2016		<0.001	<0.001				
1/25/2017	<0.001	<0.001	<0.001				
1/31/2017						<0.001	
5/23/2017		<0.001	<0.001			0.0009 (J)	
5/24/2017	<0.001						
8/10/2017	<0.001	<0.001	0.0001 (J)			<0.001	
11/13/2017	<0.001	<0.001					
11/14/2017			<0.001			<0.001	
6/4/2018	<0.001	<0.001					
6/5/2018			<0.001				
6/6/2018						<0.001	
10/1/2018	<0.001	<0.001	<0.001				
10/3/2018						<0.001	
8/21/2019	<0.001	<0.001	7.1E-05 (J)				
8/22/2019						<0.001	
10/21/2019	0.00016 (J)						
10/22/2019		<0.001	7.3E-05 (J)				
10/23/2019						<0.001	<0.001
1/3/2020							<0.001
3/4/2020							0.00011 (J)
3/24/2020	0.00058 (J)	0.00016 (J)					<0.001
3/25/2020						<0.001	
4/9/2020			0.00039 (J)				
6/18/2020							<0.001
7/21/2020							<0.001
8/25/2020	0.00036 (J)	0.00011 (J)	0.00022 (J)				
8/27/2020						<0.001	<0.001
9/18/2020	0.00026 (J)	6.5E-05 (J)		<0.001	<0.001		
9/22/2020			0.00096 (J)				
9/24/2020						<0.001	<0.001
11/10/2020				<0.001			
11/11/2020					<0.001		
12/15/2020				<0.001	0.00015 (J)		
1/19/2021				3.8E-05 (J)	5.6E-05 (J)		
3/11/2021	0.0011						
3/12/2021		0.00017 (J)		<0.001	4.8E-05 (J)		
3/16/2021			0.0016				
3/17/2021						<0.001	<0.001

Constituent: Lead (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10/20/2016					<0.001	<0.001
10/24/2016	<0.001					
10/25/2016		<0.001	<0.001	<0.001		
1/27/2017					<0.001	
1/31/2017	<0.001	<0.001	<0.001	<0.001		<0.001
5/23/2017	<0.001				<0.001	<0.001
5/24/2017		<0.001	<0.001	<0.001		
8/10/2017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
11/14/2017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6/6/2018	<0.001	<0.001	<0.001	<0.001		
6/7/2018					<0.001	<0.001
10/2/2018		<0.001	<0.001	<0.001		
10/3/2018	<0.001				<0.001	<0.001
8/22/2019	<0.001	<0.001			<0.001	<0.001
8/23/2019			<0.001	5.8E-05 (J)		
10/22/2019			7.9E-05 (J)	5.4E-05 (J)	0.00016 (J)	0.00025 (J)
10/23/2019	0.00043 (J)	6.8E-05 (J)				
3/24/2020					0.00025 (J)	
3/25/2020	7.6E-05 (J)	8.5E-05 (J)	0.00021 (J)	<0.001		0.0001 (J)
8/26/2020						0.00036 (J)
8/27/2020	0.00018 (J)	<0.001	<0.001	<0.001	0.00014 (J)	
9/24/2020	0.00028 (J)	4.9E-05 (J)	0.00034 (J)			
9/25/2020				<0.001	0.00019 (J)	
9/28/2020						0.00022 (J)
3/17/2021				<0.001		
3/18/2021	0.00024 (J)	5.8E-05 (J)	9.1E-05 (J)			0.00088 (J)
3/19/2021					0.00038 (J)	

Constituent: Lithium (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	0.0022 (J)	<0.03	<0.03				
8/31/2016						<0.03	
10/20/2016	<0.03					<0.03	
10/24/2016		<0.03	<0.03				
1/25/2017	<0.03	<0.03	<0.03				
1/31/2017						<0.03	
5/23/2017		<0.03	0.0011 (J)			<0.03	
5/24/2017	0.0017 (J)						
8/10/2017	0.0017 (J)	<0.03	<0.03			<0.03	
11/13/2017	<0.03	<0.03					
11/14/2017			<0.03			<0.03	
6/4/2018	0.0016 (J)	<0.03					
6/5/2018			0.001 (J)				
6/6/2018						<0.03	
10/1/2018	<0.03	<0.03	0.001 (J)				
10/3/2018						<0.03	
8/21/2019	0.0018 (J)	<0.03	0.0011 (J)				
8/22/2019						<0.03	
10/21/2019	0.0026 (J)						
10/22/2019		<0.03	0.0011 (J)				
10/23/2019						<0.03	0.0012 (J)
1/3/2020							0.0011 (J)
3/4/2020							0.0013 (J)
3/24/2020	0.0039 (J)	<0.03					0.00084 (J)
3/25/2020						<0.03	
4/9/2020			0.0017 (J)				
6/18/2020							0.0013 (J)
7/21/2020							0.0013 (J)
8/25/2020	0.0033 (J)	<0.03	0.0014 (J)				
8/27/2020						<0.03	0.0011 (J)
9/18/2020	0.0021 (J)	<0.03		0.0026 (J)	0.0051 (J)		
9/22/2020			0.0018 (J)				
9/24/2020						<0.03	0.0011 (J)
11/10/2020				0.0028 (J)			
11/11/2020					0.0036 (J)		
12/15/2020				0.0026 (J)	0.0045 (J)		
1/19/2021				0.003 (J)	0.0032 (J)		
3/11/2021	0.0047 (J)						
3/12/2021		<0.03		0.0031 (J)	0.0031 (J)		
3/16/2021			0.0026 (J)				
3/17/2021						<0.03	0.0012 (J)

Constituent: Lithium (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.03	0.0034 (J)	<0.03	<0.03	0.0024 (J)	<0.03
10/20/2016					0.0027 (J)	<0.03
10/24/2016	<0.03					
10/25/2016		0.0043 (J)	<0.03	<0.03		
1/27/2017					<0.03	
1/31/2017	<0.03	0.0042 (J)	<0.03	<0.03		<0.03
5/23/2017	0.0012 (J)				<0.03	0.0012 (J)
5/24/2017		0.0039 (J)	<0.03	0.0012 (J)		
8/10/2017	0.0016 (J)	0.004 (J)	<0.03	<0.03	0.0021 (J)	<0.03
11/14/2017	0.0015 (J)	0.0044 (J)	<0.03	<0.03	<0.03	<0.03
6/6/2018	0.0017 (J)	0.0041 (J)	0.00099 (J)	0.0013 (J)		
6/7/2018					0.0011 (J)	0.0015 (J)
10/2/2018		0.0041 (J)	<0.03	0.0013 (J)		
10/3/2018	0.0016 (J)				0.0021 (J)	<0.03
8/22/2019	0.0015 (J)	0.004 (J)			0.0012 (J)	0.0018 (J)
8/23/2019			0.00092 (J)	0.0009 (J)		
10/22/2019			0.00094 (J)	0.00088 (J)	0.0028 (J)	0.0027 (J)
10/23/2019	0.002 (J)	0.0039 (J)				
3/24/2020					0.0029 (J)	
3/25/2020	0.0016 (J)	0.0041 (J)	0.00091 (J)	<0.03		0.0017 (J)
8/26/2020						0.0028 (J)
8/27/2020	0.0016 (J)	0.0037 (J)	<0.03	0.0011 (J)	0.0024 (J)	
9/24/2020	0.0017 (J)	0.0038 (J)	0.00098 (J)			
9/25/2020				0.001 (J)	0.0031 (J)	
9/28/2020						0.0022 (J)
3/17/2021				<0.03		
3/18/2021	0.0018 (J)	0.0042 (J)	0.0011 (J)			0.0029 (J)
3/19/2021					0.0035 (J)	

Constituent: Mercury (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	4E-05 (J)	4.1E-05 (J)	4E-05 (J)				
8/31/2016						<0.0005	
10/20/2016	<0.0005					<0.0005	
10/24/2016		<0.0005	<0.0005				
1/25/2017	4E-05 (J)	4E-05 (J)	4E-05 (J)				
1/31/2017						9.3E-05 (J)	
5/23/2017		<0.0005	<0.0005			<0.0005	
5/24/2017	<0.0005						
8/10/2017	<0.0005	<0.0005	<0.0005			<0.0005	
11/13/2017	<0.0005	<0.0005					
11/14/2017			<0.0005			<0.0005	
6/4/2018	<0.0005	<0.0005					
6/5/2018			<0.0005				
6/6/2018						<0.0005	
10/1/2018	4.3E-05 (J)	3.9E-05 (J)	4.3E-05 (J)				
10/3/2018						<0.0005	
8/21/2019	<0.0005	<0.0005	<0.0005				
8/22/2019						<0.0005	
10/23/2019							<0.0005
1/3/2020							<0.0005
3/4/2020							<0.0005
3/24/2020							<0.0005
6/18/2020							<0.0005
7/21/2020							<0.0005
8/25/2020	<0.0005	<0.0005	<0.0005				
8/27/2020						<0.0005	<0.0005
9/18/2020				<0.0005	<0.0005		
9/24/2020							<0.0005
11/10/2020				<0.0005			
11/11/2020					<0.0005		
12/15/2020				<0.0005	<0.0005		
1/19/2021				<0.0005	<0.0005		

Constituent: Mercury (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

<0.0005

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.0005	<0.0005	<0.0005	<0.0005	7E-05 (J)	<0.0005
10/20/2016					<0.0005	<0.0005
10/24/2016	<0.0005					
10/25/2016		<0.0005	<0.0005	<0.0005		
1/27/2017					<0.0005	
1/31/2017	8E-05 (J)	<0.0005	<0.0005	8E-05 (J)		9E-05 (J)
5/23/2017	<0.0005				<0.0005	<0.0005
5/24/2017		<0.0005	<0.0005	<0.0005		
8/10/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
11/14/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6/6/2018	<0.0005	<0.0005	<0.0005	<0.0005		
6/7/2018					<0.0005	<0.0005
10/2/2018		<0.0005	<0.0005	<0.0005		
10/3/2018	<0.0005				<0.0005	<0.0005
8/22/2019	<0.0005	<0.0005			<0.0005	<0.0005
8/23/2019			<0.0005	<0.0005		
8/26/2020						<0.0005

<0.0005

<0.0005

8/27/2020

<0.0005

<0.0005

Constituent: Molybdenum (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.01	<0.01	<0.01				
8/31/2016						<0.01	
10/20/2016	<0.01					<0.01	
10/24/2016		<0.01	<0.01				
1/25/2017	<0.01	<0.01	<0.01				
1/31/2017						<0.01	
5/23/2017		<0.01	<0.01			<0.01	
5/24/2017	<0.01						
8/10/2017	<0.01	<0.01	<0.01			<0.01	
11/13/2017	<0.01	<0.01					
11/14/2017			<0.01			<0.01	
6/4/2018	<0.01	<0.01					
6/5/2018			<0.01				
6/6/2018						<0.01	
10/1/2018	<0.01	<0.01	<0.01				
10/3/2018						<0.01	
8/21/2019	<0.01	<0.01	<0.01				
8/22/2019						<0.01	
10/23/2019							<0.01
1/3/2020							<0.01
3/4/2020							<0.01
3/24/2020							<0.01
6/18/2020							<0.01
7/21/2020							<0.01
8/25/2020	<0.01	<0.01	<0.01				
8/27/2020						<0.01	<0.01
9/18/2020				0.0015 (J)	0.0026 (J)		
9/24/2020							<0.01
11/10/2020				<0.01			
11/11/2020					0.0012 (J)		
12/15/2020				<0.01	0.00097 (J)		
1/19/2021				<0.01	0.0018 (J)		

Constituent: Molybdenum (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV

Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
10/20/2016					<0.01	<0.01
10/24/2016	<0.01					
10/25/2016		<0.01	<0.01	<0.01		
1/27/2017					<0.01	
1/31/2017	<0.01	<0.01	<0.01	<0.01		<0.01
5/23/2017	<0.01				<0.01	<0.01
5/24/2017		<0.01	<0.01	<0.01		
8/10/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/14/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
6/6/2018	<0.01	<0.01	<0.01	<0.01		
6/7/2018					<0.01	<0.01
10/2/2018		<0.01	<0.01	<0.01		
10/3/2018	<0.01				<0.01	<0.01
8/22/2019	<0.01	<0.01			<0.01	<0.01
8/23/2019			<0.01	<0.01		
8/26/2020						<0.01
8/27/2020	<0.01	<0.01	<0.01	<0.01	<0.01	

Constituent: pH (s.u.) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	6.89	5.77	5.99				
8/31/2016						5.35	
10/20/2016	6.73					5.3	
10/24/2016		5.61	5.84				
1/25/2017	7.02	5.68	6.04				
1/31/2017						5.24	
5/23/2017		5.7	6.01			5.39	
5/24/2017	6.44						
8/10/2017	6.79	5.59	5.98			5.47	
11/13/2017	5.94	5.56					
11/14/2017			6.16			5.4	
6/4/2018	6.12	5.62					
6/5/2018			5.86				
6/6/2018						5.37	
10/1/2018	5.92	5.62	5.94				
10/3/2018						5.39	
4/1/2019	7.09						
4/2/2019		5.47	6				
4/4/2019						5.31	
6/18/2019						5.3	
8/21/2019	6.6	5.8	6.05				
8/22/2019						5.39	
10/21/2019	7.02						
10/22/2019		5.7	5.98				
10/23/2019						5.33	5.68
1/3/2020							5.64
3/4/2020							5.75
3/24/2020	7.37	5.64					5.58
3/25/2020						5.53	
4/9/2020			6.08				
6/18/2020							5.67
7/21/2020							5.72
8/25/2020	6.7	5.53	5.95				
8/27/2020						5.32	5.7
9/18/2020	6.46	5.58		7.54	7.5		
9/22/2020			6.1				
9/24/2020						5.48	5.82
11/10/2020				7.34			
11/11/2020					7.4		
12/15/2020				7.27	7.39		
1/19/2021				7.32	7.4		
3/11/2021	7.2			-			
3/12/2021		5.6		7.52	7.51		
3/16/2021		-	6.14	-	-		
3/17/2021						5.41	5.78
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Constituent: pH (s.u.) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	5.54	6.5	6.11	6.78	6.07	7.03
10/20/2016					6	7.01
10/24/2016	5.48					
10/25/2016		6.34	6.04	6.55		
1/27/2017					6.2	
1/31/2017	5.51	6.43	5.94	6.5		6.96
5/23/2017	5.98				5.27	6.92
5/24/2017		6.31	6.06	6.42		
8/10/2017	5.63	6.45	6.06	6.63	6.27	6.99
11/14/2017	5.59	6.53	5.99	6.5	5.4	6.9
6/6/2018	5.49	6.49	6	6.59		
6/7/2018					5.29	7.03
10/2/2018		6.18	6.18	6.54		
10/3/2018	5.53				6.08	7.08
4/3/2019			6.06	6.42		
4/4/2019	5.44	6.17				
4/5/2019					5.99	6.96
6/17/2019	5.53					
8/22/2019	5.55	6.04			5.53	6.93
8/23/2019			6.26	6.76		
10/22/2019			6.19	6.58	6.17	7.03
10/23/2019	5.49	6.46				
3/24/2020					5.99	
3/25/2020	5.49	6.47	6.13	6.56		6.89
8/26/2020						6.97
8/27/2020	5.82	6.45	6.09	6.64	5.92	
9/24/2020	5.6	6.63	6.11			
9/25/2020				6.79	6.01	
9/28/2020						7.03
3/17/2021				6.55		
3/18/2021	5.51	6.57	6.2			7.11
3/19/2021					6.14	

Constituent: Selenium (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.01	<0.01	0.0027 (J)				
8/31/2016						<0.01	
10/20/2016	<0.01					<0.01	
10/24/2016		<0.01	0.0034 (J)				
1/25/2017	<0.01	<0.01	0.0023 (J)				
1/31/2017						<0.01	
5/23/2017		<0.01	0.0024 (J)			<0.01	
5/24/2017	<0.01						
8/10/2017	<0.01	<0.01	0.0023 (J)			<0.01	
11/13/2017	<0.01	<0.01					
11/14/2017			<0.01			<0.01	
6/4/2018	<0.01	<0.01					
6/5/2018			0.0019 (J)				
6/6/2018						<0.01	
10/1/2018	<0.01	<0.01	0.0024 (J)				
10/3/2018						<0.01	
8/21/2019	<0.01	<0.01	0.0025 (J)				
8/22/2019						<0.01	
10/23/2019							<0.01
1/3/2020							0.0015 (J)
3/4/2020							<0.01
3/24/2020							<0.01
6/18/2020							<0.01
7/21/2020							<0.01
8/25/2020	<0.01	<0.01	<0.01				
8/27/2020						<0.01	<0.01
9/18/2020				<0.01	<0.01		
9/24/2020							<0.01
11/10/2020				<0.01			
11/11/2020					<0.01		
12/15/2020				<0.01	<0.01		
1/19/2021				<0.01	<0.01		

Constituent: Selenium (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
10/20/2016					<0.01	<0.01
10/24/2016	<0.01					
10/25/2016		<0.01	<0.01	<0.01		
1/27/2017					<0.01	
1/31/2017	<0.01	<0.01	<0.01	<0.01		<0.01
5/23/2017	<0.01				<0.01	<0.01
5/24/2017		<0.01	<0.01	<0.01		
8/10/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
11/14/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
6/6/2018	<0.01	<0.01	<0.01	<0.01		
6/7/2018					<0.01	<0.01
10/2/2018		<0.01	<0.01	<0.01		
10/3/2018	<0.01				<0.01	<0.01
8/22/2019	<0.01	<0.01			<0.01	<0.01
8/23/2019			<0.01	<0.01		
8/26/2020						<0.01
8/27/2020	<0.01	<0.01	<0.01	<0.01	<0.01	

