



Prepared for

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2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

PLANT HAMMOND ASH POND 1 (AP-1)

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CERTIFICATION STATEMENT

This 2021 Annual Groundwater Monitoring and Corrective Action Report, Plant Hammond Ash Pond 1 (AP-1) has been prepared in compliance with the United States Environmental Protection Agency Coal Combustion Residual Rule [40 Code of Federal Regulations 257 Subpart D], specifically §257.90(e), and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 by a qualified groundwater scientist or engineer with Geosyntec Consultants.



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SUMMARY

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

Plant Hammond is located at 5963 Alabama Highway SW, approximately 10 miles west of Rome in Floyd County, Georgia. Plant Hammond is a four-unit, coal-fired electric generating facility. All four units at Plant Hammond were decommissioned in July 2019 and no longer produce electricity. CCR material resulting from power generation were historically transferred and stored at the site until 1969. After 1969, AP-1 was utilized



Plant Hammond and the Site

as a co-treatment pond to handle return water flows from the other ponds and for recycling of process water for plant operations. The Site is located on the southeastern portion of the Plant Hammond property. The Georgia Environmental Protection Division (GA EPD) approved Closure permit No. 057-023D(CCR) for AP-1 on June 22, 2020.

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

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

During the 2021 reporting period, Geosyntec conducted three groundwater sampling events in February, March, and August 2021. Groundwater samples were submitted to Pace Analytical Services, LLC, for analysis. Per the federal CCR Rule, groundwater data from the March and August 2021 events were evaluated in accordance with the certified statistical methods. The evaluations identified statistically significant values of select Appendix III² and Appendix IV³ constituents in excess of state and federal groundwater protection standards in select monitoring wells, as summarized in the table below for the 2021 reporting period.

Appendix III Constituent	March 2021	August 2021
Boron	HGWC-7, HGWC-8, HGWC-9, HGWC-10, HGWC-11, HGWC-12, HGWC-13	HGWC-7, HGWC-8, HGWC-9, HGWC-10, HGWC-11, HGWC-12, HGWC-13
Calcium	HGWC-8, HGWC-9, HGWC-10, HGWC-12, HGWC-13	HGWC-8, HGWC-9, HGWC-10, HGWC-12, HGWC-13
Chloride	HGWC-7, HGWC-8, HGWC-9, HGWC-12	HGWC-8, HGWC-9, HGWC-12
Sulfate	HGWC-7, HGWC-8, HGWC-9, HGWC-10, HGWC-11, HGWC-12, HGWC-13	HGWC-7, HGWC-8, HGWC-9, HGWC-10, HGWC-11, HGWC-12, HGWC-13
Total Dissolved Solids	HGWC-9, HGWC-13	HGWC-9, HGWC-13
Appendix IV Constituent⁴	March 2021	August 2021
Arsenic	<i>Federal and State: HGWC-13</i>	<i>Federal and State: HGWC-13</i>
Lithium	<i>Federal and State: MW-25D</i>	<i>Federal and State: MW-25D</i>
Molybdenum	<i>Federal and State: HGWC-8 State only: HGWC-7, HGWC-9, HGWC-11, HGWC-12, HGWC-13, MW-19</i>	<i>Federal and State: HGWC-8 State only: HGWC-7, HGWC-9, HGWC-11, HGWC-12, HGWC-13, MW-19</i>

²Boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS)

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

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

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

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LIST OF ACRONYMS AND ABBREVIATIONS

ACM	Assessment of Corrective Measures
AP-1	Ash Pond 1
ASD	Alternate Source Demonstration
CCR	coal combustion residuals
CFR	Code of Federal Regulations
DO	dissolved oxygen
ft/day	feet per day
ft/ft	feet per foot
GA-20	Georgia Highway 20
GA EPD	Georgia Environmental Protection Division
Georgia Power	Georgia Power Company
Geosyntec	Geosyntec Consultants, Inc.
GSC	Groundwater Stats Consulting
GWPS	Groundwater Protection Standard
HAR	Hydrogeologic Assessment Report
i	groundwater hydraulic gradient
K_h	horizontal hydraulic conductivity
MCL	Maximum Contaminant Level
mg/L	milligram per liter
NELAP	National Environmental Laboratory Accreditation Program
NTU	nephelometric turbidity units
ORP	oxidation-reduction potential
Pace Analytical	Pace Analytical Services, LLC.
PE	professional engineer
PL	prediction limit
QA/QC	Quality Assurance/Quality Control
SSI	statistically significant increase
SSL	statistically significant level
s.u.	standard unit
Unified Guidance	Statistical Analysis of Groundwater Data at RCRA Facilities Unified Guidance
USEPA	United States Environmental Protection Agency

1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (USEPA) Coal Combustion Residual Rule (federal CCR Rule) [40 Code of Federal Regulations (CFR) Part 257, Subpart D] and the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10, Geosyntec Consultants, Inc. (Geosyntec) has prepared this *2021 Annual Groundwater Monitoring and Corrective Action Report* to document groundwater monitoring activities conducted at Georgia Power Company (Georgia Power) Plant Hammond (Site) Ash Pond 1 (AP-1) for the reporting period of January through December 2021 (referred to herein as the 2021 reporting period).

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

Due to statistically significant levels (SSLs) of arsenic and molybdenum identified in the *2018 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2019a), Georgia Power initiated an assessment of corrective measures (ACM) program for AP-1 in January 2019. Since 2018, an SSL of lithium was identified in the *2020 Semiannual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2020). Pursuant to § 257.96(b), Georgia Power continues to monitor groundwater associated with AP-1 in accordance with the assessment monitoring program established for the unit in 2018, including semiannual monitoring and reporting pursuant to § 257.90 through § 257.95 of the federal CCR Rule, and GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a). The current reporting period data indicate that arsenic, lithium, and molybdenum concentrations are horizontally delineated to below their corresponding groundwater protection standards (GWPS) and contained within the property boundary.

1.1 Site Description and Background

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

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

AP-1 is a 35-acre surface impoundment located at Plant Hammond that received CCR materials from its commission in 1952 until 1969. After 1969, AP-1 was utilized as a co-treatment pond to handle return water flows from the other ponds and for recycling of process water for plant operations. Georgia Power will close AP-1 through removal of the CCR material from the CCR unit; closure activities will be conducted in accordance with § 257.102 and corresponding Rule 391-3-4-.10(7)(b). The proposed closure by removal approach provides a source control measure that reduces the potential for migration of CCR constituents to groundwater. Details of the closure approach are provided in the Initial Written Closure Plan, published in 2016 to Georgia Power's CCR Rule Compliance website. Closure permit No. 057-023D(CCR) was approved by GA EPD on June 22, 2020.

1.2 Regional Geology and Hydrogeologic Setting

The following section summarizes the geologic and hydrogeologic conditions at AP-1 as described in the *Hydrogeologic Assessment Report Revision 01 – AP-1* (HAR Rev 01) submitted to GA EPD in December 2019 in support of the AP-1 solid waste handling permit (Geosyntec, 2019c).

1.2.1 Regional and Site Geology

The Site is located within the Great Valley District of the Valley and Ridge Physiographic Province (Valley and Ridge) in northwest Georgia. The Valley and Ridge is characterized by Paleozoic sedimentary rocks that have been folded and faulted into the ridges and valleys that gave this region its name. Geologic mapping performed at the Site by Petrologic Solutions, Inc., under the direction of Golder (Golder, 2018), indicates that AP-1 is underlain by the middle units of the Cambrian age Conasauga Formation, consisting of mostly shaley limestone. Subsurface investigations at AP-1 describe the bedrock as limestone or shaley limestone. AP-1 is underlain primarily by five lithologic units: (i) fill; (ii) terrace alluvium; (iii) residuum; (iv) highly weathered/fractured shaley limestone bedrock; and (v) competent shaley limestone bedrock.

Based on subsurface investigations, the fill material is composed of lean clay or gravelly lean clay with sand from the construction of the pond. The terrace alluvium consists of unconsolidated sediments associated with deposition from the Coosa River and Cabin Creek. Alluvium was variously described as well sorted and poorly sorted sand, clayey sand, sandy gravel, clayey gravel, or gravelly clay. The residuum clay layer or native

soils have been derived from the in-place weathering of the shaley limestone bedrock. The residuum is generally described as a lean to fat clay, sometimes silty with some sand, and rarely gravel. The subsurface investigation data suggest that the residuum thins out in places, and the alluvial deposits is in direct contact with the upper fractured or the unweathered limestone bedrock. Just below the residuum clay layer is a gradational zone of varying proportions of clayey residuum and sand, gravel, and cobble-sized angular pieces of partially weathered limestone, grading into a zone of fractured shaley limestone, before grading into unweathered, fresh shaley limestone bedrock. The upper highly weathered zone appears more as residuum with various sized rock fragments. The lower zone becomes less clayey with depth and is estimated to be approximately 10 feet thick. The limestone is described as medium to dark gray, very finely laminated with lighter and darker gray layers, and contains interbeds of calcareous shale.

1.2.2 Hydrogeologic Setting

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

1.3 Groundwater Monitoring Well Network

In accordance with § 257.91, a groundwater monitoring system was installed at AP-1 that consists of a sufficient number of wells installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer to represent the groundwater quality both upgradient of the units (i.e., background conditions) and passing the waste boundary of the units. The number, spacing, and depths of the groundwater monitoring wells were selected based on the characterization of site-specific hydrogeologic conditions.

As part of the assessment monitoring program, delineation wells have been installed since mid-2018 to characterize the nature and extent of arsenic, lithium, and molybdenum in groundwater downgradient of AP-1. Pursuant to § 257.195(g)(1)(iv), the wells classified as “delineation wells” will continue to be sampled concurrently with the compliance

monitoring well network as part of the ongoing assessment groundwater monitoring program.

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

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

2.0 GROUNDWATER MONITORING ACTIVITIES

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

2.1 Monitoring Well Installation and Maintenance

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

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

2.2 Assessment Monitoring

Georgia Power initiated an assessment monitoring program for groundwater at AP-1 in January 2018. Statistical analyses of the 2018 assessment monitoring data identified an SSL of arsenic in HGWC-13 and SSLs of molybdenum in HGWC-7, HGWC-8, HGWC-9, HGWC-11, HGWC-12, and HGWC-13 in excess of their associated federal and/or state GWPS.

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

Regarding the routine assessment monitoring program, the annual Appendix IV sampling event at AP-1 was conducted in February 2021, with the semiannual assessment monitoring events occurring in March and August 2021. The number of groundwater samples collected for analysis and the dates the samples were collected at AP-1 during this reporting period are summarized in **Table 2**.

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

2.3 Additional Groundwater Sampling

A supplemental groundwater sampling event was conducted during the 2021 reporting period to collect additional data in support of the continued evaluation of corrective measures as presented in the ACM Report. The supplementary data were collected in support of evaluating attenuation mechanisms and rates and aquifer capacity for attenuation. The scope of this additional effort and associated results are presented in the *Semiannual Remedy Selection and Design Progress Report* provided in **Appendix C**.

3.0 SAMPLING METHODOLOGY AND ANALYSES

The following section presents a summary of the field sampling procedures that were implemented, and the groundwater sampling results that were obtained in connection with the assessment monitoring program conducted at AP-1 during the 2021 reporting period.

3.1 Groundwater Level Measurement

A synoptic round of depth-to-groundwater-level measurements were recorded from the AP-1 wells and piezometers during the three 2021 site-wide assessment monitoring events and used to calculate the corresponding groundwater elevations, which are presented in **Table 3**. The February, March, and August 2021 elevations reported are generally representative of the groundwater elevations reported for prior monitoring events.

The groundwater elevation data were used to prepare potentiometric surface maps for the February, March, and August 2021 events, which are presented on **Figures 3, 4 and 5**, respectively. Groundwater in the AP-1 area flows under the influence of topography from slightly higher elevations on the north side of the Site in a generally easterly and southerly direction.

3.2 Groundwater Gradient and Flow Velocity

The horizontal groundwater hydraulic gradients within the uppermost aquifer beneath AP-1 were calculated using the groundwater elevation data from the February, March, and August 2021 events. Hydraulic gradients were calculated along the flow path south of AP-1 between HGWC-13 and MW-7 and between HGWC-8 and MW-20 along the flow path east of AP-1. The supporting calculations are presented in **Table 4**. The table also presents the average hydraulic gradients calculated from the three measurement events. The general trajectory of the flow paths used in the calculations and associated potentiometric contour lines are shown on **Figures 3, 4 and 5**. The calculated average hydraulic gradients along the southerly and easterly groundwater flow path lines associated with AP-1 for the 2021 reporting period are 0.021 feet per foot (ft/ft) and 0.025 ft/ft, respectively.

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

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

where:

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

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

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

h_1 and h_2 = Groundwater elevation at location 1 and 2

L = Distance between location 1 and 2

n_e = Effective porosity

The average horizontal hydraulic conductivity (K_h) for AP-1 of 11.82 feet per day (ft/day) was computed from slug test data derived from ten locations across the AP-1 area and presented in the HAR Rev 01 (Geosyntec, 2019c). An estimated effective porosity of 0.15 is used to represent average conditions at AP-1, derived based on review of literature (Kresic, 2007), observed site lithology, and professional judgement. With these variables defined, and accounting for the averaged hydraulic gradient discussed above for the February, March, and August 2021 events, the average groundwater flow velocity in the vicinity of AP-1, for the 2021 reporting period, was calculated to be 1.8 ft/day (i.e., average of the southerly and easterly flow velocities).

3.3 Groundwater Sampling Procedures

Groundwater samples were collected using low-flow sampling procedures in accordance with §257.93(a). Purging and sampling was performed using dedicated bladder pumps with dedicated tubing, non-dedicated bladder pumps, and peristaltic pumps. For wells sampled with non-dedicated bladder pumps and peristaltic pumps, the pump intake was lowered to the midpoint of the well screen (or as appropriate based on the groundwater level). Non-dedicated bladder pump and peristaltic pump samples were collected using new disposable polyethylene tubing; all non-dedicated tubing was disposed of following the sampling event. All non-disposable equipment was decontaminated before use and between well locations.