Constituent: Sulfate (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	1.6	0.63 (J)	14				
8/31/2016						110	
10/20/2016	1.6					110	
10/24/2016		0.62 (J)	11				
1/25/2017	1.6	0.62 (J)	12				
1/31/2017						120	
5/23/2017		0.55 (J)	12			97	
5/24/2017	1.4						
8/10/2017	1.6	0.66 (J)	11			96	
11/13/2017	1.3	0.61 (J)					
11/14/2017			11			110	
6/4/2018	1.4	0.73 (J)					
6/5/2018			9.9				
6/6/2018						95.5	
10/1/2018	1	0.52 (J)	6.7				
10/3/2018						121	
4/1/2019	1.7						
4/2/2019		0.78 (J)	8.7				
4/4/2019						95.1	
6/18/2019						102	
10/21/2019	1.8						
10/22/2019		0.6 (J)	6.8				
10/23/2019						101	<1
1/3/2020							380
3/4/2020							400
3/24/2020	1.6	<1					311
3/25/2020						85.5	
4/9/2020			6.6				
6/18/2020							349
7/21/2020							378
8/27/2020							382
9/18/2020	1	<1		3.5	9.5		
9/22/2020			5.3				
9/24/2020						97	370
11/10/2020				2.3			
11/11/2020					4.5		
12/15/2020				2.4	4.2		
1/19/2021				2.6	3.9		
3/11/2021	1.5						
3/12/2021		0.52 (J)		1.9	4.7		
3/16/2021		` '	7.7				
3/17/2021						107	332

Constituent: Sulfate (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	280	190	130	36	150	88
10/20/2016					150	81
10/24/2016	280					
10/25/2016		190	130	41		
1/27/2017					150	
1/31/2017	300	210	130	37		87
5/23/2017	340				110	84
5/24/2017		180	130	40		
8/10/2017	300	180	130	40	140	78
11/14/2017	310	170	130	40	110	79
6/6/2018	351	168	132	49.7		
6/7/2018					103	60.1
10/2/2018		173	132	42.3		
10/3/2018	381				169	91.5
4/3/2019			139	36		
4/4/2019	358	185				
4/5/2019					141	75.1
6/17/2019	311	162	126	30.9		
6/18/2019					116	77
10/22/2019			123	23.2	133	80.9
10/23/2019	248	162				
3/24/2020					129	
3/25/2020	251	161	116	27.9		78.4
9/24/2020	293	177	126			
9/25/2020				24.7	146	
9/28/2020						86
3/17/2021				28.3		
3/18/2021	286	196	128			87.8
3/19/2021					162	

Constituent: Thallium (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	<0.001	<0.001	<0.001				
8/31/2016						<0.001	
10/20/2016	<0.001					<0.001	
10/24/2016		<0.001	<0.001				
1/25/2017	<0.001	<0.001	<0.001				
1/31/2017						<0.001	
5/23/2017		<0.001	<0.001			<0.001	
5/24/2017	<0.001						
8/10/2017	<0.001	<0.001	<0.001			<0.001	
11/13/2017	<0.001	<0.001					
11/14/2017			<0.001			<0.001	
6/4/2018	<0.001	<0.001					
6/5/2018			<0.001				
6/6/2018						<0.001	
10/1/2018	<0.001	<0.001	<0.001				
10/3/2018						<0.001	
8/21/2019	<0.001	<0.001	<0.001				
8/22/2019						<0.001	
10/23/2019							<0.001
1/3/2020							8E-05 (J)
3/4/2020							<0.001
3/24/2020							<0.001
6/18/2020							<0.001
7/21/2020							<0.001
8/25/2020	<0.001	<0.001	<0.001				
8/27/2020						<0.001	<0.001
9/18/2020				<0.001	<0.001		
9/24/2020							<0.001
11/10/2020				<0.001			
11/11/2020					<0.001		
12/15/2020				<0.001	<0.001		
1/19/2021				<0.001	<0.001		

Constituent: Thallium (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10/20/2016					<0.001	<0.001
10/24/2016	<0.001					
10/25/2016		<0.001	<0.001	<0.001		
1/27/2017					<0.001	
1/31/2017	<0.001	<0.001	<0.001	<0.001		<0.001
5/23/2017	<0.001				<0.001	<0.001
5/24/2017		<0.001	<0.001	<0.001		
8/10/2017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
11/14/2017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6/6/2018	<0.001	<0.001	<0.001	<0.001		
6/7/2018					<0.001	<0.001
10/2/2018		<0.001	<0.001	<0.001		
10/3/2018	<0.001				<0.001	<0.001
8/22/2019	<0.001	<0.001			<0.001	<0.001
8/23/2019			<0.001	<0.001		
8/26/2020						<0.001
8/27/2020	<0.001	<0.001	<0.001	<0.001	<0.001	

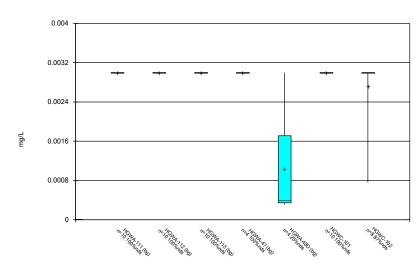
Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWA-47 (bg)	HGWA-48D (bg)	HGWC-101	HGWC-102
8/30/2016	172	76	77				
8/31/2016						278	
10/20/2016	108					165	
10/24/2016		65	111				
1/25/2017	345	152 (o)	155				
1/31/2017						263	
5/23/2017		52	74			190	
5/24/2017	126						
8/10/2017	174	60	94			175	
11/13/2017	158	75					
11/14/2017			89			253	
6/4/2018	131	70					
6/5/2018			92				
6/6/2018						188	
10/1/2018	101	76	91				
10/3/2018						238	
4/1/2019	213						
4/2/2019		69	94				
4/4/2019						149	
10/21/2019	187						
10/22/2019		81	95				
10/23/2019						221	736
1/3/2020							714
3/4/2020							764
3/24/2020	207	52					521
3/25/2020						187	
4/9/2020			48				
6/18/2020							652
7/21/2020							669
8/27/2020							663
9/18/2020	139	62		195	224		
9/22/2020			84				
9/24/2020						170	696
11/10/2020				229			
11/11/2020					221		
12/15/2020				233	239		
1/19/2021				199	224		
3/11/2021	207						
3/12/2021		56		217	204		
3/16/2021			99				
3/17/2021						213	626

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/26/2021 5:22 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/31/2016	483	389	235	182	381	373
10/20/2016					319	305
10/24/2016	517					
10/25/2016		316	223	172		
1/27/2017					407	
1/31/2017	516	437	346	252		361
5/23/2017	637				258	359
5/24/2017		352	234	184		
8/10/2017	459	356	254	208	359	325
11/14/2017	545	375	313	252	310	373
6/6/2018	559	385	278	224		
6/7/2018					223	338
10/2/2018		374	274	230		
10/3/2018	582				337	328
4/3/2019			273	210		
4/4/2019	535	340				
4/5/2019					334	308
6/17/2019	515	370	272			
6/18/2019					254	215
10/22/2019			308	212	348	354
10/23/2019	507	419				
3/24/2020					331	
3/25/2020	507	417	297	213		347
9/24/2020	517	411	253			
9/25/2020				188	340	
9/28/2020						332
3/17/2021				171		
3/18/2021	465	410	255			328
3/19/2021					371	

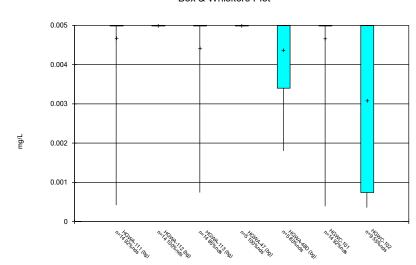
FIGURE B.



Constituent: Antimony Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

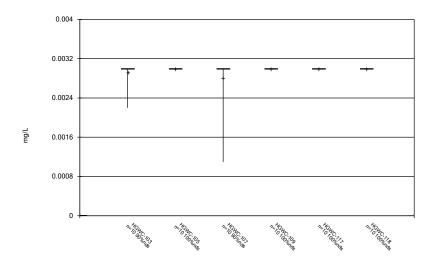
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Arsenic Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

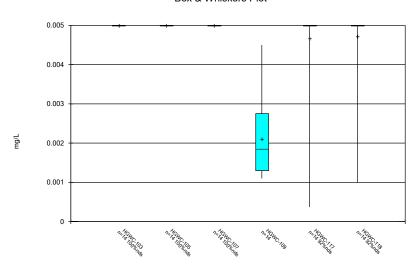
Box & Whiskers Plot



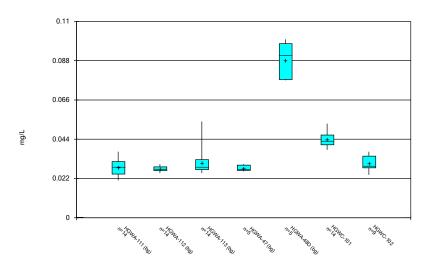
Constituent: Antimony Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



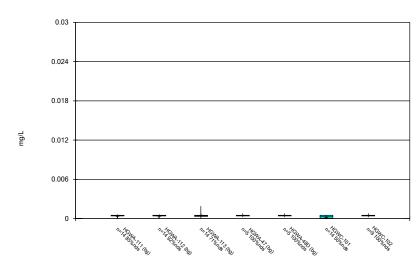
Constituent: Arsenic Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Barium Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

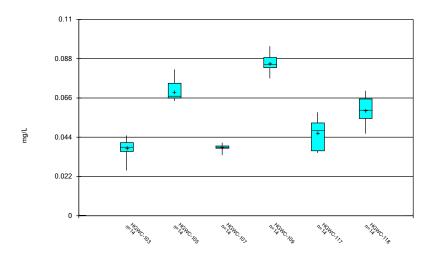
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Beryllium Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

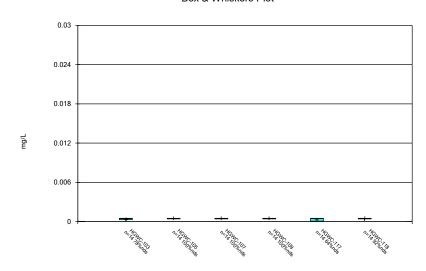
Box & Whiskers Plot



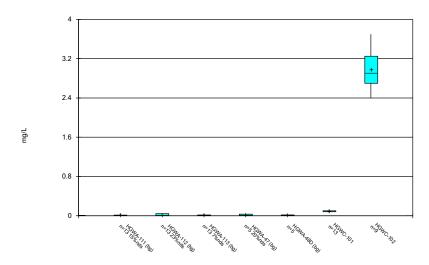
Constituent: Barium Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



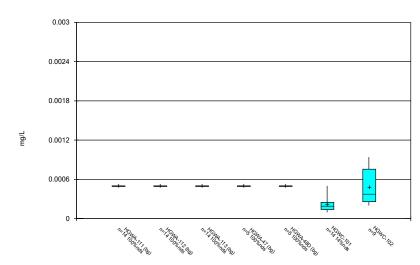
Constituent: Beryllium Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Boron Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

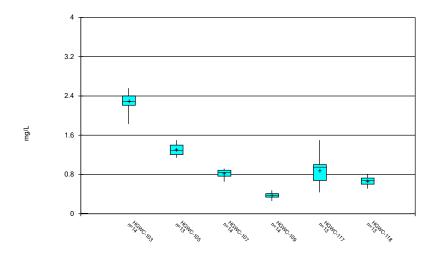
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Cadmium Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

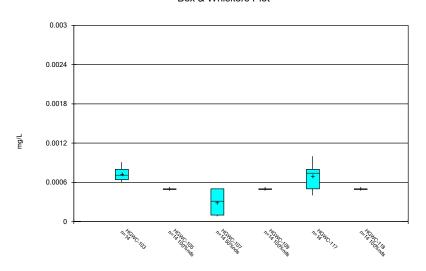
Box & Whiskers Plot



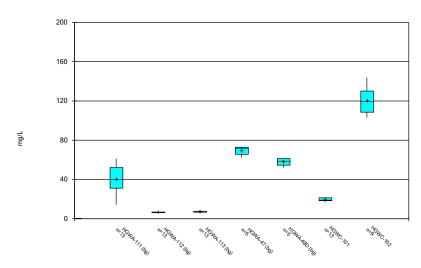
Constituent: Boron Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



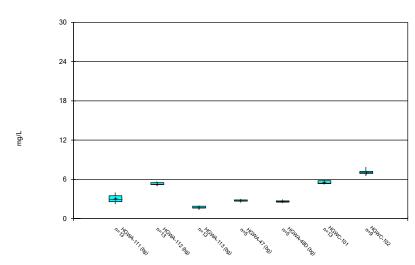
Constituent: Cadmium Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Calcium Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

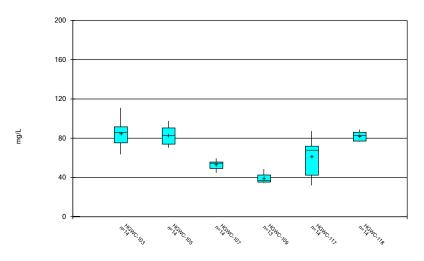
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Chloride Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

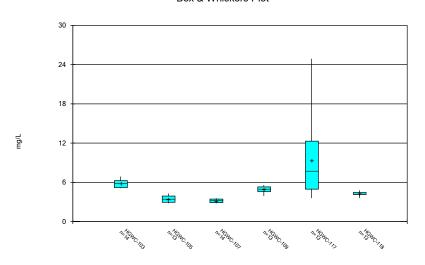
Box & Whiskers Plot



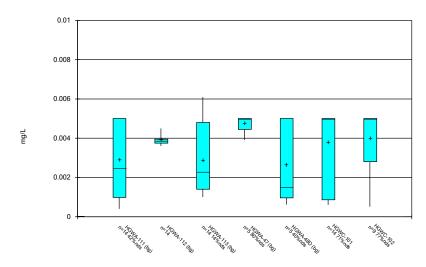
Constituent: Calcium Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



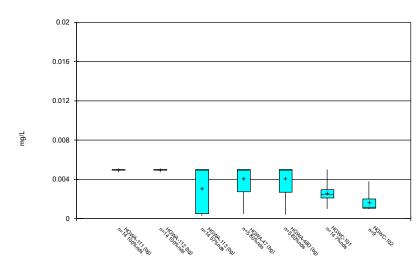
Constituent: Chloride Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Chromium Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

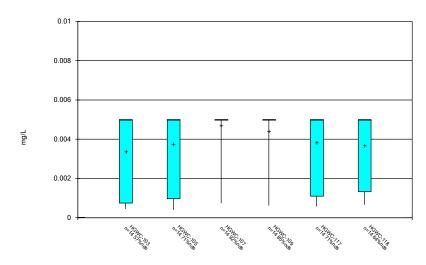
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Cobalt Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

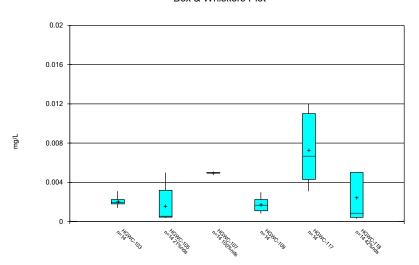
Box & Whiskers Plot



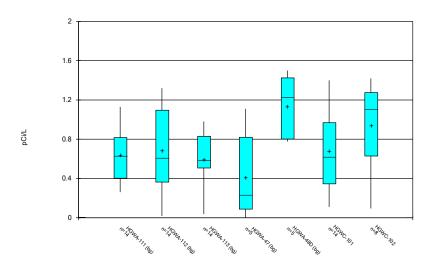
Constituent: Chromium Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



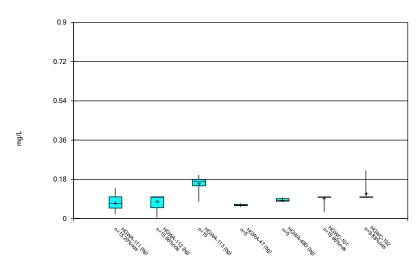
Constituent: Cobalt Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Combined Radium 226 & 228 Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

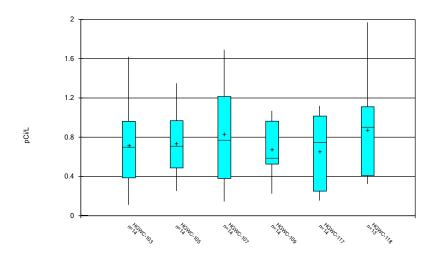
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Fluoride Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

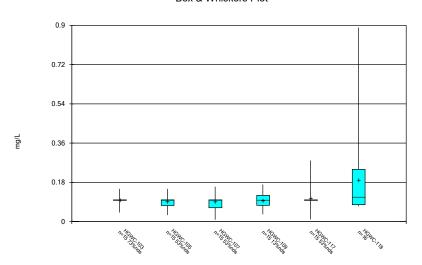
Box & Whiskers Plot



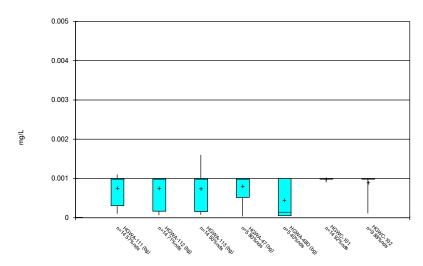
Constituent: Combined Radium 226 & 228 Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



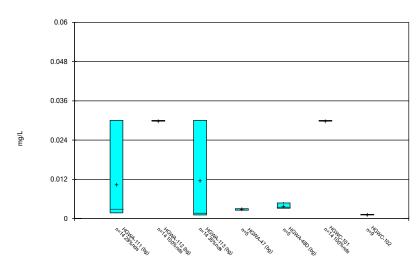
Constituent: Fluoride Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Lead Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

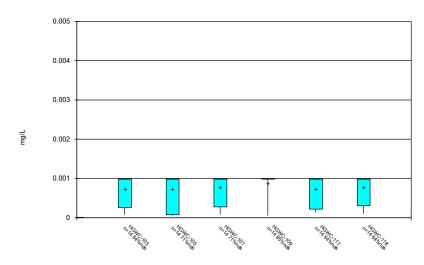
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Lithium Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

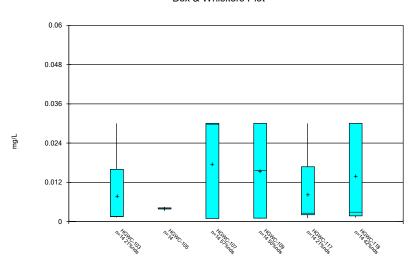
Box & Whiskers Plot



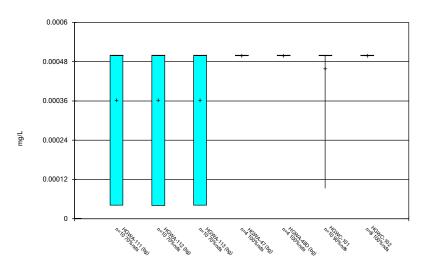
Constituent: Lead Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



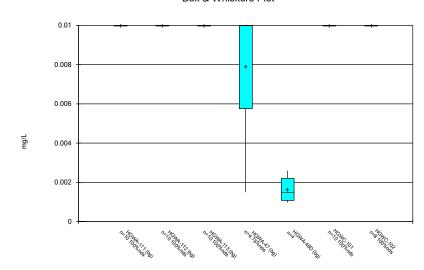
Constituent: Lithium Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Mercury Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

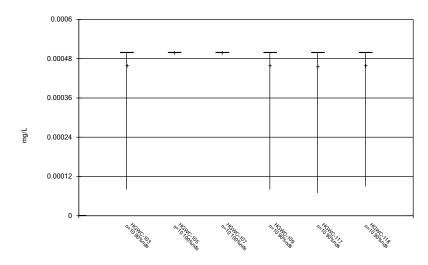
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

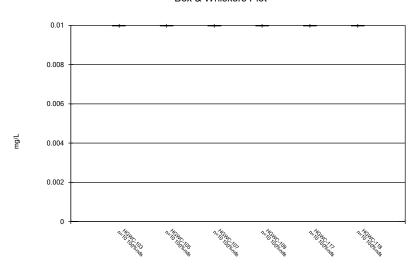
Box & Whiskers Plot



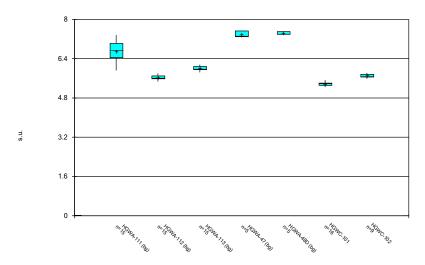
Constituent: Mercury Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



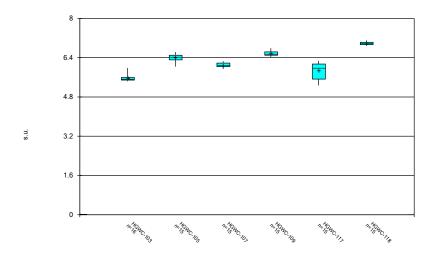
Constituent: pH Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

0.01 0.008 0.006 0.002

Constituent: Selenium Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

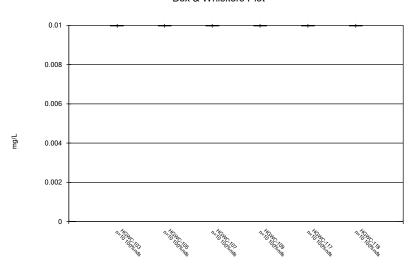
Box & Whiskers Plot



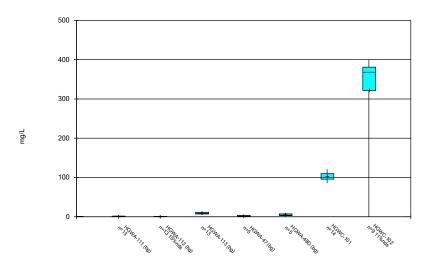
Constituent: pH Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



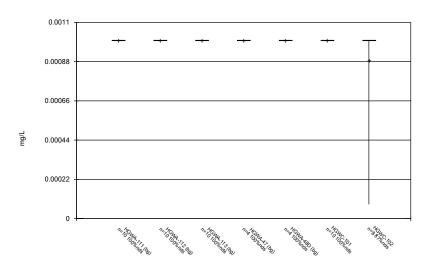
Constituent: Selenium Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Sulfate Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

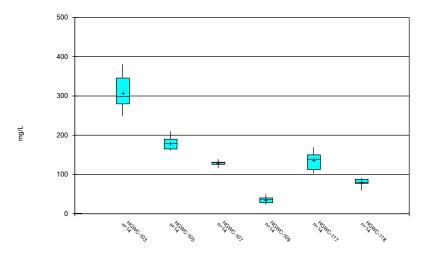
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Thallium Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

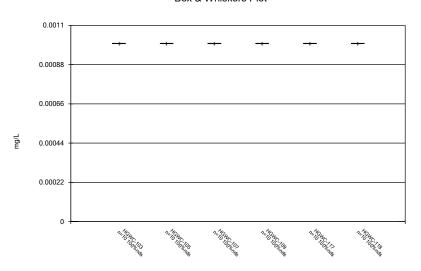
Box & Whiskers Plot



Constituent: Sulfate Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

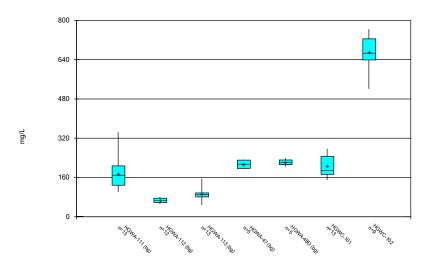
Box & Whiskers Plot



Constituent: Thallium Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

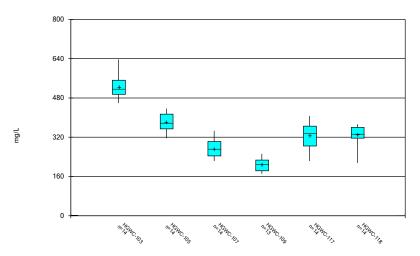
Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 4/26/2021 5:23 PM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

			Outlier	Summary	
		Plant Hammond			Printed 4/21/2021, 3:42 PM
	HGWA-112 Total Dissolved Solids (mg/L)				
1/25/2017	152 (o)				

FIGURE C.

FIGURE D.

Appendix III Interwell Prediction Limit - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/15/2021, 4:46 PM Constituent <u>Well</u> Upper Lim. Lower Lim. Date Observ. Sig. Bg N Bg Mean Std. Dev. %NDs ND Adj. Method 3/17/2021 0.13 Boron (ma/L) HGWC-101 0.05 49 14.29 0.0007731 NP Inter (normality) 1 of 2 n/a Yes n/a n/a n/a n/a HGWC-102 3/17/2021 2.7 49 NP Inter (normality) 1 of 2 Boron (mg/L) Yes n/a 14.29 n/a 0.0007731 Boron (mg/L) HGWC-103 0.05 n/a 3/18/2021 2.4 Yes 49 n/a n/a 14.29 n/a n/a 0.0007731 NP Inter (normality) 1 of 2 3/18/2021 1.5 49 Boron (mg/L) **HGWC-105** 0.05 Yes n/a 14.29 n/a 0.0007731 NP Inter (normality) 1 of 2 n/a n/a n/a Boron (mg/L) HGWC-107 0.05 3/18/2021 0.92 Yes 49 n/a n/a 0.0007731 NP Inter (normality) 1 of 2 n/a Boron (mg/L) HGWC-109 0.05 n/a 3/17/2021 0.26 Yes 49 n/a n/a 14.29 n/a n/a 0.0007731 NP Inter (normality) 1 of 2 Boron (ma/L) HGWC-117 3/19/2021 1.5 49 NP Inter (normality) 1 of 2 0.05 n/a Yes n/a n/a 14.29 n/a n/a 0.0007731 Boron (mg/L) HGWC-118 0.05 n/a 3/18/2021 0.81 Yes n/a n/a n/a 0.0007731 NP Inter (normality) 1 of 2 Calcium (mg/L) HGWC-102 73.3 3/17/2021 111 Yes 49 n/a n/a 0 n/a n/a 0.0007731 NP Inter (normality) 1 of 2 HGWC-103 3/18/2021 83.7 Yes 49 0 0.0007731 NP Inter (normality) 1 of 2 Calcium (mg/L) 73.3 n/a n/a n/a n/a n/a NP Inter (normality) 1 of 2 Calcium (mg/L) **HGWC-105** 73.3 n/a 3/18/2021 97.7 Yes 49 n/a n/a n/a n/a 0.0007731 Calcium (mg/L) HGWC-117 3/19/2021 87.3 Yes 49 n/a n/a 0 0.0007731 NP Inter (normality) 1 of 2 73.3 n/a Calcium (mg/L) **HGWC-118** 73.3 n/a 3/18/2021 85.4 Yes 49 n/a n/a n/a n/a 0.0007731 NP Inter (normality) 1 of 2 Chloride (mg/L) HGWC-102 3/17/2021 6.9 Yes 49 0.0007731 NP Inter (normality) 1 of 2 5.7 n/a n/a n/a n/a n/a Chloride (mg/L) HGWC-103 5.7 n/a 3/18/2021 6.2 Yes 49 n/a n/a n/a n/a 0.0007731 NP Inter (normality) 1 of 2 3/19/2021 24.9 49 0 Chloride (mg/L) **HGWC-117** Yes 0.0007731 NP Inter (normality) 1 of 2 5.7 n/a n/a n/a n/a n/a HGWC-101 7.54 5.47 3/17/2021 5.41 Yes 55 n/a n/a 0.001254 NP Inter (normality) 1 of 2 pH (s.u.) n/a Sulfate (mg/L) HGWC-101 14 3/17/2021 107 Yes 49 n/a n/a 4.082 n/a n/a 0.0007731 NP Inter (normality) 1 of 2 NP Inter (normality) 1 of 2 3/17/2021 332 49 Sulfate (mg/L) HGWC-102 14 n/a Yes n/a n/a 4.082 n/a n/a 0.0007731 Sulfate (mg/L) HGWC-103 14 n/a 3/18/2021 286 Yes 49 n/a n/a 4.082 n/a n/a 0.0007731 NP Inter (normality) 1 of 2 Sulfate (mg/L) HGWC-105 3/18/2021 196 Yes 49 n/a n/a 4.082 n/a 0.0007731 NP Inter (normality) 1 of 2 3/18/2021 128 49 4.082 0.0007731 NP Inter (normality) 1 of 2 Sulfate (mg/L) **HGWC-107** 14 n/a Yes n/a n/a n/a n/a HGWC-109 14 3/17/2021 28.3 Yes 49 n/a n/a 4.082 0.0007731 NP Inter (normality) 1 of 2 Sulfate (mg/L) n/a n/a n/a Sulfate (mg/L) HGWC-117 14 3/19/2021 162 Yes 49 n/a 4.082 n/a n/a 0.0007731 NP Inter (normality) 1 of 2 Sulfate (mg/L) **HGWC-118** n/a 3/18/2021 87.8 Yes 49 n/a n/a 4.082 n/a n/a 0.0007731 NP Inter (normality) 1 of 2 Total Dissolved Solids (mg/L) HGWC-102 3/17/2021 626 48 4.769 0.5223 0.0009403 Param Inter 1 of 2 332.6 Yes 0 None In(x) n/a Total Dissolved Solids (mg/L) HGWC-103 3/18/2021 465 Yes 48 4.769 0.5223 None In(x) 0.0009403 Param Inter 1 of 2 Total Dissolved Solids (mg/L) HGWC-105 332.6 n/a 3/18/2021 410 Yes 48 4.769 0.5223 0 None In(x) 0.0009403 Param Inter 1 of 2

3/19/2021 371

n/a

Yes

0.5223

None

In(x)

0.0009403 Param Inter 1 of 2

Total Dissolved Solids (mg/L) HGWC-117

Appendix III Interwell Prediction Limit - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/15/2021, 4:46 PM

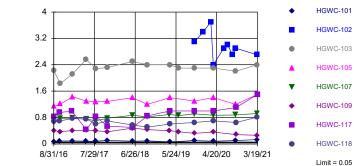
Constituent	Well	Unner Lim	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Boron (mg/L)	HGWC-101	0.05	n/a	3/17/2021		Yes	49	n/a	n/a	14.29	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-102	0.05	n/a	3/17/2021		Yes	49	n/a	n/a	14.29	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-103	0.05	n/a	3/18/2021		Yes	49	n/a	n/a	14.29	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-105	0.05	n/a	3/18/2021		Yes	49	n/a	n/a	14.29	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-107	0.05	n/a	3/18/2021		Yes	49	n/a	n/a	14.29	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-109	0.05	n/a	3/17/2021		Yes	49	n/a	n/a	14.29	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-117	0.05	n/a	3/19/2021		Yes	49	n/a	n/a	14.29	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-118	0.05	n/a	3/18/2021		Yes	49	n/a	n/a	14.29	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-101	73.3	n/a	3/17/2021		No	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-102	73.3	n/a	3/17/2021		Yes	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-102	73.3		3/18/2021			49	n/a		0			0.0007731	NP Inter (normality) 1 of 2
	HGWC-105	73.3	n/a n/a	3/18/2021		Yes Yes	49	n/a	n/a n/a	0	n/a n/a	n/a	0.0007731	` ,
Calcium (mg/L)	HGWC-107	73.3		3/18/2021		No	49	n/a		0		n/a	0.0007731	NP Inter (normality) 1 of 2 NP Inter (normality) 1 of 2
Calcium (mg/L)		73.3	n/a				49	n/a	n/a n/a	0	n/a	n/a		NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-109		n/a	3/17/2021		No				0	n/a	n/a	0.0007731	
Calcium (mg/L)	HGWC-117	73.3	n/a	3/19/2021		Yes	49	n/a	n/a	-	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-118	73.3	n/a	3/18/2021		Yes	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-101	5.7	n/a	3/17/2021		No	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-102	5.7	n/a	3/17/2021		Yes	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-103	5.7	n/a	3/18/2021		Yes	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-105	5.7	n/a	3/18/2021		No	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-107	5.7	n/a	3/18/2021		No	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-109		n/a	3/17/2021		No	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-117	5.7	n/a	3/19/2021		Yes	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-118	5.7	n/a	3/18/2021		No	49	n/a	n/a	0	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-101	0.1716	n/a	3/17/2021		No	55	0.07748	0.04777	23.64	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-102		n/a	3/17/2021		No	55	0.07748	0.04777	23.64	Kaplan-Meier		0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-103	0.1716	n/a	3/18/2021		No	55	0.07748	0.04777	23.64	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-105	0.1716	n/a	3/18/2021	0.1ND	No	55	0.07748	0.04777	23.64	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-107	0.1716	n/a	3/18/2021	0.1ND	No	55	0.07748	0.04777	23.64	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-109	0.1716	n/a	3/17/2021	0.089J	No	55	0.07748	0.04777	23.64	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-117	0.1716	n/a	3/19/2021	0.1ND	No	55	0.07748	0.04777	23.64	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
Fluoride (mg/L)	HGWC-118	0.1716	n/a	3/18/2021	0.079J	No	55	0.07748	0.04777	23.64	Kaplan-Meier	No	0.0009403	Param Inter 1 of 2
pH (s.u.)	HGWC-101	7.54	5.47	3/17/2021	5.41	Yes	55	n/a	n/a	0	n/a	n/a	0.001254	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-102	7.54	5.47	3/17/2021	5.78	No	55	n/a	n/a	0	n/a	n/a	0.001254	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-103	7.54	5.47	3/18/2021	5.51	No	55	n/a	n/a	0	n/a	n/a	0.001254	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-105	7.54	5.47	3/18/2021	6.57	No	55	n/a	n/a	0	n/a	n/a	0.001254	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-107	7.54	5.47	3/18/2021	6.2	No	55	n/a	n/a	0	n/a	n/a	0.001254	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-109	7.54	5.47	3/17/2021	6.55	No	55	n/a	n/a	0	n/a	n/a	0.001254	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-117	7.54	5.47	3/19/2021	6.14	No	55	n/a	n/a	0	n/a	n/a	0.001254	NP Inter (normality) 1 of 2
pH (s.u.)	HGWC-118	7.54	5.47	3/18/2021	7.11	No	55	n/a	n/a	0	n/a	n/a	0.001254	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-101	14	n/a	3/17/2021	107	Yes	49	n/a	n/a	4.082	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-102	14	n/a	3/17/2021	332	Yes	49	n/a	n/a	4.082	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-103	14	n/a	3/18/2021	286	Yes	49	n/a	n/a	4.082	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-105	14	n/a	3/18/2021	196	Yes	49	n/a	n/a	4.082	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-107	14	n/a	3/18/2021	128	Yes	49	n/a	n/a	4.082	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-109	14	n/a	3/17/2021	28.3	Yes	49	n/a	n/a	4.082	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-117	14	n/a	3/19/2021	162	Yes	49	n/a	n/a	4.082	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-118	14	n/a	3/18/2021	87.8	Yes	49	n/a	n/a	4.082	n/a	n/a	0.0007731	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-101	332.6	n/a	3/17/2021	213	No	48	4.769	0.5223	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-102	332.6	n/a	3/17/2021	626	Yes	48	4.769	0.5223	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-103	332.6	n/a	3/18/2021		Yes	48	4.769	0.5223	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-105	332.6	n/a	3/18/2021		Yes	48	4.769	0.5223	0	None	In(x)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-107		n/a	3/18/2021		No	48	4.769	0.5223	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-109	332.6	n/a	3/17/2021		No	48	4.769	0.5223	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-117	332.6	n/a	3/19/2021		Yes	48	4.769	0.5223	0	None	ln(x)	0.0009403	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	HGWC-118	332.6	n/a	3/18/2021		No	48	4.769	0.5223	0	None	ln(x)	0.0009403	Param Inter 1 of 2
· · ·														

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Exceeds Limit: HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 49 background values. 14.29% NDs. Annual perconstituent alpha = 0.0123. Individual comparison alpha = 0.0007731 (1 of 2). Comparing 8 points to limit.