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

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

Following purging, and once stabilization was achieved, unfiltered samples were collected into appropriately preserved laboratory-supplied sample containers. 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 would be collected. A new in-line 0.45-micron filter would be used to collect each filtered sample. The in-line filters would be 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. During the 2021 reporting period, filtered samples were collected from MW-27 and MW-28D during the February 2021 event and from HGWC-7 for the March 2021 event.

Sample bottles were placed in ice-packed coolers and submitted to Pace Analytical Services, LLC. (Pace Analytical) in Norcross, Georgia following chain-of-custody protocol. The field sampling and equipment calibration forms generated during the monitoring events conducted in December 2020 and throughout the 2021 reporting period are provided in **Appendix B**.

3.4 Laboratory Analyses

Laboratory analyses were performed by Pace Analytical, which is accredited by the National Environmental Laboratory Accreditation Program (NELAP). Pace Analytical maintains a NELAP certification for the Appendix III and Appendix IV constituents

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

The groundwater analytical results from the 2021 assessment monitoring events, and the supplementary sampling of HGWA-43D and HGWA-44D in December 2020 and January 2021, are summarized in **Table 5**. The Pace Analytical laboratory reports associated with the results presented in **Table 5** are provided in **Appendix B**.

3.5 Quality Assurance and Quality Control Summary

Quality assurance/quality control (QA/QC) samples were collected during the groundwater monitoring events in accordance with the site's *Groundwater Monitoring Plan* (Geosyntec, 2021c), and included the following: field duplicates, equipment blanks, and field blank samples. QA/QC samples were collected in appropriately preserved laboratory-provided containers and submitted under the same chain of custody as the primary samples for analysis of the same constituents by Pace Analytical.

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

4.0 STATISTICAL ANALYSIS

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

4.1 Statistical Methods

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

Appendix III statistical analysis was performed to assess if Appendix III constituents have returned to background levels. Appendix IV constituents were evaluated to assess if concentrations statistically exceeded the established state and federal GWPS. Detailed statistical methods used for Appendix III and Appendix IV constituents are discussed in the statistical analysis reports 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

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

exceedance is noted only when the resample confirms the initial exceedance by also exceeding the statistical limit. If the resample falls within its respective prediction limit, no exceedance is declared.

4.1.2 Appendix IV Statistical Methods

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

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

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

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

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

- (1) The federally established MCL.

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

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

4.2 Statistical Analyses Results

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

4.2.1 March 2021 Semiannual Event

AP-1 (Federal CCR Rule):

- Arsenic: HGWC-13
- Lithium: MW-25D
- Molybdenum: HGWC-8

AP-1 (GA EPD CCR Rule):

- Arsenic: HGWC-13
- Lithium: MW-25D
- Molybdenum: HGWC-7, HGWC-8, HGWC-9, HGWC-11, HGWC-12, HGWC-13, and MW-19

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

4.2.2 August 2021 Semiannual Event

AP-1 (Federal CCR Rule):

- Arsenic: HGWC-13
- Lithium: MW-25D
- Molybdenum: HGWC-8

AP-1 (GA EPD CCR Rule):

- Arsenic: HGWC-13
- Lithium: MW-25D
- Molybdenum: HGWC-7, HGWC-8, HGWC-9, HGWC-11, HGWC-12, HGWC-13, and MW-19

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

4.2.3 Summary of Statistical Analyses

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

- Statistical analyses of the separate March 2021 and August 2021 data did not identify a state SSL of lithium that has been identified in HGWC-13 during prior reporting periods.

5.0 NATURE AND EXTENT

5.1 Current Delineation Status

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

The SSLs identified for arsenic (HGWC-13), lithium (MW-25D), and molybdenum (HGWC-7, HGWC-8, HGWC-9, HGWC-11, HGWC-12, HGWC-13, and MW-19) are horizontally delineated to below state and federal GWPS within the property boundary by delineation wells MW-5, MW-6, MW-7, MW-20, and MW-29.

The arsenic and molybdenum concentrations reported in HGWC-13 are vertically delineated to below the applicable state and federal GWPS by MW-24D. Similarly, MW-25D, MW-26D, MW-27D and MW-28D vertically delineate molybdenum SSLs in HGWC-11, HGWC-12, HGWC-9, HGWC-8 and HGWC-7, respectively (the location of MW-25D delineates both HGWC-11 and HGWC-12).

The molybdenum and lithium SSLs identified in MW-19 and MW-25D, respectively, are horizontally delineated to below the state GWPS by MW-7. Vertical delineation of these constituents is pending additional data collection and analysis prior to the installation of additional vertical delineation wells adjacent to MW-19 and MW-25D. However, based on findings related to deep wells on the Site, as presented in the Alternate Source Demonstration (ASD) described in Section 5.2 below and submitted to GA EPD in January 2021 (Geosyntec, 2021a), it is also recommended to collect additional data and continue to evaluate these findings prior to installing additional deeper vertical delineation well(s) at MW-25D. A preliminary evaluation of the geochemical conditions in MW-25D suggested that this well is not affected by AP-1 and appeared to show geochemical conditions similar to other deep wells with low recharge.

5.2 Alternate Source Demonstration

An ASD was prepared and submitted to GA EPD on January 29, 2021, to address the fluoride and lithium SSLs reported for MW-30D and molybdenum SSL reported for MW-40D (Geosyntec, 2021a). The ASD presented multiple lines of evidence that the SSLs are not associated with a release from AP-1, but are instead a result of natural variation

in groundwater quality due to the limited (i.e., MW-30D) or no (i.e., MW-40D) connection these wells have to the uppermost aquifer as evidenced by (i) slow recharge encountered within the deeper delineation wells installed in less fractured bedrock zones; (ii) starkly different groundwater elevations in these wells compared to other site wells; and (iii) very different geochemical conditions. In addition to being submitted to GA EPD under separate cover, the ASD was also included as an appendix to the *2020 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2021b).

6.0 MONITORING PROGRAM STATUS

6.1 Assessment Monitoring Status

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

6.2 Assessment of Corrective Measures

The ACM efforts completed during the second half of the 2021 reporting period are presented in the *Semiannual Remedy Selection and Design Progress Report* provided in **Appendix C**. The semiannual progress report summarizes:

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

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

7.0 CONCLUSIONS AND FUTURE ACTIONS

This *2021 Annual Groundwater Monitoring and Corrective Action Report* for Plant Hammond AP-1 was prepared to fulfill the requirements of the federal CCR Rule and GA EPD Rules for Solid Waste Management 391-3-4-.10. Statistical analyses of the groundwater monitoring data for AP-1 for the 2021 reporting period identified the continued presence of SSLs of arsenic in HGWC-13 and lithium in MW-25D above the state and federal GWPS. The analyses also identified SSLs of molybdenum in HGWC- 7, HGWC-9, HGWC-11, HGWC-12, HGWC-13, and MW-19 above the state GWPS, and an SSL of molybdenum in HGWC-8 above state and federal GWPS. Based on the most current groundwater quality, as described in Section 4.3, the SSLs are vertically and horizontally delineated to below the state and federal GWPS within the property boundary. In select cases, as explained below, delineation by statistical analysis is pending.

The molybdenum and lithium SSLs identified in MW-19 and MW-25D, respectively, are horizontally delineated to below the state and federal GWPS by MW-7. Vertical delineation of these constituents is pending additional data collection and analysis prior to the installation of additional vertical delineation wells adjacent to MW-19 and MW- 25D. However, a preliminary evaluation of the geochemical conditions in MW- 25D suggested that this well is not affected by AP-1 and appeared to show geochemical conditions similar to other deep wells with low recharge. Georgia Power will continue routine monitoring of MW-19 and MW-25D and will implement the necessary measures to delineate Appendix IV constituents further vertically in the vicinity of these wells if/as conditions change.

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

8.0 REFERENCES

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

TABLES

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

Well ID	Hydraulic Location	Installation Date	Northing ⁽¹⁾	Easting ⁽¹⁾	Ground Surface Elevation (ft)	Top of Casing Elevation ⁽²⁾ (ft)	Top of Screen Elevation ⁽²⁾ (ft)	Bottom of Screen Elevation ⁽²⁾ (ft)	Well Depth (ft BTOC) ⁽³⁾	Screen Interval Length (ft)
Compliance Monitoring Well										
HGWA-1	Upgradient	12/3/2014	1550423.32	1940770.00	592.32	595.21	573.12	563.12	32.49	10
HGWA-2	Upgradient	12/2/2015	1549796.87	1939845.15	585.29	587.92	570.29	560.29	27.95	10
HGWA-3	Upgradient	12/2/2015	1549794.41	1939833.39	585.23	587.74	553.23	543.23	44.51	10
HGWA-43D	Upgradient	8/26/2020	1550422.85	1940753.81	592.08	595.08	544.08	534.08	61.25	10
HGWA-44D	Upgradient	8/25/2020	1550409.13	1940756.19	592.01	594.79	491.76	481.76	113.50	10
HGWC-7	Downgradient	12/3/2015	1549520.67	1942319.75	576.55	579.18	561.55	551.55	27.96	10
HGWC-8	Downgradient	12/8/2015	1549114.61	1942392.56	577.14	579.82	564.64	554.64	25.51	10
HGWC-9	Downgradient	12/9/2015	1548693.30	1942215.03	577.72	580.36	543.72	533.72	46.97	10
HGWC-10	Downgradient	12/8/2015	1548469.25	1941644.43	576.76	579.37	566.76	556.76	22.94	10
HGWC-11	Downgradient	12/15/2015	1548477.91	1941146.79	578.12	580.67	565.19	555.19	25.78	10
HGWC-12	Downgradient	12/9/2015	1548476.53	1941152.34	578.14	580.73	555.64	545.64	35.42	10
HGWC-13	Downgradient	12/10/2015	1548628.03	1940900.60	592.94	595.76	560.94	550.94	45.15	10
Delineation Monitoring Well										
MW-5	Downgradient	11/4/2014	1548436.02	1942448.85	578.00	581.14	560.70	550.70	30.84	10
MW-6	Downgradient	11/4/2014	1548383.12	1941689.01	579.18	581.84	559.28	549.28	32.96	10
MW-7	Downgradient	10/30/2014	1548230.47	1941087.44	574.94	577.73	561.24	551.24	26.89	10
MW-19	Downgradient	9/26/2018	1548422.94	1940943.01	577.46	580.65	561.45	551.45	29.53	10
MW-20	Downgradient	9/27/2018	1549029.68	1942736.85	575.96	579.00	554.96	544.96	34.37	10
MW-24D	Downgradient	11/7/2018	1548638.80	1940900.37	592.91	595.68	532.91	522.91	72.77	10
MW-25D	Downgradient	11/6/2018	1548473.00	1941162.20	577.71	580.59	527.71	517.71	63.21	10
MW-26D	Downgradient	11/14/2018	1548699.91	1942222.36	577.63	580.41	512.63	502.63	78.11	10
MW-27D	Downgradient	11/8/2018	1549103.57	1942390.80	576.84	579.70	526.84	516.84	63.19	10
MW-28D	Downgradient	11/13/2018	1549510.90	1942321.14	576.20	579.08	531.20	521.20	58.21	10
MW-29	Downgradient	11/13/2018	1549437.67	1942633.60	572.14	575.06	557.14	547.14	28.25	10
Piezometer										
APIA-1	Upgradient	12/15/2015	1550080.01	1941614.12	584.78	587.44	575.84	565.84	21.93	10
MW-1	Upgradient	12/2/2014	1549938.24	1941589.06	585.63	588.66	567.93	557.93	31.06	10
MW-8	Downgradient	10/29/2014	1548171.86	1940016.70	584.25	586.93	565.05	555.05	32.28	10
MW-30D	Downgradient	6/19/2019	1549530.00	1942318.45	576.20	578.59	481.20	471.20	107.72	10
MW-40D	Downgradient	4/29/2020	1549542.29	1942316.55	576.41	578.92	450.41	440.41	138.84	10

Notes:

ft = feet

ft BTOC = feet below top of casing

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

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

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

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

Well ID	Hydraulic Location	December 15, 2020	January 19-20, 2021	February 8-22, 2021	March 10-17, 2021	August 11-19, 2021	Status of Monitoring Well
Purpose of Sampling Event:		Supplemental	Supplemental	App. IV Annual	Assessment	Assessment	
<i>Compliance Monitoring Well</i>							
HGWA-1	Upgradient	--	--	X	X	X	Assessment
HGWA-2	Upgradient	--	--	X	X	X	Assessment
HGWA-3	Upgradient	--	--	X	X	X	Assessment
HGWA-43D	Upgradient	X	X	X	X	X	Assessment
HGWA-44D	Upgradient	X	X	X	X	X	Assessment
HGWC-7	Downgradient	--	--	X	X	X	Assessment
HGWC-8	Downgradient	--	--	X	X	X	Assessment
HGWC-9	Downgradient	--	--	X	X	X	Assessment
HGWC-10	Downgradient	--	--	X	X	X	Assessment
HGWC-11	Downgradient	--	--	X	X	X	Assessment
HGWC-12	Downgradient	--	--	X	X	X	Assessment
HGWC-13	Downgradient	--	--	X	X	X	Assessment
<i>Delineation Monitoring Well</i>							
MW-5	Downgradient	--	--	X	X	X	Assessment
MW-6	Downgradient	--	--	X	X	X	Assessment
MW-7	Downgradient	--	--	X	X	X	Assessment
MW-19	Downgradient	--	--	X	X	X	Assessment
MW-20	Downgradient	--	--	X	X	X	Assessment
MW-24D	Downgradient	--	--	X	X	X	Assessment
MW-25D	Downgradient	--	--	X	X	X	Assessment
MW-26D	Downgradient	--	--	X	X	X	Assessment
MW-27D	Downgradient	--	--	X	X	X	Assessment
MW-28D	Downgradient	--	--	X	X	X	Assessment
MW-29	Downgradient	--	--	X	X	X	Assessment

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

Well ID	Top of Casing Elevation ^(1,2) (ft)	February 8, 2021		March 10, 2021		August 11, 2021	
		Depth to Water (ft BTOC)	Groundwater Elevation ⁽¹⁾ (ft)	Depth to Water (ft BTOC)	Groundwater Elevation ⁽¹⁾ (ft)	Depth to Water (ft BTOC)	Groundwater Elevation ⁽¹⁾ (ft)
Compliance Monitoring Well Network							
HGWA-1	595.21	13.76	581.45	10.94	584.27	18.86	576.35
HGWA-2	587.92	8.10	579.82	7.08	580.84	10.72	577.20
HGWA-3	587.74	7.71	580.03	6.68	581.06	10.41	577.33
HGWA-43D	595.08	13.71	581.37	10.85	584.23	18.66	576.42
HGWA44D	594.79	13.60	581.19	11.18	583.61	18.12	576.67
HGWC-7	579.18	4.49	574.69	5.11	574.07	7.36	571.82
HGWC-8	579.82	4.83	574.99	5.29	574.53	7.96	571.86
HGWC-9	580.36	15.23	565.13	14.05	566.31	14.49	565.87
HGWC-10	579.37	14.90	564.47	13.75	565.62	14.08	565.29
HGWC-11	580.67	17.07	563.60	15.68	564.99	15.37	565.30
HGWC-12	580.73	17.15	563.58	15.82	564.91	15.43	565.30
HGWC-13	595.76	22.31	573.45	22.25	573.51	24.18	571.58
Delineation Monitoring Well							
MW-5	581.14	18.45	562.69	16.90	564.24	16.77	564.37
MW-6	581.84	18.78	563.06	17.19	564.65	17.02	564.82
MW-7	577.73	15.79	561.94	14.07	563.66	13.20	564.53
MW-19	580.65	13.50	567.15	12.68	567.97	13.24	567.41
MW-20	579.00	14.40	564.60	13.28	565.72	14.33	564.67
MW-24D	595.68	28.37	567.31	27.54	568.14	28.25	567.43
MW-25D	580.59	16.98	563.61	15.63	564.96	15.33	565.26
MW-26D	580.41	15.34	565.07	14.17	566.24	14.55	565.86
MW-27D	579.70	4.78	574.92	5.16	574.54	7.84	571.86
MW-28D	579.08	4.48	574.60	5.11	573.97	7.34	571.74
MW-29	575.06	4.48	570.58	5.34	569.72	7.87	567.19
Piezometer							
AP1A-1	587.44	6.51	580.93	6.98	580.46	10.43	577.01
MW-1	588.66	7.74	580.92	8.28	580.38	12.63	576.03
MW-8	586.93	20.30	566.63	19.02	567.91	19.35	567.58
MW-30D	578.59	2.12	576.47	2.29	576.30	3.95	574.64
MW-40D	578.92	133.35	445.57	132.92	446.00	129.98	448.94
Surface Water Gauging Location							
AP-1	--	--	580.86	--	579.90	--	575.40
Coosa River	--	--	561.30	--	563.10	--	565.70

Notes:

-- = not applicable

ft = feet

ft BTOC = feet below top of casing

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

(2) Survey data recorded May 19, 2020 and September 10, 2020 (for wells HGWA-43D and HGWA-44D).

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

Flow Path Direction ⁽¹⁾	February 8, 2021				March 10, 2021				August 11, 2021			
	h ₁ (ft)	h ₂ (ft)	L (ft)	i (ft/ft)	h ₁ (ft)	h ₂ (ft)	L (ft)	i (ft/ft)	h ₁ (ft)	h ₂ (ft)	L (ft)	i (ft/ft)
Southerly Flow Path (HGWC-13 to MW-7)	573.45	561.94	450	0.026	573.51	563.66	450	0.022	571.58	564.53	450	0.016
Easterly Flow Path (HGWC-8 to MW-20)	574.99	564.60	350	0.030	574.53	565.72	350	0.025	571.86	564.67	350	0.021

Flow Path Direction ⁽¹⁾	K _h (ft/day)	n _e	Average		
			i (ft/ft)	V (ft/day) ⁽²⁾	V (ft/day) ⁽³⁾
Southerly Flow Path (HGWC-13 to MW-7)	11.82	0.15	0.021	1.7	1.8
Easterly Flow Path (HGWC-8 to MW-20)	11.82	0.15	0.025	2.0	

Notes:

ft = feet

ft/day = feet per day

ft/ft = feet per foot

h₁ and h₂ = groundwater elevation at location 1 and 2

i = h₁-h₂/L = horizontal hydraulic gradient

K_h = horizontal hydraulic conductivity

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

n_e = effective porosity

V = groundwater flow velocity

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

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

(3) Average groundwater flow velocity for unit.

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

Well ID:		HGWA-1	HGWA-1	HGWA-1	HGWA-2	HGWA-2	HGWA-2	HGWA-3	HGWA-3	HGWA-3	HGWA-43D	HGWA-43D	HGWA-43D	HGWA-43D	HGWA-43D	
Sample Date:		2/8/2021	3/10/2021	8/11/2021	2/9/2021	3/11/2021	8/12/2021	2/9/2021	3/11/2021	8/12/2021	12/15/2020	1/19/2021	2/9/2021	3/11/2021	8/11/2021	
Parameter ^(1,2,3)																
APPENDIX III	Boron	--	0.015 J	0.020 J	--	0.056	0.044	--	0.015 J	<0.0086	0.052 J	0.049 J	--	0.060	0.042	
	Calcium	--	111	113	--	43.8	21.9	--	83.8	84.0	62.6	60.1	--	59.6	61.0	
	Chloride	--	7.4	9.6	--	5.1	5.2	--	5.9	4.8	4.7	4.1	--	4.5	3.5	
	Fluoride	0.078 J	0.079 J	0.058 J	<0.050	0.10	<0.050	0.074 J	<0.050	<0.050	0.21	0.16	0.19	0.20	0.15	
	pH	7.11	6.95	6.98	5.42	5.80	5.05	7.23	7.33	7.31	7.39	7.39	7.44	7.46	7.40	
	Sulfate	--	49.6	48.9	--	52.9	47.4	--	50.4	38.6	38.8	37.3	--	38.6	30.5	
	TDS	--	348	366	--	169	118	--	267	265	289	270	--	279	277	
APPENDIX IV	Antimony	<0.00028	<0.00028	<0.00078	0.00062 J	<0.00028	<0.00078	0.00031 J	<0.00028	<0.00078	0.00031 J	0.00029 J	0.00037 J	0.00057 J	<0.00078	
	Arsenic	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	<0.0011	<0.00078	0.0011 J	0.0017 J	0.0013 J	0.0015 J	
	Barium	0.032	0.030	0.030	0.12	0.070	0.12	0.13	0.13	0.11	0.29	0.32	0.34	0.32	0.28	
	Beryllium	<0.000046	<0.000046	<0.000054	0.00014 J	0.000086 J	0.00014 J	<0.000046	<0.000046	<0.000054	<0.000046	<0.000046	<0.000046	<0.000046	<0.000054	
	Cadmium	<0.00012	<0.00012	<0.00011	0.00016 J	<0.00012	0.00014 J	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00012	<0.00012	<0.00011	
	Chromium	<0.00055	<0.00055	<0.0011	<0.00055	<0.00055	<0.0011	<0.00055	<0.00055	<0.0011	<0.00055	<0.00055	0.00095 J	<0.00055	<0.0011	
	Cobalt	<0.00038	<0.00038	<0.00039	0.02	0.013	0.022	<0.00038	<0.00038	<0.00039	<0.00038	<0.00038	<0.00038	<0.00038	<0.00039	
	Fluoride	0.078 J	0.079 J	0.058 J	<0.050	0.10	<0.050	0.074 J	<0.050	<0.050	0.21	0.16	0.19	0.20	0.15	
	Lead	0.000058 J	<0.000036	<0.00089	0.000094 J	0.000076 J	<0.00089	<0.000036	<0.000036	<0.00089	0.000082 J	0.000044 J	0.00029 J	0.000094 J	<0.00089	
	Lithium	0.00086 J	0.00090 J	0.00078 J	0.0012 J	0.0011 J	0.0012 J	0.0032 J	0.0035 J	0.0028 J	0.0019 J	0.0025 J	0.0026 J	0.0022 J	0.0024 J	
	Mercury	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--	<0.000078	<0.000078	<0.000078	--	--	
	Molybdenum	<0.00069	<0.00069	<0.00074	<0.00069	<0.00069	<0.00074	<0.00069	<0.00069	<0.00074	0.0044 J	0.0038 J	0.0045 J	0.0064 J	0.0034 J	
	Comb. Radium 226/228	0.223 U	0.000 U	0.115 U	0.721 U	0.737 U	0.746 U	0.447 U	0.128 U	0.389 U	1.04 U	0.685 U	0.138 U	1.51 U	0.394 U	
	Selenium	<0.0016	0.0047 J	<0.0014	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0016	<0.0016	<0.0014	
Thallium	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00014	<0.00014	<0.00018		

Notes:

-- = Parameter was not analyzed

< = Indicates the parameter was not detected above the analytical method detection limit (MDL).

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

TDS = total 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, and 7470A, anions were analyzed by EPA Method 300.0, TDS was analyzed by SM2540-2011, and combined radium 226/228 by EPA Methods 9315/9320.

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

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

Well ID:		HGWA-44D	HGWA-44D	HGWA-44D	HGWA-44D	HGWA-44D	HGWC-7	HGWC-7	HGWC-7	HGWC-8	HGWC-8	HGWC-8	HGWC-9	HGWC-9	HGWC-9	
Sample Date:		12/15/2020	1/19/2021	2/9/2021	3/10/2021	8/13/2021	2/10/2021	3/15/2021	8/16/2021	2/16/2021	3/15/2021	8/18/2021	2/16/2021	3/16/2021	8/17/2021	
Parameter ^(1,2,3)																
APPENDIX III	Boron	0.31	0.40	--	0.39	0.31	--	1.1	1.1	--	1.7	1.8	--	2.2	2.3	
	Calcium	28.7	33.0	--	5.9	28.9	--	113	112	--	156	147	--	182	183	
	Chloride	9.4	9.5	--	12.3	39.9	--	44.5	40.3	--	72.4	50.9	--	94.7	88.6	
	Fluoride	0.67	0.74	0.44	0.65	0.87	0.085	0.086 J	0.084 J	0.47	0.51	0.41	0.096 J	0.098 J	0.095 J	
	pH	7.87	7.86	7.84	7.92	7.77	7.29	7.19	7.12	7.16	7.09	7.02	7.26	7.1	7.10	
	Sulfate	6.7	7.4	--	<0.50	56.1	--	107	98.1	--	272	245	--	211	207	
	TDS	295	278	--	289	436	--	370	407	--	614	620	--	672	704	
APPENDIX IV	Antimony	0.00047 J	0.00067 J	0.00042 J	0.00037 J	<0.00078	<0.00028	<0.00028	0.0017 J	0.00064 J	<0.00028	<0.00078	0.00043 J	<0.00028	<0.00078	
	Arsenic	<0.00078	<0.00078	0.00083 J	<0.00078	<0.0011	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	<0.0011	
	Barium	0.39	0.41	0.46	0.26	0.22	0.069	0.074	0.068	0.069	0.063	0.062	0.11	0.11	0.095	
	Beryllium	<0.000046	<0.000046	<0.000046	<0.000046	<0.000054	0.000081 J	0.00019 J	<0.000054	0.000071 J	0.000078 J	0.000087 J	<0.000046	<0.000046	<0.000054	
	Cadmium	<0.00012	<0.00012	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00011	0.00037 J	0.00017 J	0.00020 J	<0.00012	<0.00012	<0.00011	
	Chromium	0.00072 J	0.0011 J	0.00066 J	<0.00055	0.0016 J	0.0014 J	0.0021 J	<0.0011	<0.00055	0.0082 J	<0.0011	0.00067 J	<0.00055	<0.0011	
	Cobalt	<0.00038	<0.00038	<0.00038	<0.00038	<0.00039	0.00081 J	0.0014 J	0.0012 J	0.002 J	0.0019 J	0.0020 J	0.00061 J	0.00069 J	0.00045 J	
	Fluoride	0.67	0.74	0.44	0.65	0.87	0.085	0.086 J	0.084 J	0.47	0.51	0.41	0.096 J	0.098 J	0.095 J	
	Lead	0.00011 J	0.00019 J	0.0001 J	<0.000036	<0.00089	0.00056 J	0.0013	<0.00089	0.000086 J	0.00011 J	<0.00089	0.0002 J	0.00027 J	<0.00089	
	Lithium	0.028 J	0.034	0.026 J	0.030	0.032	0.0032 J	0.0038 J	0.0025 J	0.0027 J	0.0029 J	0.0029 J	0.0045 J	0.0046 J	0.0040 J	
	Mercury	<0.000078	<0.000078	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--	
	Molybdenum	0.0019 J	0.0035	0.0038 J	0.0019 J	0.0051 J	0.051	0.047	0.045	0.46	0.41	0.48	0.035	0.035	0.035	
	Comb. Radium 226/228	0.700 U	0.790 U	0.486 U	0.811 U	1.20	0.281 U	0.666 U	0.143 U	0.764 U	1.30 U	1.02 U	1.17 U	0.446 U	0.771 U	
	Selenium	<0.0016	<0.0016	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014	
Thallium	<0.00014	<0.00014	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018		