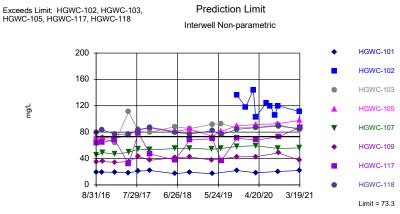
Constituent: Boron Analysis Run 4/15/2021 4:44 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Prediction Limit Exceeds Limit: HGWC-102, HGWC-103, **HGWC-117** Interwell Non-parametric HGWC-101 30 **HGWC-102** 24 HGWC-103 18 HGWC-105 HGWC-107 12 HGWC-109 HGWC-117 HGWC-118 8/31/16 7/29/17 6/26/18 5/24/19 4/20/20 3/19/21 Limit = 5.7

Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 49 background values. Annual per-constituent alpha = 0.007731 (1 of 2). Comparing 8 points to limit.

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG



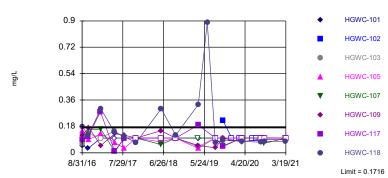
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 49 background values. Annual per-constituent alpha = 0.007731 (1 of 2). Comparing 8 points to limit.

Constituent: Calcium Analysis Run 4/15/2021 4:44 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

Within Limit Prediction Limit
Interwell Parametric



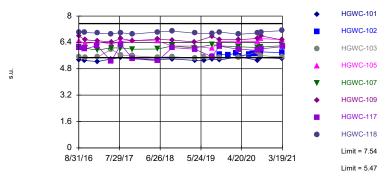
Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.07748, Std. Dev.=0.04777, n=55, 23.64% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9518, critical = 0.94. Kappa = 1.97 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009403. Comparing 8 points to limit

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Exceeds Limits: HGWC-101

Prediction Limit

Interwell Non-parametric



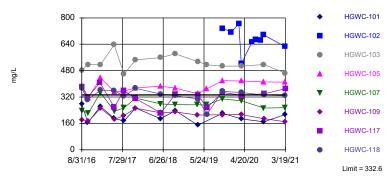
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 55 background values. Annual perconstituent alpha = 0.01997. Individual comparison alpha = 0.001254 (1 of 2). Comparing 8 points to limit.

Constituent: pH Analysis Run 4/15/2021 4:44 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Exceeds Limit: HGWC-102, HGWC-103, HGWC-105, HGWC-117

Prediction Limit
Interwell Parametric

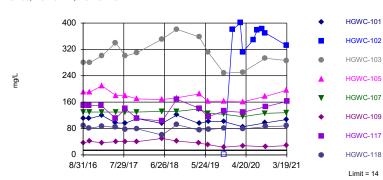


Background Data Summary (based on natural log transformation): Mean=4.769, Std. Dev.=0.5223, n=48. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9301, critical = 0.929. Kappa = 1.988 (c=7, w=8, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0009403. Comparing 8 points to limit.

Constituent: Total Dissolved Solids Analysis Run 4/15/2021 4:44 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Exceeds Limit: HGWC-101, HGWC-102, HGWC-103, HGWC-105, HGWC-107, HGWC-109, HGWC-117, HGWC-118 Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 49 background values. 4.082% NDs. Annual perconstituent alpha = 0.0123. Individual comparison alpha = 0.0007731 (1 of 2). Comparing 8 points to limit.

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-103	HGWC-105	HGWC-107	HGWC-117	HGWC-118	HGWC-109
8/30/2016	<0.1	<0.1	<0.1						
8/31/2016				2.22	1.14	0.651	0.821	0.681	0.402
10/20/2016	0.016 (J)						0.956	0.697	
10/24/2016		0.0226 (J)	0.0367 (J)	1.83					
10/25/2016					1.21	0.778			0.372
1/25/2017	0.0095 (J)	0.009 (J)	0.0075 (J)						
1/27/2017							0.99		
1/31/2017				2.12	1.43	0.782		0.768	0.404
5/23/2017		0.0082 (J)	0.0073 (J)	2.56			0.438	0.754	
5/24/2017	0.0094 (J)				1.3	0.753			0.415
8/10/2017	<0.1	0.0061 (J)	<0.1	2.28	1.28	0.702	0.821	0.608	0.397
11/13/2017	0.0103 (J)		0.0089 (J)						
11/14/2017		0.012 (J)		2.32	1.29	0.78	0.536	0.691	0.366
6/4/2018	0.0065 (J)		0.007 (J)						
6/5/2018		0.0085 (J)							
6/6/2018				2.5	1.4	0.87			0.48
6/7/2018							0.5	0.57	
10/1/2018	0.0054 (J)	0.0042 (J)	<0.1						
10/2/2018					1.2	0.82			0.43
10/3/2018				2.4			0.85	0.51	
4/1/2019	0.0076 (J)								
4/2/2019		0.0059 (J)	0.0043 (J)						
4/3/2019						0.89			0.4
4/4/2019				2.4	1.4 (X)				
4/5/2019							1 (X)	0.6 (X)	
6/17/2019				2.3		0.86			0.37
10/21/2019	0.0097 (J)								
10/22/2019		0.01 (J)	0.016 (J)			0.91	1	0.65	0.32
10/23/2019				2.3	1.3				
1/3/2020									
3/4/2020									
3/24/2020	0.011 (J)		0.012 (J)				1		
3/25/2020				2.3	1.4	0.87		0.7	0.36
4/9/2020		0.012 (J)							
6/18/2020									
7/21/2020									
8/27/2020									
9/18/2020	0.011 (J)		0.008 (J)						
9/22/2020		0.021 (J)							
9/24/2020				2.2	1.2	0.88			
9/25/2020							1.1		0.28
9/28/2020								0.65	
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	0.01 (J)								
3/12/2021			0.0061 (J)						
3/16/2021		0.011 (J)							
3/17/2021									0.26
3/18/2021				2.4	1.5	0.92		0.81	
3/19/2021							1.5		

	HGWC-101	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016				
8/31/2016	0.0724 (J)			
10/20/2016	0.0877 (J)			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	0.0928			
5/23/2017	0.0795			
5/24/2017				
8/10/2017	0.0814			
11/13/2017				
11/14/2017	0.108			
6/4/2018				
6/5/2018				
6/6/2018	0.081			
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018	0.092			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	0.06 (X)			
4/5/2019	. ,			
6/17/2019				
10/21/2019				
10/22/2019				
10/23/2019	0.1	3.1		
1/3/2020		3.4		
3/4/2020		3.7		
3/24/2020		2.4		
3/25/2020	0.08 (J)			
4/9/2020	.,			
6/18/2020		2.9		
7/21/2020		3		
8/27/2020		2.7		
9/18/2020			0.0082 (J)	0.015 (J)
9/22/2020			. ,	
9/24/2020	0.1	2.9		
9/25/2020				
9/28/2020				
11/10/2020			0.0064 (J)	
11/11/2020			.,	0.014 (J)
12/15/2020			<0.1	0.0083 (J)
1/19/2021			0.015 (J)	0.015 (J)
3/11/2021				
3/12/2021			0.0067 (J)	0.012 (J)
3/16/2021			(-)	
3/17/2021	0.13	2.7		
3/18/2021				
3/19/2021				

	0/00/0010	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-101	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
	8/30/2016	40.3	6.72	6.69	10.4	74.0	44.7	25.4	60.4	70.0
	8/31/2016	20.7			19.4	74.2	44.7	35.1	63.4	79.3
	10/20/2016	38.7	0.4	0.05	19.3				64.4	83.7
	10/24/2016		6.4	6.25		70.5	40	05.4		
	10/25/2016	44.0	0.07	0.50		72.5	49	35.4		
	1/25/2017	44.6	6.87	6.58						
	1/27/2017								68.6	
	1/31/2017				19.1	70.3	46.6	34.2		76.8
	5/23/2017		7.13	6.4	18.3				32	77.2
	5/24/2017	34.8				75.9	49.5	35.3		
	8/10/2017	48.6	6.71	6.54	20.9	84	54.2	43.1	78.9	83.1
	11/13/2017	17.1		6.26						
	11/14/2017		7.4		21.7	87.2	53.2	37.4	46.9	86.7
	6/4/2018	30.1		7.4						
	6/5/2018		7.4							
	6/6/2018				17	81	55	41.1		
	6/7/2018								37.7	79.7
	10/1/2018	14.2 (J)	6.2	5.8						
	10/2/2018					84.7	55.4	42.5		
	10/3/2018				19.1 (J)				68	77.1
	4/1/2019	58.4								
	4/2/2019		7.4	6.7						
	4/3/2019						54	37.5		
	4/4/2019				16.9	73.8				
•	4/5/2019								70	82
	6/17/2019					81.2	55.3			
	6/18/2019								36.3	76.5
	10/21/2019	51								
	10/22/2019		7.2	6.3			58.1	42.6	70.9	84.2
	10/23/2019				21.9	89.4				
	1/3/2020									
	3/4/2020									
;	3/24/2020	61.2		7					68	
	3/25/2020				18.4	91.4	59.5	42.6		86.8
•	4/9/2020		8.3							
	6/18/2020									
	7/21/2020									
	8/27/2020									
	9/18/2020	32.2		6.5						
	9/22/2020		7.9							
	9/24/2020				20.3	92.9	55.4			
	9/25/2020							48.5	72.8	
:	9/28/2020									88.9
	11/10/2020									
	11/11/2020									
	12/15/2020									
	1/19/2021									
	3/11/2021	53.2								
	3/12/2021			6.9						
	3/16/2021		8.6							
	3/17/2021				21.8			37.3		
;	3/18/2021					97.7	56			85.4

Constituent: Calcium (mg/L) Analysis Run 4/15/2021 4:46 PM View: Appendix III Plant Hammond Client: Southern Company Data: Hammond AP-4

HGWA-111 (bg) HGWA-113 (bg) HGWA-112 (bg) HGWC-101 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 87.3

3/19/2021

	HGWC-103	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016			(0,	, 0
8/31/2016	70.4			
10/20/2016				
10/24/2016	70.9			
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	63.6			
5/23/2017	111			
5/24/2017				
8/10/2017	81.2			
	01.2			
11/13/2017	70.7			
11/14/2017	79.7			
6/4/2018				
6/5/2018				
6/6/2018	88.3			
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018	85.3			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	91.9			
4/5/2019				
6/17/2019	92.6			
6/18/2019				
10/21/2019				
10/22/2019				
10/23/2019	86.5	136		
1/3/2020		118		
3/4/2020		144		
3/24/2020		103		
3/25/2020	86.8			
4/9/2020				
6/18/2020		124		
7/21/2020		120		
8/27/2020		106		
9/18/2020			62.2	51.8
9/22/2020				
9/24/2020	91.3	120		
9/25/2020				
9/28/2020				
11/10/2020			73.3	
11/11/2020			70.0	61.3
12/15/2020			72.5	61.3
1/19/2021			72.5	58.9
3/11/2021			60.2	E7 E
3/12/2021			69.2	57.5
3/16/2021				
3/17/2021 3/18/2021	83.7	111		
	8.3 \			

 $\begin{tabular}{ll} Constituent: Calcium (mg/L) & Analysis Run 4/15/2021 4:46 PM & View: Appendix III \\ Plant Hammond & Client: Southern Company & Data: Hammond AP-4 \\ \end{tabular}$

HGWC-103 HGWC-102 HGWA-47 (bg) HGWA-48D (bg)

3/19/2021

	09
8/31/2016	
10/20/2016 3.2	
10/24/2016	
10/25/2016	
1/25/2017 2.7 1.9 5 1/27/2017 - - 5.6 3.3 3.1 4.8 5.5 1/31/2017 - 1.6 5.1 5.7 3.6 4.3 5.3 5/24/2017 3 - 1.6 5.1 5.7 3.6 4.3 5.3 8/10/2017 2.8 1.7 5.2 5.8 2.9 2.8 5.9 4.2 4.6 11/13/2017 2.5 - 5.5 -	
1/27/2017 5.6 3.3 3.1 4.8 5.5 5/23/2017 1.6 5.1 5.7 3.6 4.3 5/24/2017 3 - 5.2 5.8 2.9 2.8 5.9 4.2 4.6 11/13/2017 2.8 1.7 5.2 5.8 2.9 2.8 5.9 4.2 4.6 11/13/2017 2.5 5.5 - <td></td>	
1/31/2017 1.6 5.1 5.6 3.3 3.1 4.8 5.5 5/23/2017 1.6 5.1 5.7 5.2 3.6 4.3 5.3 8/10/2017 2.8 1.7 5.2 5.8 2.9 2.8 5.9 4.2 4.6 11/13/2017 2.5 5.5 5.5 5.3 5.3 4.4 4.4 4.4 5.6 6/4/2018 2.6 5.3 5.3 5.3 5.9 4.2 4.6 5.6 6/5/2018 1.7 5.3 5.3 5.3 5.9 4.4 5.6 6/6/2018 1.7 6.4 4 3.4 4 4.4 4.4 5.6 6/7/2018 1.7 6.4 2.9 2.8 5.3 5.3 5.3 10/1/2018 2.2 1.6 5.6 5.6 5.3	
5/23/2017 1.6 5.1 5.7 3.6 4.3 5/24/2017 3 - - 5.3 2.9 - - 5.3 8/10/2017 2.8 1.7 5.2 5.8 2.9 2.8 5.9 4.2 4.6 11/13/2017 2.5 - 5.5 - - - - 4.6 6/4/2018 2.6 5.3 -<	
5/24/2017 3 1.7 5.2 5.8 2.9 2.8 5.9 4.2 4.6 11/13/2017 2.5 5.5 5.5 5.6 4 3.4 4 4.4 5.6 6/4/2018 2.6 5.3	
8/10/2017 2.8 1.7 5.2 5.8 2.9 2.8 5.9 4.2 4.6 11/13/2017 2.5 5.5 5.5 4 3.4 4 4.4 5.6 6/4/2018 2.6 5.3 5.3 5.2 5.3 5.2 5.3 <td></td>	
11/13/2017 2.5 5.5 11/14/2017 2 6 4 3.4 4 4.4 5.6 6/4/2018 2.6 5.3 5.3 5.6 5.6 5.3	
11/14/2017 2 6 4 3.4 4 4.4 5.6 6/4/2018 2.6 5.3 <	
6/4/2018 2.6 5.3 6/5/2018 1.7 6/6/2018 2.2 6.4 2.9 2.8 5.3 6/7/2018 3.6 4.1 10/1/2018 2.2 1.6 5.6 10/2/2018 3.5 3.2 5.3 10/3/2018 4 6.3 7.6 4.4 4/1/2019 4 1.8 5.7	
6/5/2018 1.7 6/6/2018 6.4 2.9 2.8 5.3 6/7/2018 2.2 1.6 5.6 10/2/2018 3.5 3.2 5.3 10/3/2018 6.3 5.6 11/2/2019 4 1.8 5.7	
6/6/2018	
67//2018 10/1/2018 2.2 1.6 5.6 10/2/2018 3.5 3.2 5.3 10/3/2018 4 4/1/2019 1.8 5.7	
10/1/2018 2.2 1.6 5.6 10/2/2018 3.5 3.2 5.3 10/3/2018 6.3 7.6 4.4 4/1/2019 4 4/2/2019 1.8 5.7	
10/2/2018 3.5 3.2 5.3 10/3/2018 6.3 7.6 4.4 4/1/2019 4 4/2/2019 1.8 5.7	
10/3/2018 6.3 7.6 4.4 4/1/2019 4 4/2/2019 1.8 5.7	
4/1/2019 4 4/2/2019 1.8 5.7	
4/2/2019 1.8 5.7	
4/3/2019 3.6 5	
4/4/2019 6.9 3.9	
4/5/2019 8.9 4.3	
6/17/2019 5.2 2.9	
10/21/2019 3.9	
10/22/2019 1.9 5.5 3.6 12.1 4.5 4.6	
10/23/2019 6.1 3.6	
1/3/2020	
3/4/2020	
3/24/2020 3.6 5.2 12.5	
3/25/2020 5.1 3.2 3 3.6 3.9	
4/9/2020 1.4	
6/18/2020	
7/21/2020	
8/27/2020	
9/18/2020 2.6 5.2	
9/22/2020 1.5	
9/24/2020 6 3.9 3.5	
9/25/2020 16.1 4.1	
9/28/2020 4	
11/10/2020	
11/11/2020	
12/15/2020	
1/19/2021	
3/11/2021 3.4	
3/12/2021 5.3 3/16/2021 1.6	
3/16/2021 1.6	
3/17/2021 4.7	
3/18/2021 6.2 4.3 3.2 4.3	
3/19/2021 24.9	