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

Well ID:		HGWC-10	HGWC-10	HGWC-10	HGWC-11	HGWC-11	HGWC-11	HGWC-12	HGWC-12	HGWC-12	HGWC-13	HGWC-13	HGWC-13	MW-5	MW-5	MW-5
Sample Date:		3/3/2020	3/12/2021	8/17/2021	2/12/2021	3/16/2021	8/18/2021	2/12/2021	3/16/2021	8/18/2021	2/22/2021	3/17/2021	8/19/2021	2/16/2021	3/16/2021	8/17/2021
Parameter ^(1,2,3)																
APPENDIX III	Boron	--	0.64	0.88	--	0.53	0.91	--	1.9	1.9	--	0.89	0.73	--	0.037 J	0.026 J
	Calcium	--	146	153	--	132	128	--	166	163	--	184	179	--	71.8	73.3
	Chloride	--	35.0	28.3	--	11.5	19.9	--	56.8	47.3	--	31.4	24.4	--	1.4	1.4
	Fluoride	0.08 J	0.054 J	<0.050	0.17	0.21	0.21	0.19	0.2	0.15	0.55	0.65	0.53	0.051 J	<0.050	<0.050
	pH	6.83	6.76	6.75	7.27	5.95	6.10	6.23	7.15	6.89	7.27	7.33	7.38	5.95	5.78	5.99
	Sulfate	--	120	156	--	291	237	--	248	226	--	384	339	--	162	154
	TDS	--	490	496	--	558	566	--	614	600	--	716	726	--	333	339
APPENDIX IV	Antimony	0.00065 J	<0.00028	<0.00078	<0.00028	<0.00028	<0.00078	<0.00028	<0.00028	<0.00078	0.00047 J	0.00049 J	<0.00078	<0.00028	<0.00028	<0.00078
	Arsenic	<0.00078	<0.00078	<0.0011	0.002 J	0.0017 J	<0.0011	0.0045 J	0.0038 J	0.0028 J	0.45	0.39	0.31	<0.00078	<0.00078	<0.0011
	Barium	0.06	0.058	0.055	0.039	0.035	0.040	0.090	0.084	0.083	0.061	0.056	0.049	0.05	0.046	0.045
	Beryllium	<0.000046	<0.000046	<0.000054	<0.000046	0.000081 J	<0.000054	<0.000046	<0.000046	<0.000054	0.000097 J	0.000090 J	0.000073 J	<0.000046	<0.000046	<0.000054
	Cadmium	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00011
	Chromium	<0.00055	<0.00055	<0.0011	<0.00055	<0.00055	<0.0011	<0.00055	<0.00055	<0.0011	<0.00055	<0.00055	<0.0011	0.0032 J	0.0024 J	0.0018 J
	Cobalt	<0.00038	<0.00038	<0.00039	<0.00038	<0.00038	<0.00039	0.0012 J	0.0012 J	0.0012 J	0.003 J	0.0029 J	0.0024 J	<0.00038	<0.00038	<0.00039
	Fluoride	0.08 J	0.054 J	<0.050	0.17	0.21	0.21	0.19	0.20	0.15	0.55	0.65	0.53	0.051 J	<0.050	<0.050
	Lead	<0.000036	<0.000036	<0.00089	<0.000036	0.000099 J	<0.00089	0.000067 J	0.000089 J	<0.00089	0.00018J	0.00015 J	<0.00089	<0.000036	<0.000036	<0.00089
	Lithium	<0.00081	<0.00081	<0.00073	<0.00081	<0.00081	<0.00073	0.0094 J	0.0081 J	0.0099 J	0.032	0.031	0.028 J	<0.00081	<0.00081	<0.00073
	Mercury	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--
	Molybdenum	<0.00069	0.00070 J	0.0012 J	0.023	0.015	0.038	0.048	0.044	0.045	0.036	0.035	0.032	<0.00069	<0.00069	<0.00074
	Comb. Radium 226/228	1.91	1.12 U	0.595 U	1.10	1.71	0.919 U	0.236 U	0.245 U	0.919 U	1.02	1.45 U	0.764 U	0.466 U	1.22	0.304 U
	Selenium	<0.00014	<0.0016	<0.0014	0.0079 J	0.015	0.0033 J	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014	0.0035	0.0026 J	0.0017 J
Thallium	<0.000078	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	0.0003	0.00037 J	0.00020 J	<0.00014	<0.00014	<0.00018	

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

Well ID:		MW-6	MW-6	MW-6	MW-7	MW-7	MW-7	MW-19	MW-19	MW-19	MW-20	MW-20	MW-20	MW-24D	MW-24D	MW-24D
Sample Date:		2/16/2021	3/16/2021	8/17/2021	2/15/2021	3/15/2021	8/17/2021	2/12/2021	3/17/2021	8/18/2021	2/11/2021	3/15/2021	8/17/2021	2/16/2021	3/17/2021	8/19/2021
Parameter ^(1,2,3)																
APPENDIX III	Boron	--	0.81	0.85	--	0.16	0.20	--	0.69	0.55	--	0.12	0.11	--	0.49	0.52
	Calcium	--	184	181	--	76.9	90.7	--	130	125	--	121	123	--	102	99.5
	Chloride	--	49.8	43.5	--	6.8	8.9	--	19.8	14.3	--	31.1	28.3	--	42.9	37.2
	Fluoride	0.059 J	0.060 J	0.055 J	<0.050	<0.050	<0.050	0.16	0.18	0.12	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	pH	7.00	6.96	6.86	6.77	6.66	6.88	6.36	6.34	6.28	6.93	6.97	7.05	7.69	7.66	7.61
	Sulfate	--	189	194	--	92.1	105	--	260	219	--	109	98.6	--	137.0	130
	TDS	--	600	656	--	293	344	--	543	464	--	406	437	--	420	420
APPENDIX IV	Antimony	<0.00028	<0.00028	<0.00078	0.0021 J	<0.00028	<0.00078	<0.00028	<0.00028	<0.00078	<0.00028	<0.00028	<0.00078	<0.00028	<0.00028	<0.00078
	Arsenic	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	<0.0011	<0.00078	<0.00078	<0.0011	0.00094 J	<0.00078	<0.0011	<0.00078	<0.00078	<0.0011
	Barium	0.09	0.081	0.081	0.048	0.053	0.057	0.051	0.049	0.045	0.093	0.096	0.089	0.062	0.055	0.048
	Beryllium	<0.000046	<0.000046	<0.000054	<0.000046	<0.000046	<0.000054	<0.000046	<0.000046	0.000058 J	<0.000046	<0.000046	<0.000054	<0.000046	<0.000046	<0.000054
	Cadmium	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00011	0.0002 J	0.00016 J	0.00027 J	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00011
	Chromium	<0.00055	<0.00055	<0.0011	0.0015 J	0.0018 J	<0.0011	0.00059 J	0.0022 J	<0.0011	<0.00055	0.00068 J	<0.0011	<0.00055	0.0017 J	<0.0011
	Cobalt	0.00045 J	0.00042 J	<0.00039	<0.00038	<0.00038	<0.00039	0.037	0.037	0.039	<0.00038	<0.00038	<0.00039	<0.00038	<0.00038	<0.00039
	Fluoride	0.059 J	0.060 J	0.055 J	<0.050	<0.050	<0.050	0.16	0.18	0.12	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Lead	0.000084 J	0.000036 J	<0.00089	<0.000036	<0.000036	<0.00089	0.000071 J	0.000038 J	<0.00089	0.000039 J	0.00010 J	<0.00089	0.00012 J	0.000040 J	<0.00089
	Lithium	<0.00081	<0.00081	<0.00073	<0.00081	<0.00081	<0.00073	0.012 J	0.012 J	0.014 J	0.001 J	0.0011 J	0.00091 J	0.0028 J	0.0027 J	0.0027 J
	Mercury	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--
	Molybdenum	0.0025 J	0.0023 J	0.0027 J	0.0015 J	0.0015 J	0.0030 J	0.046	0.043	0.032	<0.00069	<0.00069	<0.00074	0.00096 J	0.0010 J	0.00087 J
	Comb. Radium 226/228	0.198 U	0.727 U	0.557 U	0.892 U	0.386 U	0.183 U	0.764 U	0.466 U	0.642 U	0.334 U	1.24 U	0.709 U	0.156 U	0.174 U	0.227 U
	Selenium	<0.0016	<0.0016	<0.0014	<0.0016	0.0021 J	<0.0014	0.0021 J	<0.0016	0.0026 J	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014
Thallium	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	0.00019 J	0.00026 J	0.00023 J	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	

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

Well ID:		MW-25D	MW-25D	MW-25D	MW-26D	MW-26D	MW-26D	MW-27D	MW-27D	MW-27D	MW-28D	MW-28D	MW-28D	MW-29	MW-29	MW-29
Sample Date:		2/12/2021	3/16/2021	8/19/2021	2/16/2021	3/17/2021	8/17/2021	2/16/2021	3/12/2021	8/17/2021	2/10/2021	3/15/2021	8/18/2021	2/15/2021	3/15/2021	8/16/2021
Parameter ^(1,2,3)																
APPENDIX III	Boron	--	0.4	0.40	--	2.1	2.2	--	0.13	0.14	--	0.36	0.72	--	1.20	1.1
	Calcium	--	24.8	23.8	--	175	177	--	28	28.5	--	66.1	82.8	--	145.0	140
	Chloride	--	29.2	30.8	--	95.3	89.2	--	31.3	30.0	--	35.8	33.7	--	73.6	68.0
	Fluoride	1.6	1.7	1.5	0.071 J	0.072 J	0.075 J	0.25	0.24	0.24	0.16	0.24	0.14	<0.050	<0.050	<0.050
	pH	7.77	7.76	7.69	7.27	7.14	7.14	7.96	7.88	7.75	7.54	7.61	7.16	7.09	7.05	7.08
	Sulfate	--	9.4	4.1	--	212	194	--	7.4	8.2	--	50.1	82.1	--	148	136
	TDS	--	347	373	--	738	746	--	215	239	--	293	396	--	555	512
APPENDIX IV	Antimony	<0.00028	<0.00028	<0.00078	<0.00028	<0.00028	<0.00078	0.00038 J	<0.00028	<0.00078	0.0019 J	<0.00028	<0.00078	0.00094 J	<0.00028	<0.00078
	Arsenic	<0.00078	<0.00078	<0.0011	0.0008 J	<0.00078	<0.0011	0.001 J	<0.00078	<0.0011	0.0011 J	<0.00078	<0.0011	<0.00078	<0.00078	<0.0011
	Barium	0.46	0.51	0.58	0.093	0.094	0.072	1	1.1	1.1	0.26	0.45	0.53	0.081	0.078	0.074
	Beryllium	<0.000046	<0.000046	<0.000054	<0.000046	<0.000046	<0.000054	<0.000046	<0.000046	<0.000054	0.000054 J	0.000048 J	<0.000054	<0.000046	<0.000046	<0.000054
	Cadmium	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00011	<0.00012	<0.00012	<0.00011
	Chromium	<0.00055	<0.00055	<0.0011	0.001 J	0.0015 J	<0.0011	0.00082 J	<0.00055	<0.0011	0.0014 J	0.00078 J	<0.0011	<0.00055	<0.00055	<0.0011
	Cobalt	<0.00038	<0.00038	<0.00039	0.00045 J	0.00044 J	0.00045 J	0.0004 J	<0.00038	<0.00039	<0.00038	<0.00038	<0.00039	0.00097 J	0.0011 J	0.0014 J
	Fluoride	1.6	1.7	1.5	0.071 J	0.072 J	0.075 J	0.25	0.24	0.24	0.16	0.24	0.14	<0.050	<0.050	<0.050
	Lead	<0.000036	<0.000036	<0.00089	0.00008 J	<0.000036	<0.00089	0.00043 J	<0.000036	<0.00089	0.00044 J	0.00034 J	<0.00089	0.000052 J	<0.000036	<0.00089
	Lithium	0.045	0.049	0.046	0.0038 J	0.0040 J	0.0036 J	0.0078 J	0.0090 J	0.0079 J	0.0092 J	0.013 J	0.0086 J	0.0024 J	0.0022 J	0.0021 J
	Mercury	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--	<0.000078	--	--
	Molybdenum	<0.00069	<0.00069	<0.00074	0.022	0.023	0.024	0.0019 J	0.00080 J	0.0016 J	0.02	0.013	0.022	0.0029 J	0.0031 J	0.0027 J
	Comb. Radium 226/228	1.17	0.742 U	0.935 U	0.505 U	0.165 U	0.0468 U	1.21	0.649 U	1.06 U	0.201	0.564 U	0.876 U	1.17 U	0.436 U	0.208 U
	Selenium	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014	<0.0016	<0.0016	<0.0014
Thallium	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	<0.00014	<0.00014	<0.00018	

Table 6
Summary of Background Concentrations and Groundwater Protection Standards
Plant Hammond AP-1, Floyd County, Georgia

Analyte	Units	Background ⁽¹⁾	Federal GWPS ⁽²⁾	State GWPS ⁽³⁾
Antimony	mg/L	0.003	0.006	0.006
Arsenic	mg/L	0.005	0.01	0.01
Barium	mg/L	0.46	2	2
Beryllium	mg/L	0.0005	0.004	0.004
Cadmium	mg/L	0.0005	0.005	0.005
Chromium	mg/L	0.0079	0.1	0.1
Cobalt	mg/L	0.038	0.038	0.038
Fluoride	mg/L	0.74, 0.87	4	4
Lead	mg/L	0.001	0.015	0.001
Lithium	mg/L	0.034	0.04	0.034
Mercury	mg/L	0.0005	0.002	0.002
Molybdenum	mg/L	0.01	0.1	0.01
Selenium	mg/L	0.005	0.05	0.05
Thallium	mg/L	0.001	0.002	0.002
Combined Radium-226/228	pCi/L	4.36	5	5

Notes:

mg/L = milligrams per liter

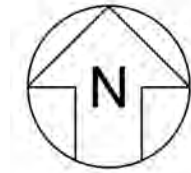
pCi/L = picocuries per liter

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


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

- (1) The background limits were used when determining the GWPS under 40 CFR §257.95(h) and Georgia Environmental Protection Division (GA EPD) Rule 391-3-4-.10(6)(a). A cell with two values denotes that different background concentrations were calculated per semiannual event, presented in the order of the events.
- (2) Under 40 CFR §257.95(h)(1-3) the GWPS is: (i) the maximum contaminant level (MCL) established under 141.62 and 141.66 of this title; (ii) where an MCL has not been established a rule-specific GWPS is used; or (iii) background concentrations for constituents where the background level is higher than the MCL or rule-specified GWPS.
- (3) Under the existing GA EPD rules, the GWPS is: (i) the MCL, (ii) where the MCL is not established, the background concentration, or (iii) background concentrations for constituents where the background level is higher than the MCL.