	HGWC-101	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/30/2016				
8/31/2016	5.7			
10/20/2016	5.7			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	5.8			
5/23/2017	5.3			
5/24/2017				
8/10/2017	5.4			
11/13/2017				
11/14/2017	5.8			
6/4/2018				
6/5/2018				
6/6/2018	5.3			
6/7/2018	5.0			
10/1/2018				
10/2/2018	5.0			
10/3/2018	5.8			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	5.9			
4/5/2019				
6/17/2019				
10/21/2019				
10/22/2019				
10/23/2019	5.5	7.9		
	5.5			
1/3/2020		7		
3/4/2020		7.1		
3/24/2020		6.5		
3/25/2020	5.2			
4/9/2020				
6/18/2020		6.9		
7/21/2020		7.2		
8/27/2020		7.1		
9/18/2020			2.6	2.7
9/22/2020				
9/24/2020	5.5	7.2		
9/25/2020	5.0			
9/28/2020				0.7
11/10/2020				2.7
11/11/2020			2.6	
12/15/2020			2.7	2.9
1/19/2021			2.7	2.8
3/11/2021				
3/12/2021			2.6	2.7
3/16/2021				
	5.5	6.9		
3/17/2021	5.5	6.9		
	5.5	6.9		

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-101	HGWC-103	HGWC-105	HGWC-109	HGWC-107	HGWC-117
8/30/2016	0.07 (J)	0.04 (J)	0.2 (J)						
8/31/2016				0.05 (J)	0.06 (J)	0.15 (J)	0.12 (J)	0.08 (J)	0.09 (J)
10/20/2016	0.07 (J)			0.03 (J)					0.11 (J)
10/24/2016		0.05 (J)	0.16 (J)		0.13 (J)				
10/25/2016						0.09 (J)	0.17 (J)	0.16 (J)	
1/25/2017	0.14 (J)	<0.1	0.15 (J)						
1/27/2017									0.28 (J)
1/31/2017				<0.1	<0.1	0.13 (J)	0.05 (J)	0.16 (J)	
5/23/2017		0.004 (J)	0.18 (J)	<0.1	0.15 (J)				0.01 (J)
5/24/2017	0.02 (J)					0.07 (J)	0.13 (J)	0.009 (J)	
8/10/2017	0.06 (J)	0.03 (J)	0.19 (J)	<0.1	<0.1	0.03 (J)	0.12 (J)	<0.1	0.1 (J)
11/13/2017	<0.1	<0.1							
11/14/2017			0.16 (J)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
6/4/2018	0.032 (J)	<0.1							
6/5/2018			0.18 (J)						
6/6/2018				<0.1	<0.1	0.074 (J)	0.15 (J)	0.057 (J)	
6/7/2018						, ,	. ,		<0.1
10/1/2018	<0.1	<0.1	0.078 (J)						
10/2/2018			(-,			<0.1	<0.1	<0.1	
10/3/2018				<0.1	<0.1				<0.1
4/1/2019	0.042 (J)								•
4/2/2019	0.0.12 (0)	<0.1	0.18 (J)						
4/3/2019		30.1	0.10 (3)				0.05 (J)	<0.1	
4/4/2019				<0.1	0.042 (J)	0.03 (J)	0.03 (3)	~0.1	
4/5/2019				~0.1	0.042 (3)	0.03 (3)			0.19 (J)
									0.19 (3)
6/18/2019	0.049 (1)	-0.1	0.1171)						
8/21/2019	0.048 (J)	<0.1	0.11 (J)	-0.4	-0.1	-0.4			-0.4
8/22/2019				<0.1	<0.1	<0.1	0.00470		<0.1
8/23/2019							0.034 (J)	<0.1	
10/21/2019	0.12 (J)								
10/22/2019		0.05 (J)	0.18 (J)				0.099 (J)	0.047 (J)	0.042 (J)
10/23/2019				<0.1	<0.1	<0.1			
1/3/2020									
3/4/2020									
3/24/2020	0.076 (J)	<0.1							<0.1
3/25/2020				<0.1	<0.1	<0.1	0.075 (J)	<0.1	
4/9/2020			0.14 (J)						
6/18/2020									
7/21/2020									
8/25/2020	0.052 (J)	<0.1	0.17						
8/26/2020									
8/27/2020				<0.1	<0.1	<0.1	0.094 (J)	<0.1	<0.1
9/18/2020	<0.1	<0.1							
9/22/2020			0.16						
9/24/2020				<0.1	<0.1	<0.1		0.064 (J)	
9/25/2020							0.091 (J)		<0.1
9/28/2020									
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									
3/11/2021	0.057 (J)								

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-101	HGWC-103	HGWC-105	HGWC-109	HGWC-107	HGWC-117
3/12/2021		<0.1							
3/16/2021			0.18						
3/17/2021				<0.1			0.089 (J)		
3/18/2021					<0.1	<0.1		<0.1	
3/19/2021									<0.1

	HGWC-118	HGWC-102	HGWA-47 (bg)	HGWA-48D (be
8/30/2016			(0)	`
8/31/2016	0.18 (J)			
10/20/2016	0.12 (J)			
10/24/2016	J Z (U)			
10/25/2016				
1/25/2017				
1/27/2017	0.0			
1/31/2017	0.3			
5/23/2017	0.14 (J)			
5/24/2017				
8/10/2017	0.11 (J)			
11/13/2017				
11/14/2017	0.07 (J)			
6/4/2018				
6/5/2018				
6/6/2018				
6/7/2018	0.3			
10/1/2018				
10/2/2018				
10/3/2018	0.12 (J)			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019				
4/5/2019	0.33			
6/18/2019	0.89			
8/21/2019	0.03			
8/22/2019	0.07 (1)			
	0.07 (J)			
8/23/2019				
10/21/2019	0.007.41			
10/22/2019	0.087 (J)			
10/23/2019		0.22 (J)		
1/3/2020		<0.1		
3/4/2020		<0.1		
3/24/2020		<0.1		
3/25/2020	0.078 (J)			
4/9/2020				
6/18/2020		<0.1		
7/21/2020		<0.1		
8/25/2020				
8/26/2020	0.072 (J)			
8/27/2020		<0.1		
9/18/2020			0.067 (J)	0.098 (J)
9/22/2020			` '	.,
9/24/2020		<0.1		
9/25/2020				
9/28/2020	0.078 (J)			
	0.078 (3)		0.065 (1)	
11/10/2020			0.065 (J)	0.002 (1)
11/11/2020			0.004 ("	0.083 (J)
12/15/2020			0.064 (J)	0.081 (J)
1/19/2021			0.057 (J)	0.079 (J)
3/11/2021				

	HGWC-118	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
3/12/2021			0.062 (J)	0.085 (J)
3/16/2021				
3/17/2021		<0.1		
3/18/2021	0.079 (J)			
3/19/2021				

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-101	HGWC-103	HGWC-105	HGWC-109	HGWC-107	HGWC-117
8/30/2016	6.89	5.77	5.99						
8/31/2016				5.35	5.54	6.5	6.78	6.11	6.07
10/20/2016	6.73			5.3					6
10/24/2016		5.61	5.84		5.48				
10/25/2016						6.34	6.55	6.04	
1/25/2017	7.02	5.68	6.04						
1/27/2017									6.2
1/31/2017				5.24	5.51	6.43	6.5	5.94	
5/23/2017		5.7	6.01	5.39	5.98				5.27
5/24/2017	6.44					6.31	6.42	6.06	
8/10/2017	6.79	5.59	5.98	5.47	5.63	6.45	6.63	6.06	6.27
11/13/2017	5.94	5.56							
11/14/2017			6.16	5.4	5.59	6.53	6.5	5.99	5.4
6/4/2018	6.12	5.62							
6/5/2018			5.86						
6/6/2018				5.37	5.49	6.49	6.59	6	
6/7/2018									5.29
10/1/2018	5.92	5.62	5.94						
10/2/2018						6.18	6.54	6.18	
10/3/2018				5.39	5.53				6.08
4/1/2019	7.09								
4/2/2019		5.47	6						
4/3/2019							6.42	6.06	
4/4/2019				5.31	5.44	6.17			
4/5/2019									5.99
6/17/2019					5.53				
6/18/2019				5.3					
8/21/2019	6.6	5.8	6.05						
8/22/2019				5.39	5.55	6.04			5.53
8/23/2019							6.76	6.26	
10/21/2019	7.02								
10/22/2019		5.7	5.98				6.58	6.19	6.17
10/23/2019				5.33	5.49	6.46			
1/3/2020									
3/4/2020									
3/24/2020	7.37	5.64							5.99
3/25/2020	7.07	0.04		5.53	5.49	6.47	6.56	6.13	0.00
4/9/2020			6.08	0.00	0.40	0.47	0.50	0.15	
6/18/2020			0.00						
7/21/2020									
8/25/2020	6.7	5.53	5.95						
8/26/2020	0.7	5.55	5.95						
8/27/2020				5.32	5.82	6.45	6.64	6.09	5.92
9/18/2020	6.46	E E0		5.32	5.62	0.45	0.04	0.09	5.92
	6.46	5.58	6.1						
9/22/2020 9/24/2020			0.1	5.48	5.6	6 63		6.11	
				5.48	5.6	6.63	6 70	6.11	6.01
9/25/2020							6.79		6.01
9/28/2020									
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021									

	HGWA-111 (bg)	HGWA-112 (bg)	HGWA-113 (bg)	HGWC-101	HGWC-103	HGWC-105	HGWC-109	HGWC-107	HGWC-117
3/11/2021	7.2								
3/12/2021		5.6							
3/16/2021			6.14						
3/17/2021				5.41			6.55		
3/18/2021					5.51	6.57		6.2	
3/19/2021									6.14

	HGWC-118	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
8/30/2016			. 3/	
8/31/2016	7.03			
10/20/2016	7.01			
10/24/2016				
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	6.96			
5/23/2017	6.92			
5/24/2017	0.92			
8/10/2017	6.99			
	0.99			
11/13/2017	6.0			
11/14/2017	6.9			
6/4/2018				
6/5/2018				
6/6/2018	7.00			
6/7/2018	7.03			
10/1/2018				
10/2/2018				
10/3/2018	7.08			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019				
4/5/2019	6.96			
6/17/2019				
6/18/2019				
8/21/2019				
8/22/2019	6.93			
8/23/2019				
10/21/2019				
10/22/2019	7.03			
10/23/2019		5.68		
1/3/2020		5.64		
3/4/2020		5.75		
3/24/2020		5.58		
3/25/2020	6.89			
4/9/2020				
6/18/2020		5.67		
7/21/2020		5.72		
8/25/2020				
8/26/2020	6.97			
8/27/2020		5.7		
9/18/2020			7.5	7.54
9/22/2020				
9/24/2020		5.82		
9/25/2020				
9/28/2020	7.03			
11/10/2020				7.34
11/11/2020			7.4	
12/15/2020			7.39	7.27
1/19/2021			7.33	7.32
1/13/2021			7.7	1.0E

	HGWC-118	HGWC-102	HGWA-48D (bg)	HGWA-47 (bg)
3/11/2021				
3/12/2021			7.51	7.52
3/16/2021				
3/17/2021		5.78		
3/18/2021	7.11			
3/19/2021				

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-101	HGWC-105	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/30/2016	1.6	14	0.63 (J)						
8/31/2016				110	190	130	36	150	88
10/20/2016	1.6			110				150	81
10/24/2016		11	0.62 (J)						
10/25/2016					190	130	41		
1/25/2017	1.6	12	0.62 (J)						
1/27/2017								150	
1/31/2017				120	210	130	37		87
5/23/2017		12	0.55 (J)	97				110	84
5/24/2017	1.4				180	130	40		
8/10/2017	1.6	11	0.66 (J)	96	180	130	40	140	78
11/13/2017	1.3		0.61 (J)						
11/14/2017		11		110	170	130	40	110	79
6/4/2018	1.4		0.73 (J)						
6/5/2018		9.9							
6/6/2018				95.5	168	132	49.7		
6/7/2018								103	60.1
10/1/2018	1	6.7	0.52 (J)						
10/2/2018					173	132	42.3		
10/3/2018				121				169	91.5
4/1/2019	1.7								
4/2/2019		8.7	0.78 (J)						
4/3/2019						139	36		
4/4/2019				95.1	185				
4/5/2019								141	75.1
6/17/2019					162	126	30.9		
6/18/2019				102	.02	.20	00.0	116	77
10/21/2019	1.8								
10/22/2019		6.8	0.6 (J)			123	23.2	133	80.9
10/23/2019		0.0	0.0 (0)	101	162	.20	20.2	.00	00.0
1/3/2020					.02				
3/4/2020									
3/24/2020	1.6		<1					129	
3/25/2020	1.0			85.5	161	116	27.9	123	78.4
4/9/2020		6.6		00.0	101	110	27.0		70.4
6/18/2020		0.0							
7/21/2020									
8/27/2020									
9/18/2020	1		<1						
9/22/2020	1	5.3	~1						
9/24/2020		5.5		0.7	177	106			
9/24/2020				97	177	126	24.7	146	
							24.7	146	00
9/28/2020									86
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021	4.5								
3/11/2021	1.5		0.50 (1)						
3/12/2021			0.52 (J)						
3/16/2021		7.7							
3/17/2021				107	100	100	28.3		07.0
3/18/2021					196	128			87.8

Constituent: Sulfate (mg/L) Analysis Run 4/15/2021 4:46 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-4

HGWA-111 (bg) HGWA-113 (bg) HGWA-112 (bg) HGWC-101 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118

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Constituent: Sulfate (mg/L) Analysis Run 4/15/2021 4:46 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016				
8/31/2016	280			
10/20/2016				
10/24/2016	280			
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	300			
5/23/2017	340			
5/24/2017	000			
8/10/2017	300			
11/13/2017				
11/14/2017	310			
6/4/2018				
6/5/2018				
6/6/2018	351			
6/7/2018				
10/1/2018				
10/2/2018				
10/3/2018	381			
4/1/2019				
4/2/2019				
4/3/2019				
4/4/2019	358			
4/5/2019				
6/17/2019	311			
	311			
6/18/2019				
10/21/2019				
10/22/2019				
10/23/2019	248	<1		
1/3/2020		380		
3/4/2020		400		
3/24/2020		311		
3/25/2020	251			
4/9/2020				
6/18/2020		349		
7/21/2020		378		
8/27/2020		382		
9/18/2020			3.5	9.5
9/22/2020				
9/24/2020	293	370		
9/25/2020	200	0,0		
9/28/2020			2.2	
11/10/2020			2.3	4.5
11/11/2020				4.5
12/15/2020			2.4	4.2
1/19/2021			2.6	3.9
3/11/2021				
3/12/2021			1.9	4.7
3/16/2021				
3/17/2021		332		
3/18/2021	286			

Constituent: Sulfate (mg/L) Analysis Run 4/15/2021 4:46 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-4

HGWC-103 HGWC-102 HGWA-47 (bg) HGWA-48D (bg)

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Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/15/2021 4:46 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWA-111 (bg)	HGWA-113 (bg)	HGWA-112 (bg)	HGWC-105	HGWC-101	HGWC-107	HGWC-109	HGWC-117	HGWC-118
8/30/2016	172	77	76						
8/31/2016				389	278	235	182	381	373
10/20/2016	108				165			319	305
10/24/2016		111	65						
10/25/2016				316		223	172		
1/25/2017	345	155	152 (o)						
1/27/2017			. (-)					407	
1/31/2017				437	263	346	252		361
5/23/2017		74	52		190			258	359
5/24/2017	126			352		234	184		
8/10/2017	174	94	60	356	175	254	208	359	325
11/13/2017	158		75						
11/14/2017	.00	89		375	253	313	252	310	373
6/4/2018	131		70	0.0	200	0.0	202	0.0	0.0
6/5/2018	101	92	70						
6/6/2018		<i>52</i>		385	188	278	224		
6/7/2018				303	100	270	224	223	338
10/1/2018	101	91	76					225	330
10/1/2018	101	91	70	374		274	230		
10/3/2018				374	238	274	230	337	328
4/1/2019	213				230			337	320
4/2/2019	213	0.4	60						
		94	69			272	210		
4/3/2019 4/4/2019				240	140	273	210		
4/4/2019				340	149			224	200
				270		070		334	308
6/17/2019				370		272		054	045
6/18/2019	107							254	215
10/21/2019	187	05	0.4			200	010	240	254
10/22/2019		95	81	440	201	308	212	348	354
10/23/2019 1/3/2020				419	221				
3/4/2020	207		50					221	
3/24/2020	207		52	447	107	207	010	331	247
3/25/2020		40		417	187	297	213		347
4/9/2020		48							
6/18/2020									
7/21/2020									
8/27/2020	120		60						
9/18/2020	139	0.4	62						
9/22/2020		84		444	170	050			
9/24/2020				411	170	253	100	240	
9/25/2020							188	340	222
9/28/2020									332
11/10/2020									
11/11/2020									
12/15/2020									
1/19/2021	007								
3/11/2021	207		50						
3/12/2021		00	56						
3/16/2021		99			040		474		
3/17/2021				440	213	055	171		200
3/18/2021				410		255			328