FIGURES



Legend

 Plant Hammond Property Boundary



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



SITE LOCATION MAP

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

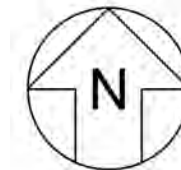
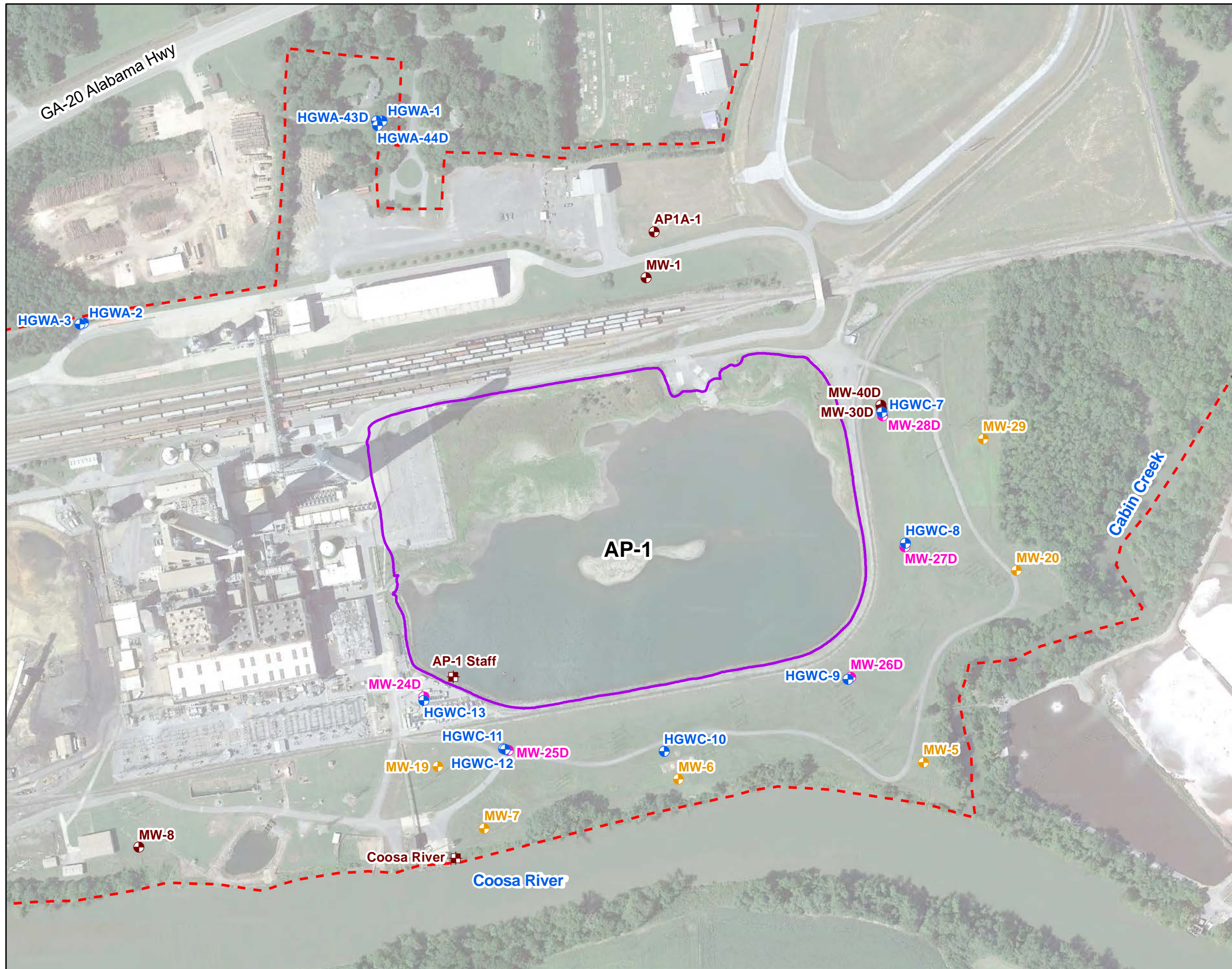
Prepared For:  Georgia Power

Prepared By: 

KENNESAW, GA

JANUARY 2022

FIGURE
1



LEGEND

- Compliance Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well
- Piezometer
- Staff Gauge Point
- Approximate AP-1 Boundary
- Plant Hammond Property Boundary

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



MONITORING WELL NETWORK AND SAMPLING LOCATION MAP

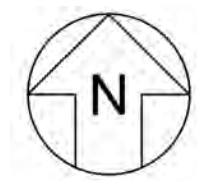
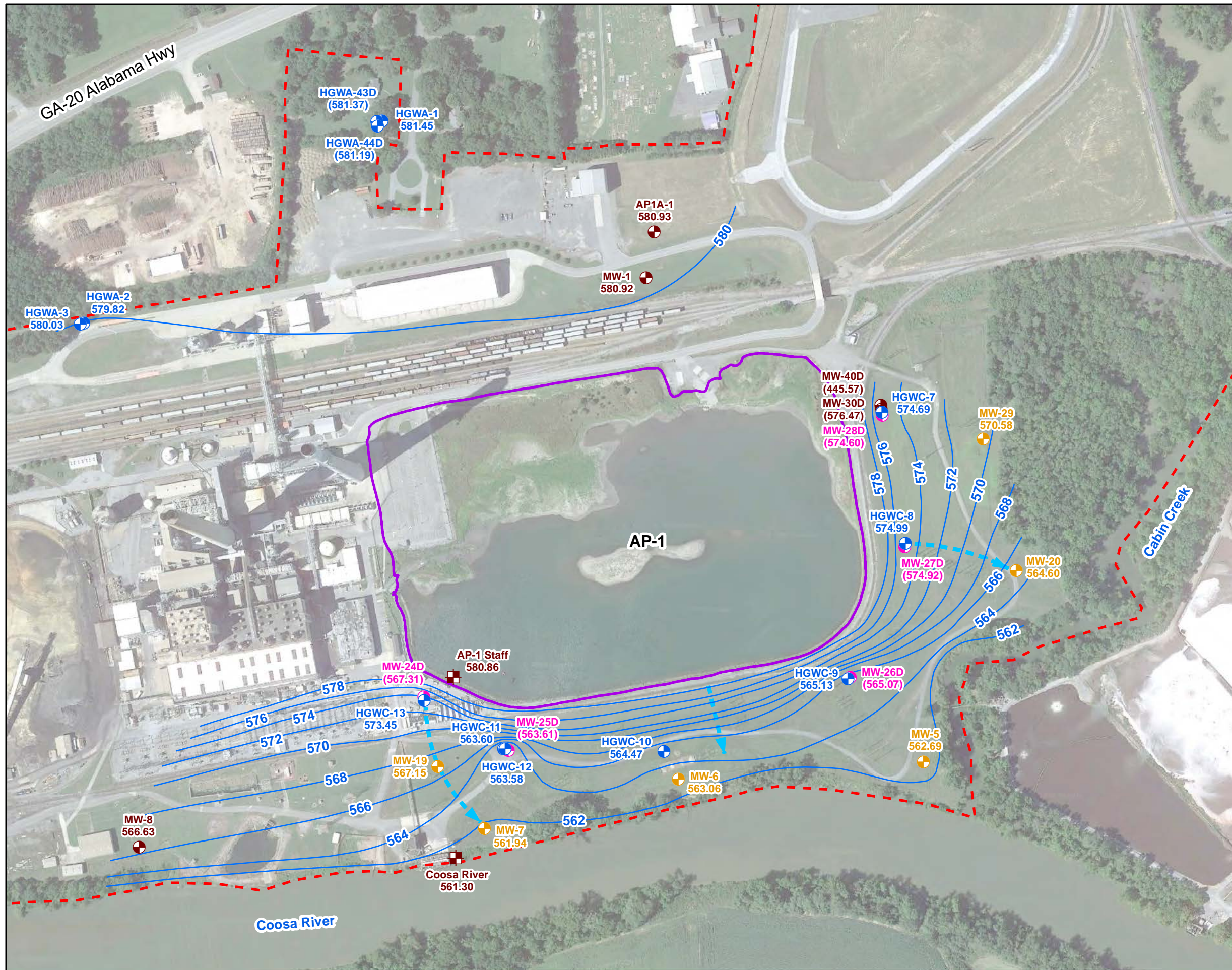
GEORGIA POWER COMPANY
PLANT HAMMOND AP-1
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

KENNESAW, GA JANUARY 2022

FIGURE 2



- LEGEND**
- Compliance Monitoring Well
 - Horizontal Delineation Well
 - Vertical Delineation Well
 - Piezometer
 - Surface Water Level Gauge Point
 - Groundwater Elevation Iso-Contour
 - Approximate Groundwater Flow Direction
 - Approximate AP-1
 - Plant Hammond Property Boundary

- Notes:**
1. Water level elevation recorded on February 8, 2021. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
 2. Groundwater elevation in parentheses were not used in development of groundwater contours due to wells being screened at a different elevation in the formation/aquifer.
 3. Surface water elevations from AP-1 was not used in development of the potentiometric surface map.
 4. Aerial photograph source: Google Earth Pro, August 2019.



**POTENTIOMETRIC SURFACE
CONTOUR MAP - FEBRUARY 2021**

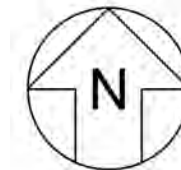
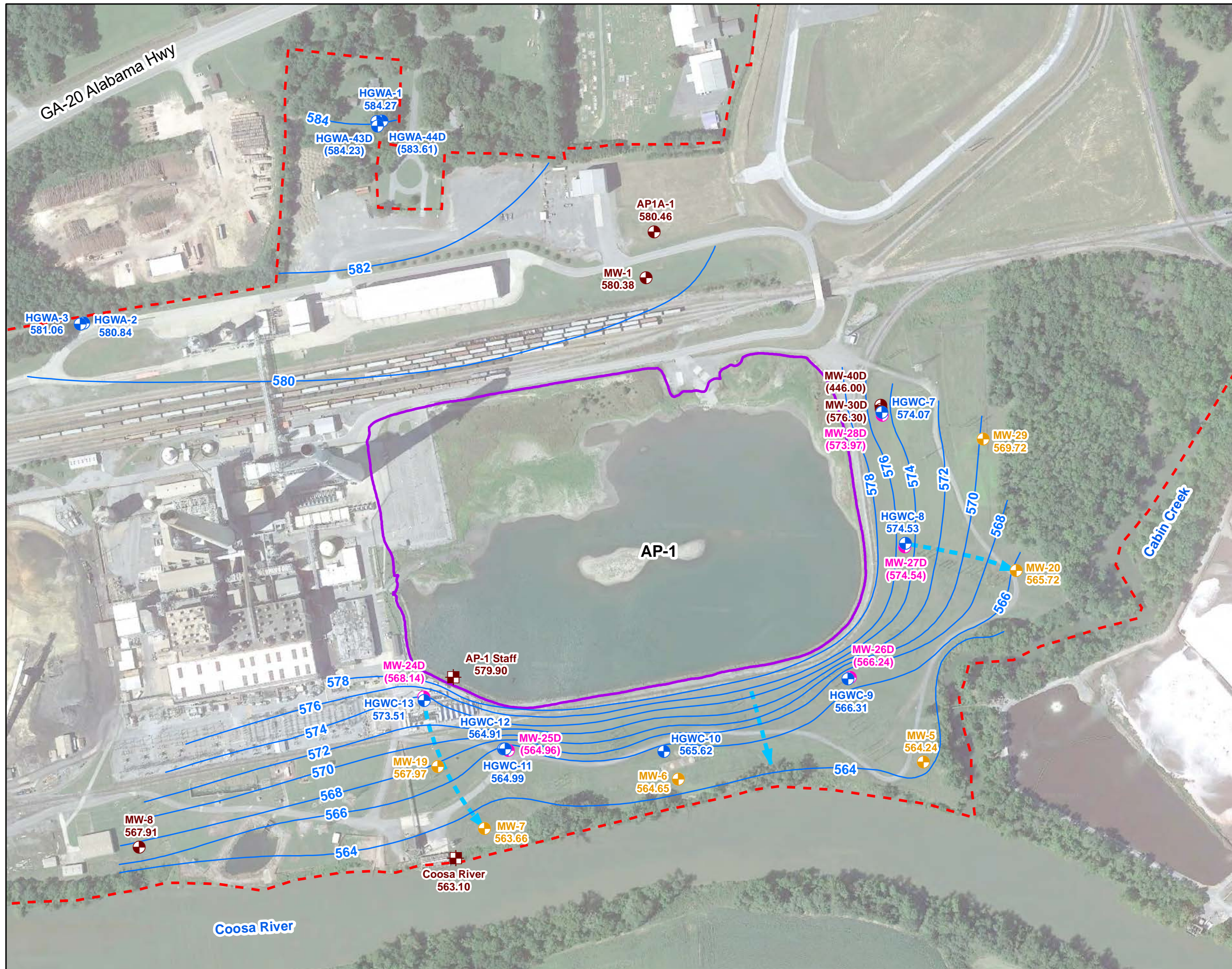
GEORGIA POWER COMPANY
PLANT HAMMOND
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

FIGURE
3

KENNESAW, GA JANUARY 2022



- LEGEND**
- Compliance Monitoring Well
 - Horizontal Delineation Well
 - Vertical Delineation Well
 - Piezometer
 - Surface Water Level Gauge Point
 - Groundwater Elevation Iso-Contour
 - Approximate Groundwater Flow Direction
 - Approximate AP-1 Boundary
 - Plant Hammond Property Boundary

- Notes:**
1. Water level elevation recorded on March 10, 2021. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
 2. Groundwater elevation in parentheses were not used in development of groundwater contours due to wells being screened at a different elevation in the formation/aquifer.
 3. Aerial photograph source: Google Earth Pro, August 2019.



**POTENTIOMETRIC SURFACE
CONTOUR MAP - MARCH 2021**

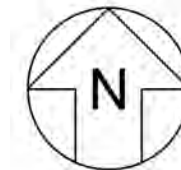
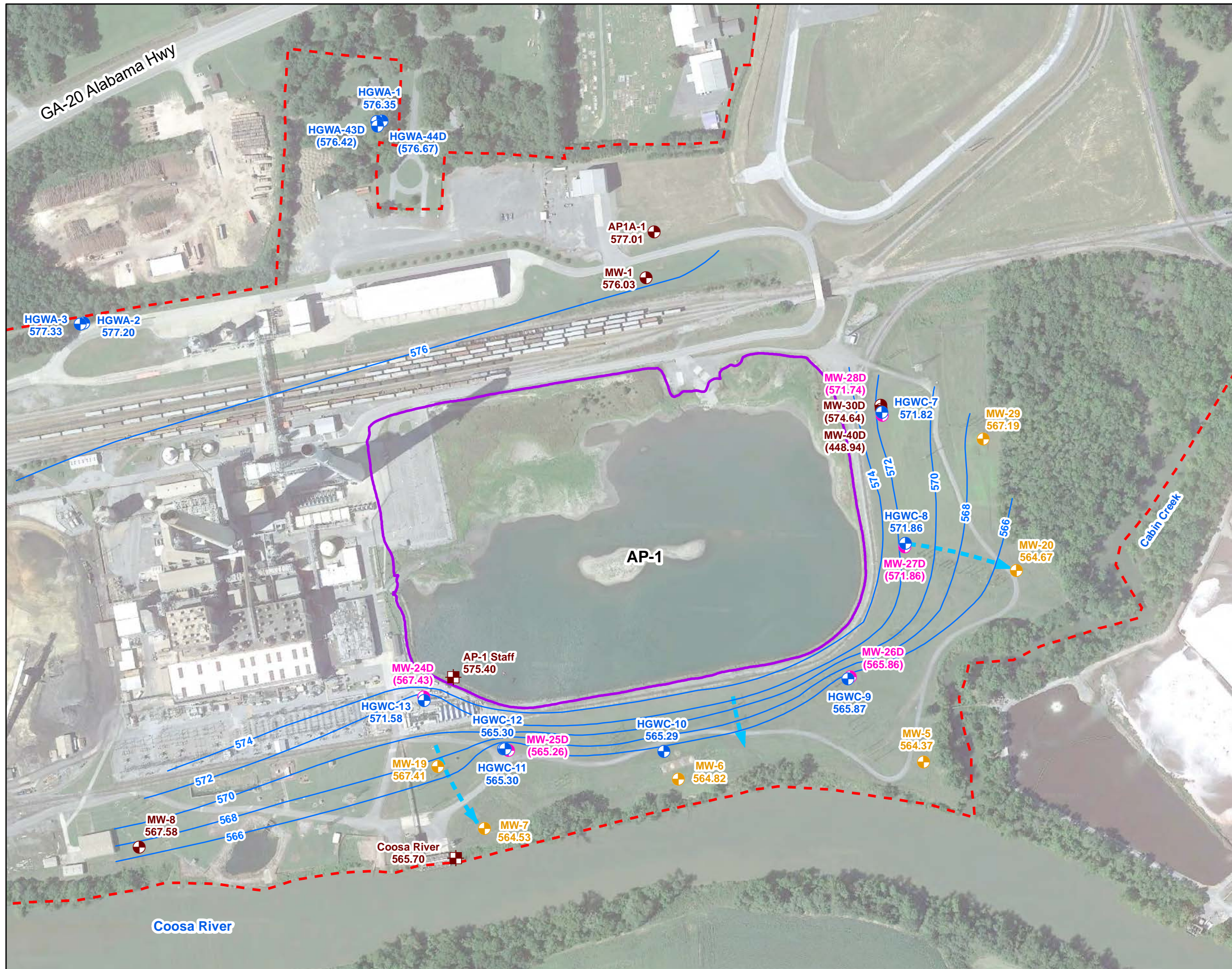
GEORGIA POWER COMPANY
PLANT HAMMOND
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec consultants

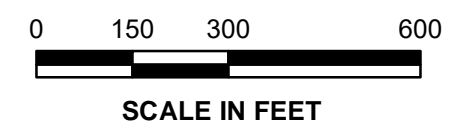
KENNESAW, GA JANUARY 2022

**FIGURE
4**



- LEGEND**
- Compliance Monitoring Well
 - Horizontal Delineation Well
 - Vertical Delineation Well
 - Piezometer
 - Staff Gauge Point
 - Groundwater Elevation Iso-Contour
 - Approximate Groundwater Flow Direction
 - Approximate AP-1
 - Plant Hammond Property Boundary

- Notes:**
1. Water level elevation recorded on August 11, 2021. Elevation provided in feet (ft) referenced to the North American Vertical Datum of 1988 (NAVD 88).
 2. Groundwater elevations in parentheses were not used to make the groundwater contours because these wells are screened at a different elevation in the formation/aquifer.
 3. Aerial photograph source: Google Earth Pro, August 2019.



**POTENTIOMETRIC SURFACE
CONTOUR MAP - AUGUST 2021**

GEORGIA POWER COMPANY
PLANT HAMMOND
ROME, FLOYD COUNTY, GEORGIA

Prepared For:	Georgia Power	FIGURE 5
Prepared By:	Geosyntec consultants	
KENNESAW, GA	JANUARY 2022	

APPENDIX A

Well Maintenance and Repair Documentation Memorandum

MEMORANDUM

DATE: November 19, 2021

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

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

FROM: Geosyntec Consultants

SUBJECT: Plant Hammond Ash Pond 1 (AP-1) – Well Maintenance and Repair Documentation, Georgia Power Company

Geosyntec Consultants has prepared this memorandum to provide documentation of groundwater monitoring well maintenance and/or repair performed at Plant Hammond AP-1 during the 2021 annual reporting period. All repairs and maintenance were completed in accordance with the Georgia Environmental Protection Division (GA EPD) guidance on routine visual inspections of groundwater monitoring wells. Documentation of the well inspections are provided as an attachment to this memorandum.

Georgia Power Site/Unit	Date Performed	Well ID	Maintenance/ Repair Performed
Hammond/AP-1	2/22/2021	HGWC-13	Inspection of dedicated sampling equipment, no action taken.
Hammond/AP-1	8/4/2021	HGWC-10, HGWC-9, MW-26D, HGWC-8, MW-27D, HGWC-7	Checked and cleared weepholes of debris
Hammond/AP-1	8/4/2021	MW-5	Added additional pea gravel.

ATTACHMENT

Well Inspection Forms

February 2021

Groundwater Monitoring Well Integrity Form

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

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

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

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID Hgw 4-3
 Date, field conditions 2/19/21, Cold sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name _____
 Permit Number Hammond
 Well ID HGWA-CDD
 Date, field conditions 2/9/21 60°F SUNNY

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID NGWA-44D
 Date, field conditions 2/9/11 60°F sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID 216WC-7
 Date, field conditions 2/10/21, Sunny, cold

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Number
 Permit Number _____
 Well ID HGLWC-8
 Date, field conditions 2/16/2021 snowy, cold

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID Hgwc-9
 Date, field conditions 2/16/21 Cold, cloudy

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond APN
 Permit Number _____
 Well ID HGW-10
 Date, field conditions 2/20/02, cloudy, cool

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID DGWC-11
 Date, field conditions 2/17/21 sunny (d/d)

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID HG.WC-12
 Date, field conditions 2/17/21, sunny, cold

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hummon AP1
 Permit Number _____
 Well ID HGW-13
 Date, field conditions 2/21/2021, Remy, CO

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-5
 Date, field conditions 2/16/11 25°F sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-6
 Date, field conditions 2/16/21 25°F (WNY)

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-7
 Date, field conditions 2/15/21, cold, rainy

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond AP-1
 Permit Number _____
 Well ID MW-19
 Date, field conditions Wet, Rain 2-12-2021

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

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID ~~MW-20~~ MW-20
 Date, field conditions 2/12/20 cold, sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hazardous Waste
 Permit Number _____
 Well ID MW-24D
 Date, field conditions 2/16/24 26°F overcast

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

7 Corrective actions as needed, by date.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID MW-2515
 Date, field conditions 2/17/21 sunny, cold

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-26D
 Date, field conditions 2/6/21 25°F sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hummer
 Permit Number _____
 Well ID MW-27D
 Date, field conditions 2/16/21, snowy, cold

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID MW-28D
 Date, field conditions 2/10/21 # cold, sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-29
 Date, field conditions 2/15/21, rainy, cold

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID APIA-1
 Date, field conditions 2/8/2008 500F Sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-1
 Date, field conditions 2/8/21

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

7 Corrective actions as needed, by date.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hummer J
 Permit Number _____
 Well ID MW 8
 Date, field conditions 2/8/21 sunny

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-300
 Date, field conditions 2/8/24 SOP SUNNY

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-110D
 Date, field conditions 2/16/21 5:00F sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

March 2021

Groundwater Monitoring Well Integrity Form

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

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID NGWA-2
 Date, field conditions 3/10/2021 65°F Sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID HGWA-3
 Date, field conditions 3/10/2021 65°F Sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

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

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

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

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID HGW 67
 Date, field conditions 2/10/2011

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID NGWC-8
 Date, field conditions 3/10/2024 65°F sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Nammond
 Permit Number _____
 Well ID HGW-9
 Date, field conditions 3/10/11 6:50F CUNY

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID HGW010
 Date, field conditions 3/10/2011 6:50P SUNDAY

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID NEWG-11
 Date, field conditions 3/10/2021 65°F SUNNY

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond 1
 Permit Number _____
 Well ID 116W-12
 Date, field conditions 7/10/2021 65°F Sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID H60C-13
 Date, field conditions 3/10/2011 GSPF sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-1
 Date, field conditions 3/16/2024 65° F Sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-6
 Date, field conditions 3/10/2021 65°F SUNNY

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-7
 Date, field conditions 3/10/2021 65°F Sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-19
 Date, field conditions 3/10/2021 65°F Sunny

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

7 Corrective actions as needed, by date.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-20
 Date, field conditions 2/16/2014 6:50P SUNNY

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-24D
 Date, field conditions 3/10/2021 65°F sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Warrumbah
 Permit Number _____
 Well ID MW-25D
 Date, field conditions 3/6/201 6:50F sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammont
 Permit Number _____
 Well ID MW-26D
 Date, field conditions 2/10/2021 65°F r/dry

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW# 276
 Date, field conditions 7/16/2021 CSOF sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-29D
 Date, field conditions 3/10/2021 65°F sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-29
 Date, field conditions 3/10/2021 CSOP sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID APIA-1
 Date, field conditions 3/16/2011 6:50P sunny

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-1
 Date, field conditions 3/10/2021

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID MW-8
 Date, field conditions 3/10/12 sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID M/W-30D
 Date, field conditions 7/10/2021 65°F Sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Hammond
 Permit Number _____
 Well ID MW-40D
 Date, field conditions 2/10/2021

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

August 2021

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID HGWA-1
 Date, field conditions 6/11/21 Spring 92°F

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

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

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

7 Corrective actions as needed, by date:
none

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

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

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID EG HGW443D
 Date, field conditions 8/9, sunny, hot

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Munnion
 Permit Number _____
 Well ID 2014-441
 Date, field conditions 8/19

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

7 Corrective actions as needed, by date:
pump Broken

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID HGWC-7
 Date, field conditions 8/11/21 8/13/21

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

7 Corrective actions as needed, by date:

none.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID HGWC-8
 Date, field conditions 8/18/21 sun, 72°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID H6WC-9
 Date, field conditions 8/11/21 8/17/21

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

7 Corrective actions as needed, by date:

none.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name plant hanmond
 Permit Number _____
 Well ID HGWC-10
 Date, field conditions 8/11/21 8/17/21

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

7 Corrective actions as needed, by date:

None

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID HGW-11
 Date, field conditions 8/18/21 Sunny 94°F

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID HGWC-12
 Date, field conditions 8/18/21, Sunny 92°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID HGW/C-13
 Date, field conditions 8/19/21 Sun 88°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Alummound
 Permit Number _____
 Well ID AW-5
 Date, field conditions 8/19 sunny, hot

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name plant hammond
 Permit Number _____
 Well ID NW-6
 Date, field conditions 8/11/21 8/17/21

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

7 Corrective actions as needed, by date:

None.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plaza Hummer
 Permit Number _____
 Well ID MSW-7
 Date, field conditions 8/19 sunny, hot

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name plant hammond
 Permit Number _____
 Well ID MMW-10
 Date, field conditions 8/11/21 8/18/21

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

7 Corrective actions as needed, by date:

None

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID mw-20
 Date, field conditions 8/9/21 sunny, hot

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID MW-24D
 Date, field conditions 8/19/21 Sunny 88° F

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID MLW-25D
 Date, field conditions 8/19/21 Rain 78°F

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name plant hammond
 Permit Number _____
 Well ID MW-26D
 Date, field conditions 8/11/21 8/17/21

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

7 Corrective actions as needed, by date:

None.