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/15/2021 4:46 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-4

HGWA-111 (bg) HGWA-113 (bg) HGWA-112 (bg) HGWC-105 HGWC-101 HGWC-107 HGWC-109 HGWC-117 HGWC-118

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Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/15/2021 4:46 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-4

	HGWC-103	HGWC-102	HGWA-47 (bg)	HGWA-48D (bg)
8/30/2016				
8/31/2016	483			
10/20/2016				
10/24/2016	517			
10/25/2016				
1/25/2017				
1/27/2017				
1/31/2017	516			
5/23/2017	637			
5/24/2017	007			
8/10/2017	459			
11/13/2017	.00			
11/14/2017	545			
6/4/2018	545			
6/5/2018				
	550			
6/6/2018 6/7/2018	559			
10/1/2018				
10/2/2018 10/3/2018	582			
	562			
4/1/2019				
4/2/2019				
4/3/2019	525			
4/4/2019	535			
4/5/2019				
6/17/2019	515			
6/18/2019				
10/21/2019				
10/22/2019				
10/23/2019	507	736		
1/3/2020		714		
3/4/2020		764		
3/24/2020		521		
3/25/2020	507			
4/9/2020				
6/18/2020		652		
7/21/2020		669		
8/27/2020		663		
9/18/2020			195	224
9/22/2020				
9/24/2020	517	696		
9/25/2020				
9/28/2020				
11/10/2020			229	
11/11/2020				221
12/15/2020			233	239
1/19/2021			199	224
3/11/2021				
3/12/2021			217	204
3/16/2021				
3/17/2021		626		
3/18/2021	465			

Constituent: Total Dissolved Solids (mg/L) Analysis Run 4/15/2021 4:46 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-4

HGWC-103 HGWC-102 HGWA-47 (bg) HGWA-48D (bg)

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FIGURE E.

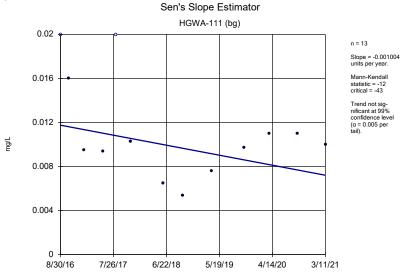
Appendix III Trend Test - Prediction Limit Exceedances - Significant Results Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/19/2021, 1:22 PM

	Plant Hammond	Client: Southern C	ompany L	ata: Hammon	Printed	4/19/202	11, 1:22 PIVI				
Constituent	Well	Slope	Calc.	<u>Critical</u>	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Boron (mg/L)	HGWC-107	0.04373	64	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-113 (bg)	0.3842	45	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-105	5.165	61	48	Yes	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-113 (bg)	-1.781	-58	-43	Yes	13	0	n/a	n/a	0.01	NP

Appendix III Trend Test - Prediction Limit Exceedances - All Results

	Plant Hammond	Client: Southern C	ompany	Data: Hammor	nd AP-4	Printed	I 4/19/202	21, 1:22 PM			
Constituent	Well	Slope	Calc.	Critical	Sig.	<u>N</u>	%NDs	Normality	<u>Xform</u>	<u>Alpha</u>	Method
Boron (mg/L)	HGWA-111 (bg)	-0.001004	-12	-43	No	13	15.38	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-112 (bg)	-0.00203	-27	-43	No	13	23.08	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-113 (bg)	-0.0003883	-7	-43	No	13	7.692	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-101	0.006042	23	43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-102	-0.4388	-14	-25	No	9	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-103	0.02192	13	48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-105	0.03697	21	43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-107	0.04373	64	48	Yes	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-109	-0.02609	-45	-48	No	14	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-117	0.09547	42	43	No	13	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-118	-0.005229	-3	-43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-111 (bg)	2.851	14	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-112 (bg)	0.05064	12	43	No	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-113 (bg)	0.3842	45	43	Yes	13	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-102	-17.65	-11	-25	No	9	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-103	3.572	33	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-105	5.165	61	48	Yes	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-117	2.328	32	48	No	14	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-118	1.559	31	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-111 (bg)	-0.0137	-1	-43	No	13	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-112 (bg)	0.03351	16	43	No	13	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-113 (bg)	-0.08208	-34	-43	No	13	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-102	-0.04157	-3	-25	No	9	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-103	0.1966	29	48	No	14	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-117	2.698	43	43	No	13	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-111 (bg)	0.06841	12	53	No	15	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-112 (bg)	-0.02033	-23	-53	No	15	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWA-113 (bg)	0.02744	30	53	No	15	0	n/a	n/a	0.01	NP
pH (s.u.)	HGWC-101	0.01391	28	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-111 (bg)	0	-10	-43	No	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-112 (bg)	-0.02244	-29	-43	No	13	15.38	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-113 (bg)	-1.781	-58	-43	Yes	13	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-101	-2.874	-25	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-102	12.25	2	25	No	9	11.11	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-103	0	1	48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-105	-5.151	-34	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-107	-0.4844	-22	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-109	-2.891	-37	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-117	0	-1	-48	No	14	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-118	-0.2732	-7	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-111 (bg)	6.82	13	43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-112 (bg)	-1.162	-8	-38	No	12	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-113 (bg)	-0.8749	-1	-43	No	13	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-102	-70.01	-12	-25	No	9	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-103	-3.687	-15	-48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-105	12.57	21	48	No	14	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-117	-1.931	-1	-48	No	14	0	n/a	n/a	0.01	NP

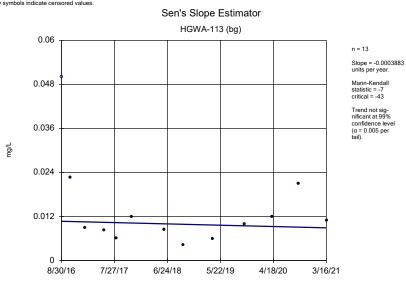
Hollow symbols indicate censored values.



Constituent: Boron Analysis Run 4/19/2021 1:20 PM View: Appendix III Plant Hammond Client: Southern Company Data: Hammond AP-4

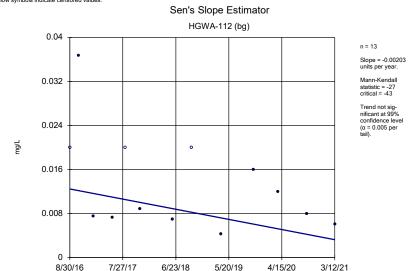
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.



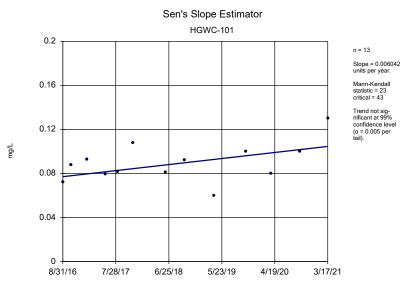
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Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG Hollow symbols indicate censored values.

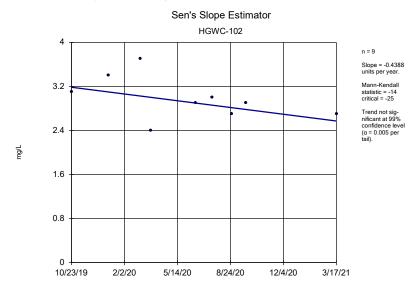


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Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

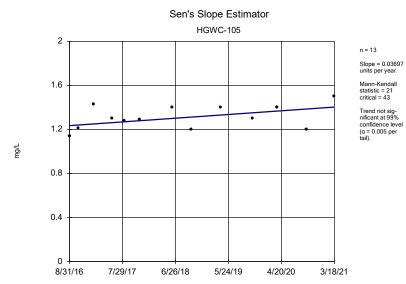


Analysis Run 4/19/2021 1:20 PM View: Appendix III Constituent: Boron Plant Hammond Client: Southern Company Data: Hammond AP-4

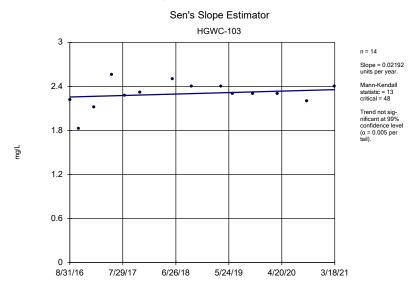


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Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG



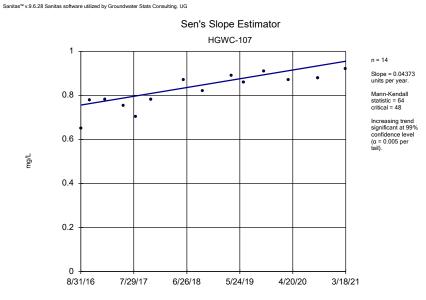
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Plant Hammond Client: Southern Company Data: Hammond AP-4



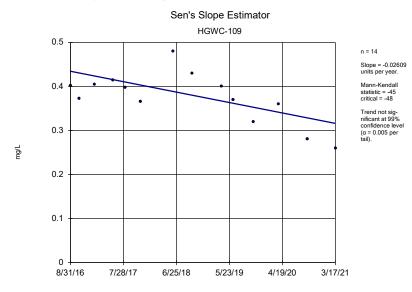
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Client: Southern Company Data: Hammond AP-4

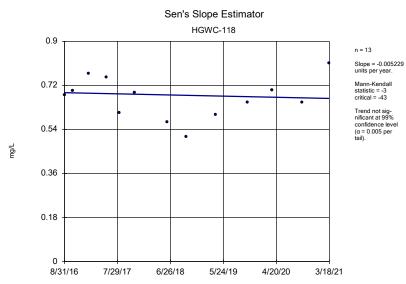
Plant Hammond



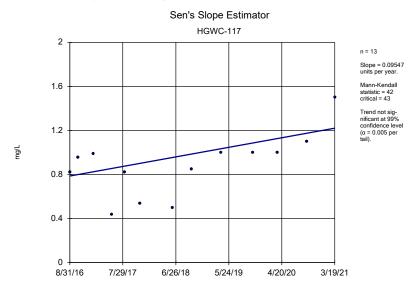
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Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Boron Analysis Run 4/19/2021 1:20 PM View: Appendix III
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Plant Hammond Client: Southern Company Data: Hammond AP-4

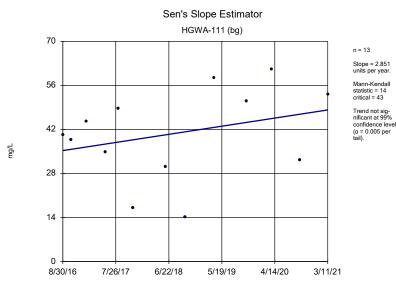


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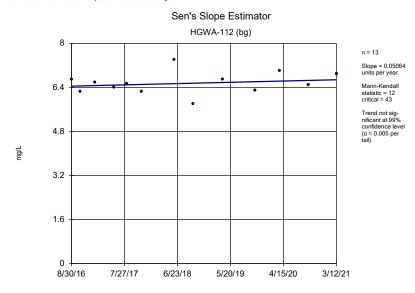
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Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

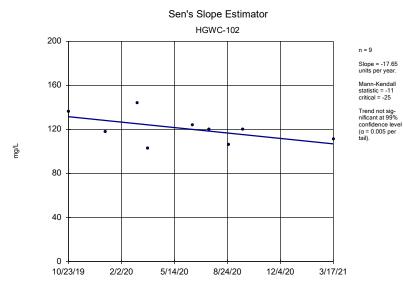
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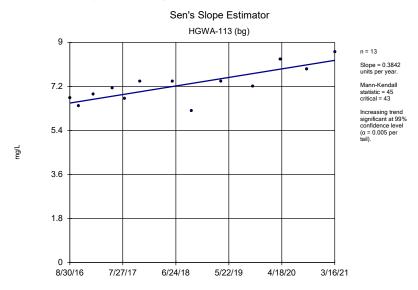
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Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Calcium Analysis Run 4/19/2021 1:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-4



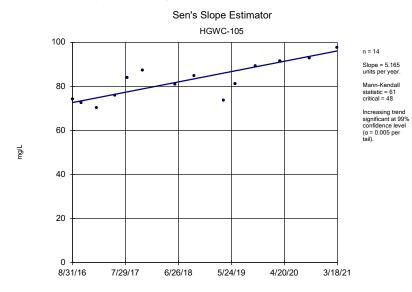
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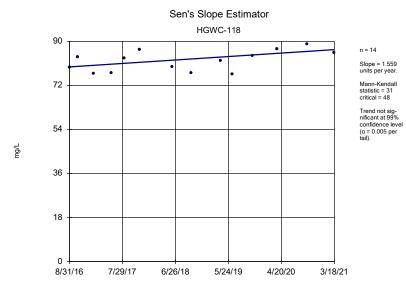
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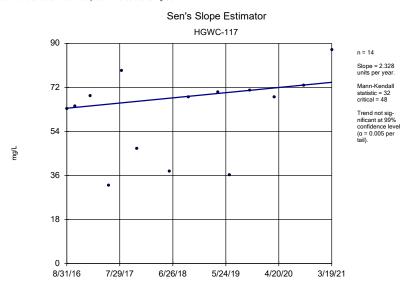
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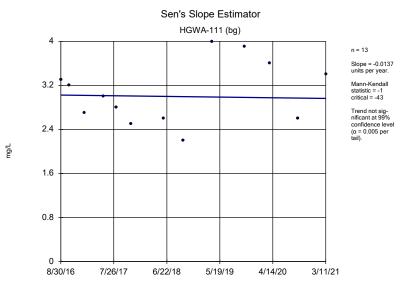
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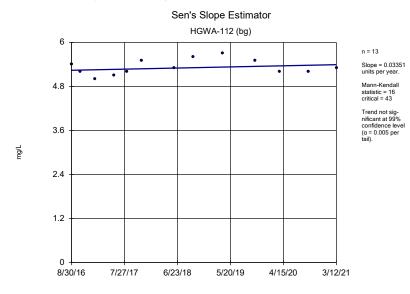
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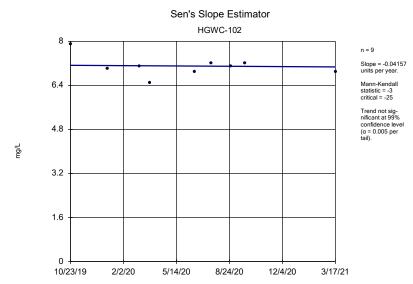
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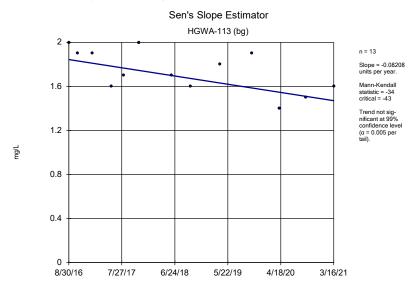
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Plant Hammond Client: Southern Company Data: Hammond AP-4



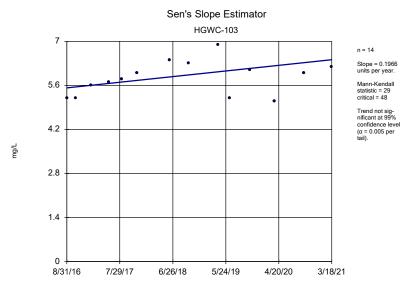
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Plant Hammond Client: Southern Company Data: Hammond AP-4



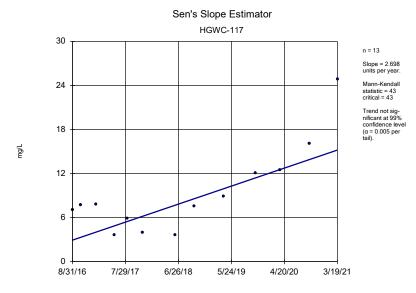
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Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Chloride Analysis Run 4/19/2021 1:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-4

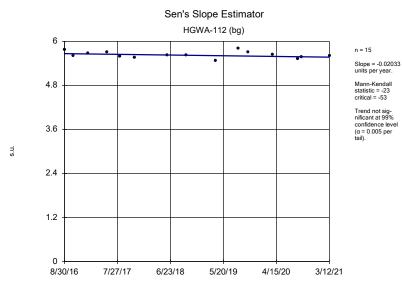


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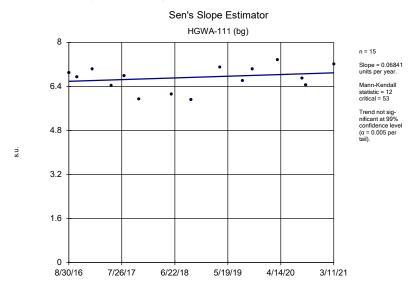


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Plant Hammond Client: Southern Company Data: Hammond AP-4



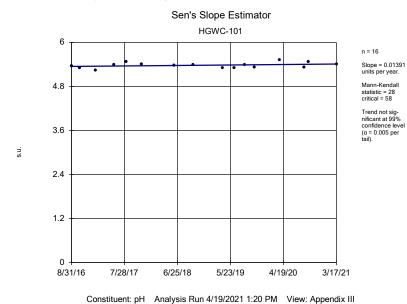
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Plant Hammond Client: Southern Company Data: Hammond AP-4



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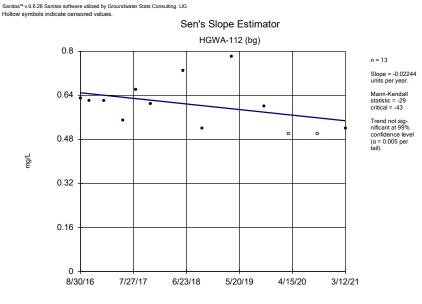


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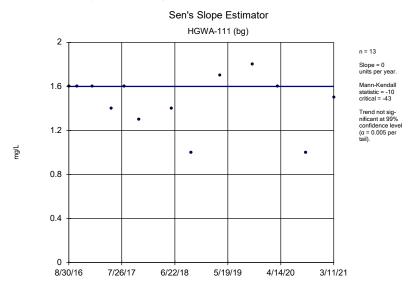


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Constituent: Sulfate Analysis Run 4/19/2021 1:20 PM View: Appendix III
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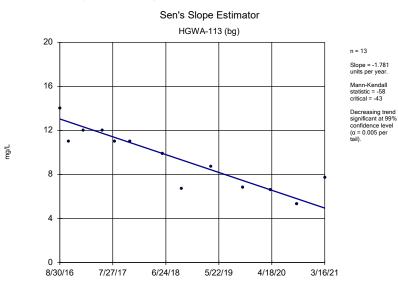


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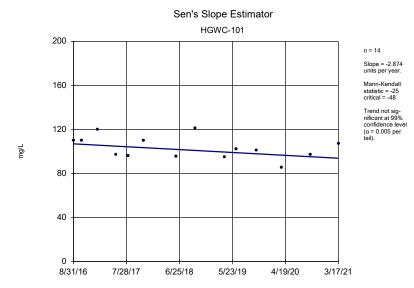
Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

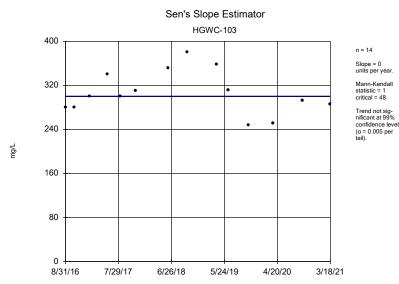
Plant Hammond



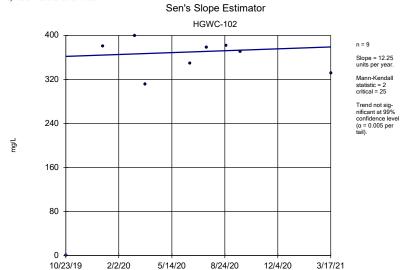
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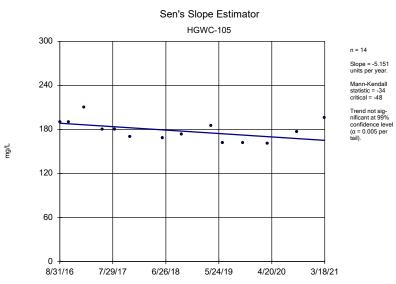


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Plant Hammond Client: Southern Company Data: Hammond AP-4

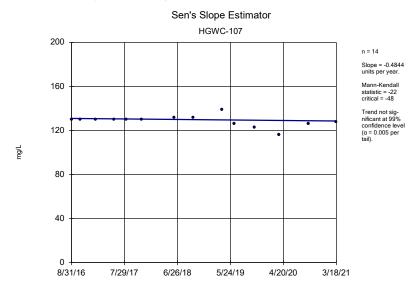


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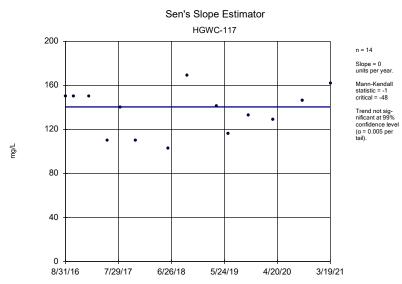
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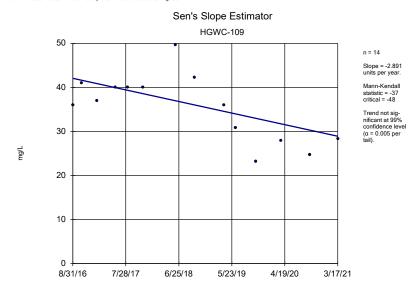
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Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Sulfate Analysis Run 4/19/2021 1:20 PM View: Appendix III
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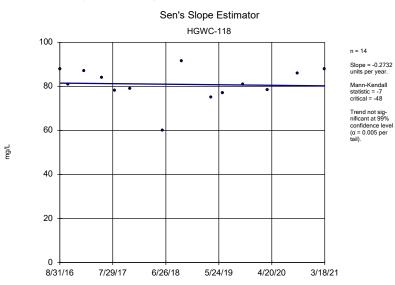


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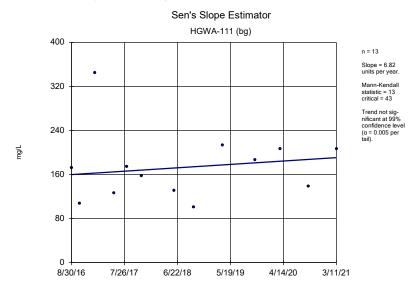
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Plant Hammond

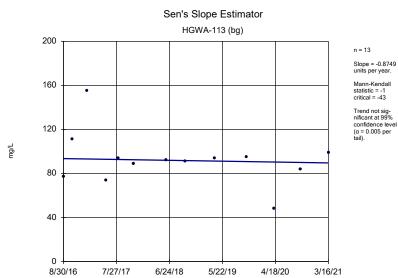


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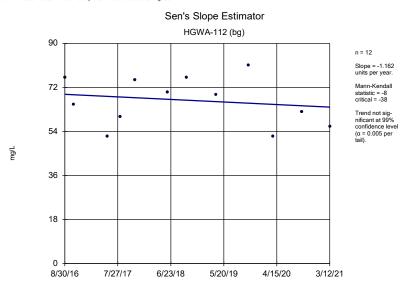
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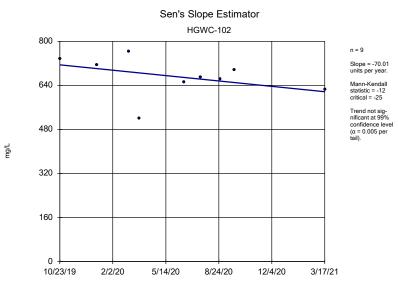
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Plant Hammond Client: Southern Company Data: Hammond AP-4



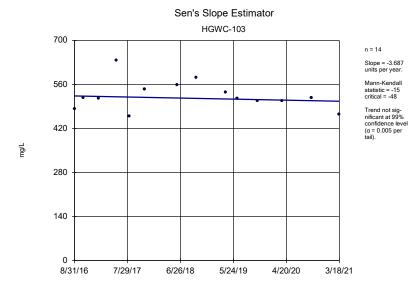
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Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Total Dissolved Solids Analysis Run 4/19/2021 1:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-4

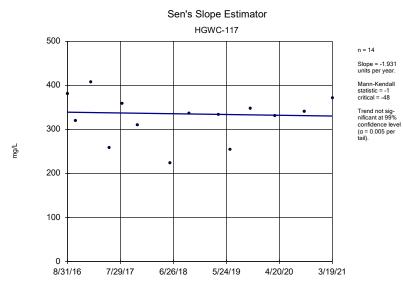


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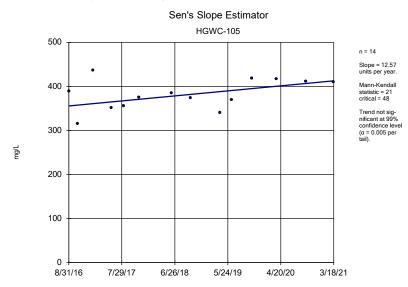


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Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG



Constituent: Total Dissolved Solids Analysis Run 4/19/2021 1:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-4



Constituent: Total Dissolved Solids Analysis Run 4/19/2021 1:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-4

FIGURE F.

Upper Tolerance Limit

	Pla	nt Hammond	Client: \$	Souther	n Company	Data: Hami	mond AP-4	Printed 4/21/2	2021, 3:51 PM		
Constituent	Upper Lim.	Lower Lim.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	<u>Alpha</u>	Method
Antimony (mg/L)	0.003	n/a	n/a	38	n/a	n/a	92.11	n/a	n/a	0.1424	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	n/a	52	n/a	n/a	92.31	n/a	n/a	0.06944	NP Inter(NDs)
Barium (mg/L)	0.1	n/a	n/a	52	n/a	n/a	0	n/a	n/a	0.06944	NP Inter(normality)
Beryllium (mg/L)	0.0019	n/a	n/a	52	n/a	n/a	86.54	n/a	n/a	0.06944	NP Inter(NDs)
Cadmium (mg/L)	0.0005	n/a	n/a	52	n/a	n/a	100	n/a	n/a	0.06944	NP Inter(NDs)
Chromium (mg/L)	0.0061	n/a	n/a	52	n/a	n/a	26.92	n/a	n/a	0.06944	NP Inter(normality)
Cobalt (mg/L)	0.005	n/a	n/a	52	n/a	n/a	84.62	n/a	n/a	0.06944	NP Inter(NDs)
Combined Radium 226 & 228 (pCi/L)	1.406	n/a	n/a	52	0.6644	0.3612	0	None	No	0.05	Inter
Fluoride (mg/L)	0.1747	n/a	n/a	55	0.07748	0.04777	23.64	Kaplan-Meier	No	0.05	Inter
Lead (mg/L)	0.0016	n/a	n/a	52	n/a	n/a	59.62	n/a	n/a	0.06944	NP Inter(NDs)
Lithium (mg/L)	0.03	n/a	n/a	52	n/a	n/a	44.23	n/a	n/a	0.06944	NP Inter(normality)
Mercury (mg/L)	0.0005	n/a	n/a	38	n/a	n/a	76.32	n/a	n/a	0.1424	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	38	n/a	n/a	86.84	n/a	n/a	0.1424	NP Inter(NDs)
Selenium (mg/L)	0.01	n/a	n/a	38	n/a	n/a	78.95	n/a	n/a	0.1424	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	38	n/a	n/a	100	n/a	n/a	0.1424	NP Inter(NDs)

FIGURE G.

PLANT HA	MMOND AP	-4 GWPS	
Constituent Name	MCL	Background Limit	GWPS
Antimony, Total (mg/L)	0.006	0.003	0.006
Arsenic, Total (mg/L)	0.01	0.005	0.01
Barium, Total (mg/L)	2	0.1	2
Beryllium, Total (mg/L)	0.004	0.0019	0.004
Cadmium, Total (mg/L)	0.005	0.005	0.005
Chromium, Total (mg/L)	0.1	0.0061	0.1
Cobalt, Total (mg/L)		0.005	0.005
Combined Radium, Total (pCi/L)	5	1.41	5
Fluoride, Total (mg/L)	4	0.18	4
Lead, Total (mg/L)		0.0016	0.0016
Lithium, Total (mg/L)		0.03	0.03
Mercury, Total (mg/L)	0.002	0.0005	0.002
Molybdenum, Total (mg/L)		0.01	0.01
Selenium, Total (mg/L)	0.05	0.01	0.05
Thallium, Total (mg/L)	0.002	0.001	0.002

^{*}MCL = Maximum Contaminant Level

^{*}GWPS = Groundwater Protection Standard

FIGURE H.

Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/27/2021, 10:27 AM

Constituent Well Upper Lim. Lower Lim. Compliance Sig. N <u>%NDs</u> <u>Transform</u> <u>Alpha</u> Method HGWC-117 0.009463 0.005094 0.005 Yes 14 0 0.01 Cobalt (mg/L) Param. No