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID MW-27D
 Date, field conditions 8/17/21 Rainy 72°F

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID MW-280
 Date, field conditions 8/18/21 Sunny 88°F

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

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID MW-29
 Date, field conditions 8/9 sunny, hot

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID APIA-1
 Date, field conditions 8/11/21

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID MW-1
 Date, field conditions 8/11/21

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammer
 Permit Number _____
 Well ID ML 8
 Date, field conditions 8/11/2021, hot, sunny

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID MLW-30D
 Date, field conditions 8/11/21

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name Plant Hammond
 Permit Number _____
 Well ID MW-400
 Date, field conditions 8/11/21

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

7 Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

APPENDIX B

Laboratory Analytical and Field Sampling Reports

LABORATORY ANALYTICAL RESULTS

December 2020

December 31, 2020

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

RE: Project: HAMMOND AP-1 BKG 03
Pace Project No.: 92512572

Dear Joju Abraham:

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

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

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

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-1 BKG 03

Pace Project No.: 92512572

Pace Analytical Services Charlotte

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

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

Pace Analytical Services Asheville

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

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

Pace Analytical Services Peachtree Corners

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-1 BKG 03

Pace Project No.: 92512572

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92512572001	HGWA-43D	Water	12/15/20 12:25	12/17/20 08:48
92512572002	HGWA-44D	Water	12/15/20 16:18	12/17/20 08:48
92512572003	EB-01	Water	12/15/20 18:02	12/17/20 08:48

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 BKG 03

Pace Project No.: 92512572

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92512572001	HGWA-43D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92512572002	HGWA-44D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92512572003	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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 BKG 03

Pace Project No.: 92512572

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92512572001	HGWA-43D					
	Performed by	CUSTOMER			12/15/20 12:25	
	Collected By	Thomas Kessler			12/15/20 12:25	
	Collected Date	12/15/20			12/15/20 12:25	
	Collected Time	12:25			12/15/20 12:25	
	pH	7.39	Std. Units		12/15/20 12:25	
EPA 6010D	Calcium	62.6	mg/L	1.0	12/24/20 23:57	
EPA 6020B	Antimony	0.00031J	mg/L	0.0030	12/28/20 17:38	
EPA 6020B	Barium	0.29	mg/L	0.010	12/28/20 17:38	
EPA 6020B	Boron	0.052J	mg/L	0.10	12/28/20 17:38	
EPA 6020B	Lead	0.000082J	mg/L	0.0050	12/28/20 17:38	
EPA 6020B	Lithium	0.0019J	mg/L	0.030	12/28/20 17:38	
EPA 6020B	Molybdenum	0.0044J	mg/L	0.010	12/28/20 17:38	
SM 2450C-2011	Total Dissolved Solids	289	mg/L	10.0	12/19/20 12:19	
EPA 300.0 Rev 2.1 1993	Chloride	4.7	mg/L	1.0	12/23/20 19:30	
EPA 300.0 Rev 2.1 1993	Fluoride	0.21	mg/L	0.10	12/23/20 19:30	
EPA 300.0 Rev 2.1 1993	Sulfate	38.8	mg/L	1.0	12/23/20 19:30	
92512572002	HGWA-44D					
	Performed by	CUSTOMER			12/15/20 16:18	
	Collected By	Thomas Kessler			12/15/20 16:18	
	Collected Date	12/15/20			12/15/20 16:18	
	Collected Time	16:18			12/15/20 16:18	
	pH	7.87	Std. Units		12/15/20 16:18	
EPA 6010D	Calcium	28.7	mg/L	1.0	12/25/20 00:03	M1
EPA 6020B	Antimony	0.00047J	mg/L	0.0030	12/28/20 17:43	
EPA 6020B	Barium	0.39	mg/L	0.010	12/28/20 17:43	
EPA 6020B	Boron	0.31	mg/L	0.10	12/28/20 17:43	
EPA 6020B	Chromium	0.00072J	mg/L	0.010	12/28/20 17:43	
EPA 6020B	Lead	0.00011J	mg/L	0.0050	12/28/20 17:43	
EPA 6020B	Lithium	0.028J	mg/L	0.030	12/28/20 17:43	
EPA 6020B	Molybdenum	0.0019J	mg/L	0.010	12/28/20 17:43	
SM 2450C-2011	Total Dissolved Solids	295	mg/L	10.0	12/19/20 12:19	
EPA 300.0 Rev 2.1 1993	Chloride	9.4	mg/L	1.0	12/23/20 19:45	
EPA 300.0 Rev 2.1 1993	Fluoride	0.67	mg/L	0.10	12/23/20 19:45	
EPA 300.0 Rev 2.1 1993	Sulfate	6.7	mg/L	1.0	12/23/20 19:45	
92512572003	EB-01					
EPA 6010D	Calcium	0.12J	mg/L	1.0	12/25/20 00:28	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 BKG 03

Pace Project No.: 92512572

Sample: HGWA-43D **Lab ID: 92512572001** Collected: 12/15/20 12:25 Received: 12/17/20 08:48 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		12/15/20 12:25		
Collected By	Thomas Kessler				1		12/15/20 12:25		
Collected Date	12/15/20				1		12/15/20 12:25		
Collected Time	12:25				1		12/15/20 12:25		
pH	7.39	Std. Units			1		12/15/20 12:25		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	62.6	mg/L	1.0	0.070	1	12/24/20 13:26	12/24/20 23:57	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00031J	mg/L	0.0030	0.00028	1	12/24/20 10:19	12/28/20 17:38	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	12/24/20 10:19	12/28/20 17:38	7440-38-2	
Barium	0.29	mg/L	0.010	0.00071	1	12/24/20 10:19	12/28/20 17:38	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	12/24/20 10:19	12/28/20 17:38	7440-41-7	
Boron	0.052J	mg/L	0.10	0.0052	1	12/24/20 10:19	12/28/20 17:38	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	12/24/20 10:19	12/28/20 17:38	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	12/24/20 10:19	12/28/20 17:38	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	12/24/20 10:19	12/28/20 17:38	7440-48-4	
Lead	0.00082J	mg/L	0.0050	0.000036	1	12/24/20 10:19	12/28/20 17:38	7439-92-1	
Lithium	0.0019J	mg/L	0.030	0.00081	1	12/24/20 10:19	12/28/20 17:38	7439-93-2	
Molybdenum	0.0044J	mg/L	0.010	0.00069	1	12/24/20 10:19	12/28/20 17:38	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	12/24/20 10:19	12/28/20 17:38	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/20 10:19	12/28/20 17:38	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	12/18/20 08:35	12/18/20 14:17	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	289	mg/L	10.0	10.0	1		12/19/20 12:19		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	4.7	mg/L	1.0	0.60	1		12/23/20 19:30	16887-00-6	
Fluoride	0.21	mg/L	0.10	0.050	1		12/23/20 19:30	16984-48-8	
Sulfate	38.8	mg/L	1.0	0.50	1		12/23/20 19:30	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 BKG 03
Pace Project No.: 92512572

Sample: HGWA-44D Lab ID: 92512572002 Collected: 12/15/20 16:18 Received: 12/17/20 08:48 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		12/15/20 16:18		
Collected By	Thomas Kessler				1		12/15/20 16:18		
Collected Date	12/15/20				1		12/15/20 16:18		
Collected Time	16:18				1		12/15/20 16:18		
pH	7.87	Std. Units			1		12/15/20 16:18		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	28.7	mg/L	1.0	0.070	1	12/24/20 13:26	12/25/20 00:03	7440-70-2	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00047J	mg/L	0.0030	0.00028	1	12/24/20 10:19	12/28/20 17:43	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	12/24/20 10:19	12/28/20 17:43	7440-38-2	
Barium	0.39	mg/L	0.010	0.00071	1	12/24/20 10:19	12/28/20 17:43	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	12/24/20 10:19	12/28/20 17:43	7440-41-7	
Boron	0.31	mg/L	0.10	0.0052	1	12/24/20 10:19	12/28/20 17:43	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	12/24/20 10:19	12/28/20 17:43	7440-43-9	
Chromium	0.00072J	mg/L	0.010	0.00055	1	12/24/20 10:19	12/28/20 17:43	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	12/24/20 10:19	12/28/20 17:43	7440-48-4	
Lead	0.00011J	mg/L	0.0050	0.000036	1	12/24/20 10:19	12/28/20 17:43	7439-92-1	
Lithium	0.028J	mg/L	0.030	0.00081	1	12/24/20 10:19	12/28/20 17:43	7439-93-2	
Molybdenum	0.0019J	mg/L	0.010	0.00069	1	12/24/20 10:19	12/28/20 17:43	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	12/24/20 10:19	12/28/20 17:43	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/20 10:19	12/28/20 17:43	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	12/18/20 08:35	12/18/20 14:19	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	295	mg/L	10.0	10.0	1		12/19/20 12:19		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	9.4	mg/L	1.0	0.60	1		12/23/20 19:45	16887-00-6	
Fluoride	0.67	mg/L	0.10	0.050	1		12/23/20 19:45	16984-48-8	
Sulfate	6.7	mg/L	1.0	0.50	1		12/23/20 19:45	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 BKG 03

Pace Project No.: 92512572

Sample: EB-01		Lab ID: 92512572003		Collected: 12/15/20 18:02	Received: 12/17/20 08:48	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	0.12J	mg/L	1.0	0.070	1	12/24/20 13:26	12/25/20 00:28	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	12/24/20 10:19	12/29/20 10:21	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	12/24/20 10:19	12/29/20 10:21	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	12/24/20 10:19	12/29/20 10:21	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	12/24/20 10:19	12/29/20 10:21	7440-41-7		
Boron	ND	mg/L	0.10	0.0052	1	12/24/20 10:19	12/29/20 10:21	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	12/24/20 10:19	12/29/20 10:21	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	12/24/20 10:19	12/29/20 10:21	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	12/24/20 10:19	12/29/20 10:21	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	12/24/20 10:19	12/29/20 10:21	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	12/24/20 10:19	12/29/20 10:21	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	12/24/20 10:19	12/29/20 10:21	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	12/24/20 10:19	12/29/20 10:21	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	12/24/20 10:19	12/29/20 10:21	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	12/18/20 08:35	12/18/20 14:22	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		12/19/20 12:19			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		12/23/20 20:00	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		12/23/20 20:00	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		12/23/20 20:00	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 BKG 03

Pace Project No.: 92512572

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: 92512572001, 92512572002, 92512572003

METHOD BLANK: 3113409 Matrix: Water

Associated Lab Samples: 92512572001, 92512572002, 92512572003

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

LABORATORY CONTROL SAMPLE: 3113410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3113411 3113412

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 BKG 03
Pace Project No.: 92512572

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: 92512572001, 92512572002, 92512572003

METHOD BLANK: 3113101 Matrix: Water
Associated Lab Samples: 92512572001, 92512572002, 92512572003

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

LABORATORY CONTROL SAMPLE: 3113102

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3113103 3113104

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

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 BKG 03

Pace Project No.: 92512572

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

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 BKG 03

Pace Project No.: 92512572

QC Batch: 587972

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92512572001, 92512572002, 92512572003

METHOD BLANK: 3107202

Matrix: Water

Associated Lab Samples: 92512572001, 92512572002, 92512572003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	12/18/20 13:15	

LABORATORY CONTROL SAMPLE: 3107203

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0022	87	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3107204 3107205

Parameter	Units	3107204		3107205		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0026	0.0026	103	102	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 BKG 03

Pace Project No.: 92512572

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: 92512572001, 92512572002, 92512572003

METHOD BLANK: 3109057 Matrix: Water

Associated Lab Samples: 92512572001, 92512572002, 92512572003

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

LABORATORY CONTROL SAMPLE: 3109058

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

SAMPLE DUPLICATE: 3109059

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

SAMPLE DUPLICATE: 3109063

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

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 BKG 03
Pace Project No.: 92512572

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: 92512572001, 92512572002, 92512572003

METHOD BLANK: 3112052 Matrix: Water
Associated Lab Samples: 92512572001, 92512572002, 92512572003

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

LABORATORY CONTROL SAMPLE: 3112053

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3112054 3112055

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3112056 3112057

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

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: HAMMOND AP-1 BKG 03

Pace Project No.: 92512572

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 BKG 03

Pace Project No.: 92512572

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92512572001	HGWA-43D				
92512572002	HGWA-44D				
92512572001	HGWA-43D	EPA 3010A	589396	EPA 6010D	589429
92512572002	HGWA-44D	EPA 3010A	589396	EPA 6010D	589429
92512572003	EB-01	EPA 3010A	589396	EPA 6010D	589429
92512572001	HGWA-43D	EPA 3005A	589337	EPA 6020B	589405
92512572002	HGWA-44D	EPA 3005A	589337	EPA 6020B	589405
92512572003	EB-01	EPA 3005A	589337	EPA 6020B	589405
92512572001	HGWA-43D	EPA 7470A	587972	EPA 7470A	588144
92512572002	HGWA-44D	EPA 7470A	587972	EPA 7470A	588144
92512572003	EB-01	EPA 7470A	587972	EPA 7470A	588144
92512572001	HGWA-43D	SM 2450C-2011	588373		
92512572002	HGWA-44D	SM 2450C-2011	588373		
92512572003	EB-01	SM 2450C-2011	588373		
92512572001	HGWA-43D	EPA 300.0 Rev 2.1 1993	589104		
92512572002	HGWA-44D	EPA 300.0 Rev 2.1 1993	589104		
92512572003	EB-01	EPA 300.0 Rev 2.1 1993	589104		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project #:

WO#: 92512572



92512572

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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: (2/17/10)

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

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

Yes No N/A

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

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 4.3

USDA Regulated Soil (N/A, water sample)

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

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

Yes No

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



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# : 92512572

PM: KLH1

Due Date: 01/04/21

CLIENT : GA-GA Power

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

pH Adjustment Log for Preserved Samples

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: GA Power Address: Atlanta, GA	Section B Required Project Information: Report To: SCS Contacts Copy To: Geosynetic Contacts
Email To: SCS Contacts Phone: _____ Requested Due Date/TAT: 10 Day	Section C Invoice Information: Attention: Southern Co. Company Name: _____ Address: _____ Site Location: _____ State: GA

Section D Required Client Information: Matrix Code: _____ Sample Type: (G=GRAB C=COMP) Date: 12/15/2020 Time: 12:15 Sample Temp at Collection: _____ # of Containers: 2 Unpreserved: _____ H ₂ SO ₄ : _____ HNO ₃ : _____ HCl: _____ NaOH: _____ Na ₂ S ₂ O ₃ : _____ Methanol: _____ Other: _____	Valid Matrix Codes: CHEMICAL WATER: CW WATER: WT WASTE WATER: WW PRODUCT: P SOLID/SLURRY: SL OIL: OL WIFE: WF OTHER: OT TISSUE: TS
--	---

ITEM #	MATRIX CODE	SAMPLE TYPE	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH = 7.39 pH = 7.87		
			DATE	TIME					H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other					Chloride, Fluoride, Sulfate	TDS
1	HQWA-43D	WT G	12/15	12:15	12/15	12:15	17	5	2	3											
2	HQWA-44D	WT G	12/15	12:15	12/15	12:15	12	5	2	3											
3	EB-01	WT G	12/15	12:02	12/15	12:02	5	2	3												
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Section E Relinquished By / Affiliation: James Kessler / Geosynetic Date: 12/17/20 Time: 08:46 Accepted By / Affiliation: _____ Date: 12/17/20 Time: 08:46	Section F Sampler Name and Signature: James Kessler Print Name of Sampler: James Kessler Signature of Sampler: _____ Date Signed (MM/DD/YYYY): 12/15/2020
---	--

*Important Note: By signing this form, you are accepting Face's NET 30 day payment terms and agreeing to the charges of 1.2% per month for any invoices not paid within 30 days.