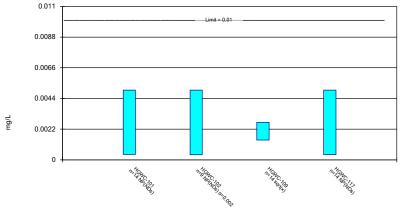
Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-4 Printed 4/27/2021, 10:27 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	<u>Alpha</u>	Method
Arsenic (mg/L)	HGWC-101	0.005	0.00039	0.01	No	14	92.86	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-102	0.005	0.00036	0.01	No	9	55.56	No	0.002	NP (NDs)
Arsenic (mg/L)	HGWC-109	0.002693	0.001421	0.01	No	14	0	sqrt(x)	0.01	Param.
Arsenic (mg/L)	HGWC-117	0.005	0.00037	0.01	No	14	92.86	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-118	0.005	0.001	0.01	No	14	92.86	No	0.01	NP (NDs)
Barium (mg/L)	HGWC-101	0.04678	0.04071	2	No	14	0	x^(1/3)	0.01	Param.
Barium (mg/L)	HGWC-102	0.03457	0.02654	2	No	9	0	No	0.01	Param.
Barium (mg/L)	HGWC-103	0.04124	0.03526	2	No	14	0	x^2	0.01	Param.
Barium (mg/L)	HGWC-105	0.0745	0.066	2	No	14	0	No	0.01	NP (normality)
Barium (mg/L)	HGWC-107	0.03966	0.0373	2	No	14	0	x^2	0.01	Param.
Barium (mg/L)	HGWC-109	0.08872	0.08207	2	No	14	0	No	0.01	Param.
Barium (mg/L)	HGWC-117	0.05161	0.04101	2	No	14	0	No	0.01	Param.
Barium (mg/L)	HGWC-118	0.06381	0.05441	2	No	14	0	No No	0.01	Param.
Beryllium (mg/L)	HGWC-101 HGWC-103	0.003 0.003	0.000057 0.000088	0.004 0.004	No	14 14	50 79 57	No No	0.01 0.01	NP (normality) NP (NDs)
Beryllium (mg/L) Beryllium (mg/L)	HGWC-103	0.003	0.000068	0.004	No No	14	78.57 64.29	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-118	0.003	0.000008	0.004	No	14	92.86	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-101	0.0002259	0.000033	0.005	No	14	14.29	No	0.01	Param.
Cadmium (mg/L)	HGWC-102	0.0007433	0.0001404	0.005	No	9	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-103	0.0007911	0.0006603	0.005	No	14	0	No	0.01	Param.
Cadmium (mg/L)	HGWC-107	0.00025	0.00009	0.005	No	14	50	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-117	0.0008213	0.0005758	0.005	No	14	0	No	0.01	Param.
Chromium (mg/L)	HGWC-101	0.005	0.00075	0.1	No	14	71.43	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-102	0.005	0.00051	0.1	No	9	77.78	No	0.002	NP (NDs)
Chromium (mg/L)	HGWC-103	0.005	0.00069	0.1	No	14	57.14	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-105	0.005	0.00064	0.1	No	14	71.43	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-107	0.005	0.00074	0.1	No	14	92.86	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-109	0.005	0.0014	0.1	No	14	85.71	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-117	0.005	0.001	0.1	No	14	71.43	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-118	0.005	0.00098	0.1	No	14	64.29	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-101	0.002817	0.001983	0.005	No	14	7.143	No	0.01	Param.
Cobalt (mg/L)	HGWC-102	0.002337	0.0009837	0.005	No	9	0	ln(x)	0.01	Param.
Cobalt (mg/L)	HGWC-103	0.002335	0.001751	0.005	No	14	0	No	0.01	Param.
		0.0025				14	21.43	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-105		0.00045	0.005	No					,
Cobalt (mg/L)	HGWC-109	0.00223	0.001266	0.005	No	14	0	No	0.01	Param.
Cobalt (mg/L) Cobalt (mg/L)	HGWC-109 HGWC-117	0.00223 0.009463	0.001266 0.005094	0.005 0.005	No Yes	14 14	0 0	No No	0.01 0.01	Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L)	HGWC-109 HGWC-117 HGWC-118	0.00223 0.009463 0.0025	0.001266 0.005094 0.0004	0.005 0.005 0.005	No Yes No	14 14 14	0 0 42.86	No No	0.01 0.01 0.01	Param. Param. NP (normality)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101	0.00223 0.009463 0.0025 0.9491	0.001266 0.005094 0.0004 0.4125	0.005 0.005 0.005 5	No Yes No No	14 14 14 14	0 0 42.86 0	No No No	0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102	0.00223 0.009463 0.0025 0.9491 1.438	0.001266 0.005094 0.0004 0.4125 0.4452	0.005 0.005 0.005 5	No Yes No No No	14 14 14 14 8	0 0 42.86 0	No No No No	0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103	0.00223 0.009463 0.0025 0.9491 1.438 0.9845	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412	0.005 0.005 0.005 5 5	No Yes No No No	14 14 14 14 8 14	0 0 42.86 0 0	No No No No No	0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201	0.005 0.005 0.005 5 5 5	No Yes No No No No	14 14 14 14 8 14 14	0 0 42.86 0 0 0	No No No No No No	0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015	0.005 0.005 0.005 5 5 5 5	No Yes No No No No No	14 14 14 14 8 14 14 14	0 0 42.86 0 0 0	No No No No No No No No No	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201	0.005 0.005 0.005 5 5 5	No Yes No No No No	14 14 14 14 8 14 14	0 0 42.86 0 0 0	No No No No No No	0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012	0.005 0.005 0.005 5 5 5 5 5	No Yes No No No No No No	14 14 14 14 8 14 14 14	0 0 42.86 0 0 0 0 0	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041	0.005 0.005 0.005 5 5 5 5 5 5	No Yes No No No No No No No No No No No No No	14 14 14 14 8 14 14 14 14	0 0 42.86 0 0 0 0 0 0	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-117	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013	0.005 0.005 0.005 5 5 5 5 5 5 5	No Yes No No No No No No No No No No No No No	14 14 14 14 8 14 14 14 14 14 14	0 0 42.86 0 0 0 0 0 0	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05	0.005 0.005 0.005 5 5 5 5 5 5 5 5 4	No Yes No No No No No No No No No No No No No	14 14 14 14 8 14 14 14 14 14 13 15	0 0 42.86 0 0 0 0 0 0 0 0	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1	0.005 0.005 0.005 5 5 5 5 5 5 5 4	No Yes No No No No No No No No No No No No No	14 14 14 14 8 14 14 14 14 14 15 9	0 0 42.86 0 0 0 0 0 0 0 0 0 0 86.67 88.89	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Poram. Param. Param. Param. Poram. Param. Poram. Poram. Poram. Poram. Poram. Poram. Poram. Poram. Poram. Poram. Poram.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-105	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 15 9 15 15	0 0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. Poron. NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-103 HGWC-103	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4	No Yes No No No No No No No No No No No No No	14 14 14 14 8 14 14 14 14 13 15 9 15	0 42.86 0 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-105 HGWC-107 HGWC-109 HGWC-107	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4 4 4	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 15 9 15 15	0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 13.33 53.33	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-117	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4 4 4 4	No Yes No No No No No No No No No No No No No	14 14 14 14 8 14 14 14 14 15 9 15 15 15 15	0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33 13.33 53.33	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Poram. NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-107 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-111	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009	0.005 0.005 0.005 5 5 5 5 5 5 4 4 4 4 4 4 4 4 4 4 4 4 4	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 15 9 15 15 15 15 15	0 42.86 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33 13.33 53.33 0 92.86	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-107 HGWC-107 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-111	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.00011	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4 4 4 4 4 4 4 0.0016 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 18 14 14 14 14 15 9 15 15 15 15 15 16 14 9	0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 13.33 53.33 0 92.86 88.89	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-105 HGWC-107 HGWC-107 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.16 0.1233 0.11 0.3 0.001 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.00011 0.00024	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4 4 4 4 4 4 4 0.0016 0.0016 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 15 9 15 15 15 16 14 9 14	0 42.86 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 13.33 53.33 0 92.86 88.89 64.29	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001 0.001 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.00011 0.00024 0.000068	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4 4 4 4 4 4 4 0.0016 0.0016 0.0016 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 15 9 15 15 15 16 14 9 14	0 42.86 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 13.33 53.33 0 92.86 88.89 64.29 71.43	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Poram. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-107 HGWC-109 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-105	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001 0.001 0.001 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.00011 0.00024 0.000068 0.00021	0.005 0.005 0.005 5 5 5 5 5 4 4 4 4 4 4 0.0016 0.0016 0.0016 0.0016 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 14 15 9 15 15 15 16 14 9 14	0 42.86 0 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33 0 92.86 88.89 64.29 71.43 71.43	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L)	HGWC-109 HGWC-117 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-107 HGWC-109 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001 0.001 0.001 0.001 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.00011 0.00024 0.000068 0.00021 0.000058	0.005 0.005 0.005 5 5 5 5 5 4 4 4 4 4 4 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 14 15 9 15 15 16 14 9 14 14 14	0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33 0 92.86 88.89 64.29 71.43 71.43 85.71	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Poram. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-107 HGWC-108 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-101 HGWC-102 HGWC-101 HGWC-102 HGWC-101 HGWC-102 HGWC-103 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.00011 0.00024 0.000068 0.00021 0.000058 0.00019	0.005 0.005 0.005 5 5 5 5 5 5 4 4 4 4 4 4 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 14 15 9 15 15 15 16 14 9 14 14 14	0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 13.33 53.33 0 92.86 88.89 64.29 71.43 71.43 85.71 64.29	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L)	HGWC-109 HGWC-117 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-107	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.00011 0.00024 0.000068 0.00021 0.000058 0.00019 0.00025	0.005 0.005 0.005 5 5 5 5 5 5 4 4 4 4 4 4 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 14 15 9 15 15 15 16 14 9 14 14 14 14 14 14	0 42.86 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33 0 92.86 88.89 64.29 71.43 71.43 85.71 64.29 64.29	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-105 HGWC-107 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.001266 0.005094 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.0011 0.00024 0.00068 0.00021 0.000058 0.00019 0.00025 0.001026	0.005 0.005 0.005 5 5 5 5 5 5 4 4 4 4 4 4 4 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 14 15 9 15 15 15 15 16 14 9 14 14 14 14 14 14 14 14 14 9	0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 0 92.86 88.89 64.29 71.43 71.43 85.71 64.29 64.29 0	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L)	HGWC-109 HGWC-117 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-107	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.00011 0.00024 0.000068 0.00021 0.000058 0.00019 0.00025	0.005 0.005 0.005 5 5 5 5 5 5 4 4 4 4 4 4 4 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 14 15 9 15 15 15 16 14 9 14 14 14 14 14 14	0 42.86 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33 0 92.86 88.89 64.29 71.43 71.43 85.71 64.29 64.29	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-105 HGWC-107 HGWC-108 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-107 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	0.001266 0.005094 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.0011 0.00024 0.00068 0.00021 0.00058 0.00019 0.00025 0.001026 0.0015	0.005 0.005 0.005 5 5 5 5 5 5 4 4 4 4 4 4 4 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 14 15 9 15 15 15 15 16 14 9 14 14 14 14 14 14 14 14 14 14 15 15 16 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	0 42.86 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33 0 92.86 88.89 64.29 71.43 71.43 85.71 64.29 64.29 0 21.43	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-105 HGWC-105 HGWC-107 HGWC-109 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.0011 0.00024 0.00068 0.00021 0.00058 0.00019 0.00025 0.001026 0.0015 0.003824	0.005 0.005 0.005 5 5 5 5 5 5 4 4 4 4 4 4 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 15 9 15 15 15 15 16 16 14 9 14 14 14 14 14 14 14 14 14 14 14 14 15 16 16 16 16 16 16 16 16 16 16 16 16 16	0 42.86 0 0 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33 0 92.86 88.89 71.43 71.43 85.71 64.29 64.29 0 21.43 0	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) Param. NP (normality) Param.
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-107 HGWC-109 HGWC-117 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-105 HGWC-105 HGWC-105 HGWC-107 HGWC-109 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-107 HGWC-101	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001	0.001266 0.005094 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.072 0.0009 0.00011 0.00024 0.000068 0.00021 0.000058 0.00019 0.00025 0.001026 0.0015 0.003824 0.00094	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4 4 4 4 4 0.0016	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 14 14 15 9 15 15 15 15 16 16 14 14 14 14 14 14 14 14 15 15 15 15 16 16 17 18 18 18 18 18 18 18 18 18 18	0 42.86 0 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 13.33 53.33 0 92.86 88.89 71.43 71.43 85.71 64.29 0 21.43 0 57.14	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Param. NP (NDs) Param. NP (NDromality) Param. NP (NDs)
Cobalt (mg/L) Cobalt (mg/L) Cobalt (mg/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Combined Radium 226 & 228 (pCi/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Fluoride (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lead (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L) Lithium (mg/L)	HGWC-109 HGWC-117 HGWC-118 HGWC-101 HGWC-102 HGWC-105 HGWC-105 HGWC-107 HGWC-109 HGWC-1011 HGWC-102 HGWC-103 HGWC-107 HGWC-109 HGWC-107 HGWC-109 HGWC-101 HGWC-101 HGWC-102 HGWC-103 HGWC-101 HGWC-102 HGWC-103 HGWC-104 HGWC-105 HGWC-105 HGWC-105 HGWC-105 HGWC-105 HGWC-107 HGWC-108 HGWC-107 HGWC-108 HGWC-107 HGWC-108 HGWC-107 HGWC-108	0.00223 0.009463 0.0025 0.9491 1.438 0.9845 0.9531 1.163 0.8475 0.9068 1.243 0.1 0.22 0.13 0.13 0.16 0.1233 0.11 0.3 0.001	0.001266 0.005094 0.0004 0.4125 0.4452 0.4412 0.5201 0.5015 0.5012 0.4041 0.5013 0.05 0.1 0.06 0.07 0.057 0.07299 0.09 0.0072 0.0009 0.00011 0.00024 0.000068 0.00021 0.000058 0.00019 0.00025 0.001026 0.0015 0.003824 0.00094 0.001	0.005 0.005 0.005 5 5 5 5 5 5 5 4 4 4 4 4 4 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.0016 0.003 0.03 0.03 0.03	No Yes No No No No No No No No No No No No No	14 14 14 14 14 14 14 13 15 9 15 15 15 16 14 9 14 14 14 14 14 14 14 14 14 14 14 14 14	0 42.86 0 0 0 0 0 0 0 0 0 0 0 86.67 88.89 73.33 53.33 53.33 13.33 53.33 71.43 85.71 64.29 0 21.43 0 57.14 50	No No No No No No No No No No No No No N	0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01	Param. Param. NP (normality) Param. Param. Param. Param. Param. Param. Param. Param. Param. Poram. NP (NDs) Param. NP (NDs) Param. NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs) NP (NDs)

Parametric and Non-Parametric (NP) Confidence Interval



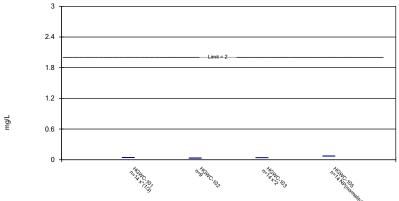


Constituent: Arsenic Analysis Run 4/27/2021 10:25 AM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

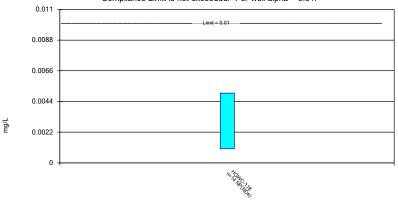
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Constituent: Barium Analysis Run 4/27/2021 10:25 AM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

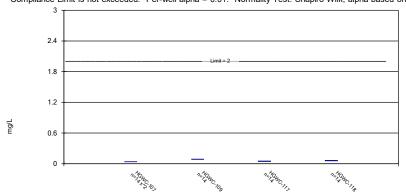


Constituent: Arsenic Analysis Run 4/27/2021 10:25 AM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

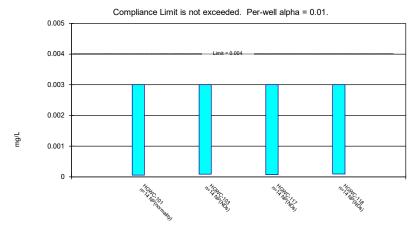
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Parametric Confidence Interval

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



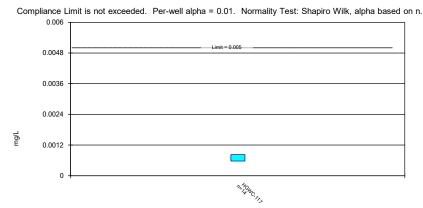
Non-Parametric Confidence Interval



Constituent: Beryllium Analysis Run 4/27/2021 10:25 AM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

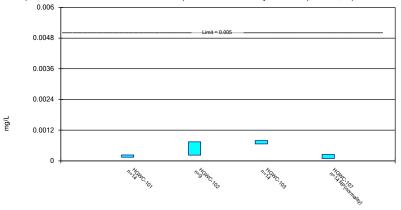
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Parametric Confidence Interval



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.

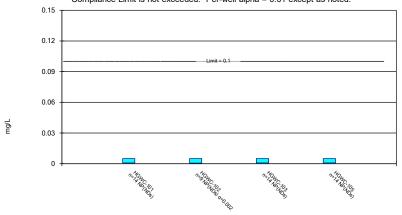


Constituent: Cadmium Analysis Run 4/27/2021 10:25 AM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

 ${\sf Sanitas^{\sf TM}} \ v. 9. 6. 28 \ {\sf Sanitas} \ {\sf software} \ {\sf utilized} \ {\sf by} \ {\sf Groundwater} \ {\sf Stats} \ {\sf Consulting}. \ {\sf UG}$

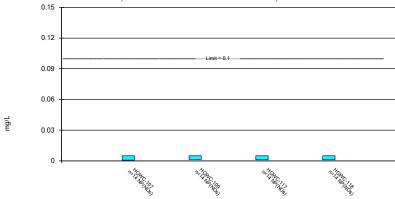
Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

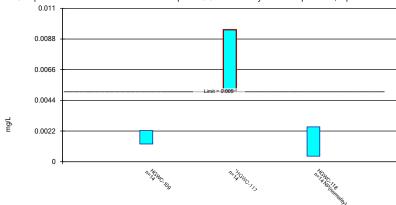


Constituent: Chromium Analysis Run 4/27/2021 10:26 AM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

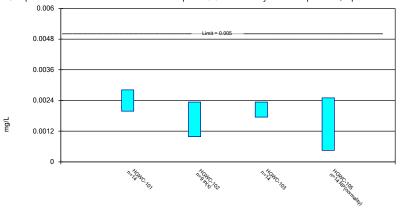
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Constituent: Cobalt Analysis Run 4/27/2021 10:26 AM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

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.

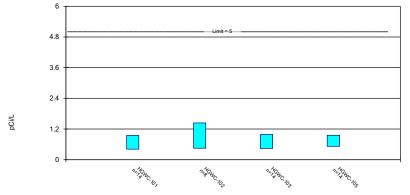


Constituent: Cobalt Analysis Run 4/27/2021 10:26 AM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

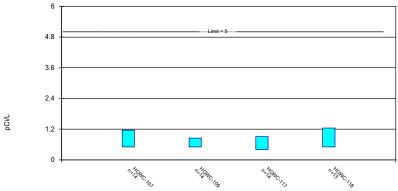
Parametric Confidence Interval

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



Parametric Confidence Interval

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

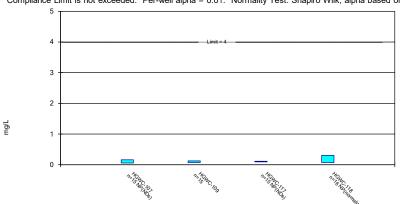


Constituent: Combined Radium 226 & 228 Analysis Run 4/27/2021 10:26 AM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

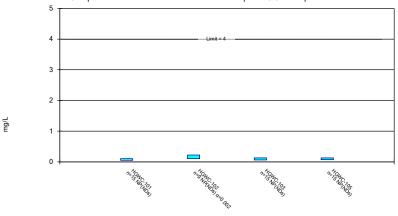
Parametric and Non-Parametric (NP) Confidence Interval

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



Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

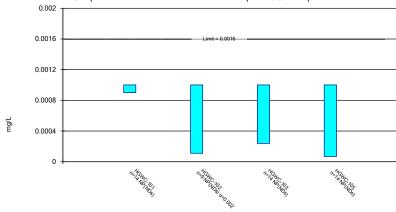


Constituent: Fluoride Analysis Run 4/27/2021 10:26 AM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

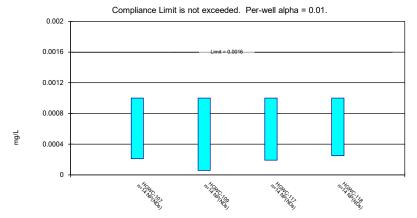
Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



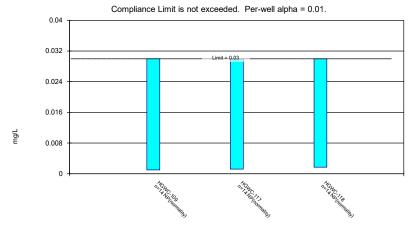
Non-Parametric Confidence Interval



Constituent: Lead Analysis Run 4/27/2021 10:26 AM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

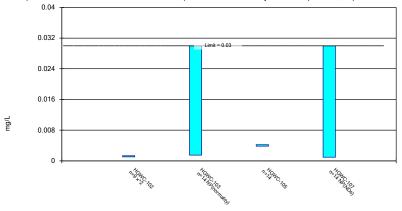


Constituent: Lithium Analysis Run 4/27/2021 10:26 AM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4

Sanitas™ v.9.6.28 Sanitas software utilized by Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

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



Constituent: Lithium Analysis Run 4/27/2021 10:26 AM View: Appendix III & IV
Plant Hammond Client: Southern Company Data: Hammond AP-4