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

January 11, 2021

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

RE: Project: HAMMOND AP-1 BKG 03 RADS
Pace Project No.: 92512535

Dear Joju Abraham:

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

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-1 BKG 03 RADS
Pace Project No.: 92512535

Pace Analytical Services Pennsylvania

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-1 BKG 03 RADS

Pace Project No.: 92512535

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92512535001	HGWA-43D	Water	12/15/20 12:25	12/17/20 08:48
92512535002	HGWA-44D	Water	12/15/20 16:18	12/17/20 08:48
92512535003	EB-01	Water	12/15/20 18:02	12/17/20 08:48

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 BKG 03 RADS

Pace Project No.: 92512535

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92512535001	HGWA-43D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92512535002	HGWA-44D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92512535003	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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 BKG 03 RADS

Pace Project No.: 92512535

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92512535001	HGWA-43D					
EPA 9315	Radium-226	0.162 ± 0.236 (0.511) C:88% T:NA	pCi/L		01/06/21 07:00	
EPA 9320	Radium-228	0.879 ± 0.484 (0.887) C:69% T:83%	pCi/L		01/05/21 13:26	
Total Radium Calculation	Total Radium	1.04 ± 0.720 (1.40)	pCi/L		01/06/21 14:34	
92512535002	HGWA-44D					
EPA 9315	Radium-226	0.359 ± 0.268 (0.453) C:92% T:NA	pCi/L		01/06/21 07:27	
EPA 9320	Radium-228	0.341 ± 0.410 (0.868) C:68% T:86%	pCi/L		01/05/21 13:26	
Total Radium Calculation	Total Radium	0.700 ± 0.678 (1.32)	pCi/L		01/06/21 14:34	
92512535003	EB-01					
EPA 9315	Radium-226	0.0278 ± 0.302 (0.765) C:89% T:NA	pCi/L		01/06/21 07:00	
EPA 9320	Radium-228	0.226 ± 0.391 (0.853) C:72% T:88%	pCi/L		01/05/21 13:26	
Total Radium Calculation	Total Radium	0.254 ± 0.693 (1.62)	pCi/L		01/06/21 14:34	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 BKG 03 RADS

Pace Project No.: 92512535

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-43D Lab ID: 92512535001 Collected: 12/15/20 12:25 Received: 12/17/20 08:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.162 ± 0.236 (0.511) C:88% T:NA	pCi/L	01/06/21 07:00	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.879 ± 0.484 (0.887) C:69% T:83%	pCi/L	01/05/21 13:26	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.04 ± 0.720 (1.40)	pCi/L	01/06/21 14:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 BKG 03 RADS

Pace Project No.: 92512535

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-44D Lab ID: 92512535002 Collected: 12/15/20 16:18 Received: 12/17/20 08:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.359 ± 0.268 (0.453) C:92% T:NA	pCi/L	01/06/21 07:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.341 ± 0.410 (0.868) C:68% T:86%	pCi/L	01/05/21 13:26	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.700 ± 0.678 (1.32)	pCi/L	01/06/21 14:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 BKG 03 RADS

Pace Project No.: 92512535

Sample: EB-01 **Lab ID: 92512535003** Collected: 12/15/20 18:02 Received: 12/17/20 08:48 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0278 ± 0.302 (0.765) C:89% T:NA	pCi/L	01/06/21 07:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.226 ± 0.391 (0.853) C:72% T:88%	pCi/L	01/05/21 13:26	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.254 ± 0.693 (1.62)	pCi/L	01/06/21 14:34	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 BKG 03 RADS

Pace Project No.: 92512535

QC Batch: 428750

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92512535001, 92512535002, 92512535003

METHOD BLANK: 2071922

Matrix: Water

Associated Lab Samples: 92512535001, 92512535002, 92512535003

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

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 BKG 03 RADS

Pace Project No.: 92512535

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

Associated Lab Samples: 92512535001, 92512535002, 92512535003

METHOD BLANK: 2073293 Matrix: Water

Associated Lab Samples: 92512535001, 92512535002, 92512535003

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

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

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QUALIFIERS

Project: HAMMOND AP-1 BKG 03 RADS

Pace Project No.: 92512535

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE


Project: HAMMOND AP-1 BKG 03 RADS

Pace Project No.: 92512535

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92512535001	HGWA-43D	EPA 9315	429175		
92512535002	HGWA-44D	EPA 9315	429175		
92512535003	EB-01	EPA 9315	429175		
92512535001	HGWA-43D	EPA 9320	428750		
92512535002	HGWA-44D	EPA 9320	428750		
92512535003	EB-01	EPA 9320	428750		
92512535001	HGWA-43D	Total Radium Calculation	429861		
92512535002	HGWA-44D	Total Radium Calculation	429861		
92512535003	EB-01	Total Radium Calculation	429861		

REPORT OF LABORATORY ANALYSIS

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

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project

WO#: **92512535**

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



Custody Seal Present? Yes No Seals Intact? Yes No

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

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

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

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

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

Cooler Temp Corrected (°C): 4.3

USDA Regulated Soil (N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____

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

Project #

WO# : 92512535

PM: KLH1

Due Date: 01/11/21

CLIENT: GA-GA Power

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

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

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

pH Adjustment Log for Preserved Samples

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: GA Power	Report To: SCS Contacts	Attention: Southern Co.
Address: Atlanta, GA	Copy To: Geosyntec Contacts	Company Name:
	Purchase Order No.:	Address:
Email To: SCS Contacts	Project Name: Plant Hammond AP-1 BKG 03	Price Quote Reference: Kevin Herring
Phone: Fax	Project Number: GW65818	Price Project Manager: Kevin Herring
Requested Due Date/TAT: 10 Day		Price Profile #: 10839-4

Page: 1 of 1

REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER (specify)	
Site Location	STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes SCOE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)	pH = 7.39 pH = 7.87 Pace Project No./ Lab ID: 42512535	
					DATE	TIME					UNPRESERVED	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol					Other
1	HQWA-43D	WATER	WT G	12/15	12/15	17	5	2	3													
2	HQWA-44D	WASTE WATER	WT G	12/15	12/15	14	5	2	3													
3	EB-01	PRODUCT SOLUTION	WT G	12/15	12/15	1800	5	2	3													
4		WASTE WATER																				
5		WASTE WATER																				
6		WASTE WATER																				
7		WASTE WATER																				
8		WASTE WATER																				
9		WASTE WATER																				
10		WASTE WATER																				
11		WASTE WATER																				
12		WASTE WATER																				

ADDITIONAL COMMENTS
 Please note dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken.
 *Full App. III & IV Metals=5b, As, Ba, Bi, B, Cd, Ca, Cr, Co, Pb, Li, Hg, Mo, Se, Tl
 One sample set submitted for HQWA-43D and HQWA-44D but they will be reported for AP-1/2/3 SOCs
 One sample set submitted for EB-01 but it will be reported for AP-1/2/3 SOCs

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Thomas Messler / Geosyntec	12/17	0842	David Spade / Pace	12/17	0940
Lynn Winters / Pace	12/18	1102	David Spade / Pace	12/17	1102

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER: Thomas Messler	DATE Signed (MM/DD/YYYY): 12/15/2020
SIGNATURE of SAMPLER: <i>Thomas Messler</i>	

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Method Blank Assessment	
MB Sample ID	2073293
MB Concentration:	0.176
MB Counting Uncertainty:	0.125
MB %DC:	0.246
MB Numerical Performance Indicator:	2.56
Y/B Status vs. Numerical Indicator:	N/A
Y/B Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD Y or N?	N
	LCSD58138	LCSD59138
Decay Corrected Spike Concentration (pCi/mL):	1/6/2021	
Spike I.D.:	18-033	
Volume Used (mL):	24.041	
Aliquot Volume (L, g, F):	0.10	
Target Conc. (pCi/L, g, F):	0.515	
Uncertainty (Calculated):	4.669	
Result (pCi/L, g, F):	0.056	
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	4.726	
Numerical Performance Indicator:	0.782	
Percent Recovery:	0.14	
Status vs. Numerical Indicator:	101.21%	
Status vs. Recovery:	N/A	
Upper % Recovery Limits:	Pass	
Lower % Recovery Limits:	125%	
	75%	

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCSD/LCSD in the space below.	
	92512557001	92512557021
Sample I.D.:	92512557001	
Duplicate Sample I.D.:	92512557007 DUP	
Sample Result (pCi/L, g, F):	0.259	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.248	
Sample Duplicate Result (pCi/L, g, F):	0.181	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.219	
Are sample and/or duplicate results below RL?	See Reference	
Duplicate Numerical Performance Indicator:	35.10%	
Duplicate RPD:	35.10%	
Duplicate Status vs. Numerical Indicator:	N/A	
Duplicate Status vs. RPD:	Fail	
% RPD Limit:	32%	

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

Comments:

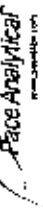
***Batch number 181E-011996 does not meet unacceptable precision. N/A

1-6-2021

1-6-2021

1/6/21

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Method Blank Assessment	
MB Sample ID	2073298
MB Concentration	0.176
MB Counting Uncertainty	0.135
MB MDC	0.246
MB Numerical Performance Indicator	2.55
MB Status vs Numerical Indicator	N/A
MB Status vs. MDC	Pass

Laboratory Control Sample Assessment	LOSD (Y or N)?	
	LCS58138	Y
Count Date	1/5/2021	LCS58138
Spike I.D.	19.033	19.033
Dosey Corrected Spike Concentration (pCi/ml.)	24.041	24.041
Volume Used (ml.)	0.10	0.10
Aliquot Volume (l., g. F.)	0.515	0.507
Target Conc. (pCi/L., g. F.)	4.669	4.743
Uncertainty (Calculated)	0.055	0.057
Result (pCi/L., g. F.)	4.725	4.173
Counting Uncertainty (pCi/L., g. F.)	0.782	0.736
Numerical Performance Indicator	0.14	+1.51
Percent Recovery	101.21%	87.98%
Status vs Numerical Indicator	N/A	N/A
Status vs Recovery	Pass	Pass
Upper % Recovery Limits	125%	125%
Lower % Recovery Limits	75%	75%

Duplicate Sample Assessment	Enter Duplicates Sample IDs if other than LCS/LOSD in the space below.
Sample I.D.	LCS58138
Duplicate Sample I.D.	LCS58138
Sample Result Counting Uncertainty (pCi/L., g. F.)	4.726
Sample Duplicate Result Counting Uncertainty (pCi/L., g. F.)	0.782
Sample Duplicate Result Counting Uncertainty (pCi/L., g. F.)	4.173
Sample Duplicate Result Counting Uncertainty (pCi/L., g. F.)	0.736
Are sample and/or duplicate results below RCP	NO
Duplicate Numerical Performance Indicator	1.059
Duplicate Percent Recoveries	13.69%
Duplicate Status vs Numerical Indicator	N/A
Duplicate Status vs RPD	Pass
% RPD Limit	25%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Spike I.D.:		
MS/MSD Dosey 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		

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

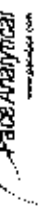
*** Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

1-6-2021
MDC

WAM 1/10/21

Quality Control Sample Performance Assessment



Test: Ra-228
 Analyst: VAL
 Date: 12/01/2020
 Worksheet: 58095
 Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2071932
MB Concentration:	0.894
MB 2 Sigma CSU:	0.340
MB X DC:	0.676
MB Numerical Performance Indicator:	3.58
MB Status vs. Numerical Indicator:	Fail
MB Status vs. MDC:	See Comment

Laboratory Control Sample Assessment	
LCS ID	Y or N?
LCS58095	Y
LCS58095	1/5/2021
Count Date:	1/5/2021
Spike ID:	X-030
Decay Corrected Spike Concentration (pCi/mL):	37.002
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.803
Target Conc. (pCi/L, g, F):	4.810
Uncertainty (Calculated):	0.226
Result (pCi/L, g, F):	5.591
LCS1,CS0 2 Sigma CSU (pCi/L, g, F):	1.255
Numerical Performance Indicator:	1.49
Percent Recovery:	121.08%
Status vs Numerical Indicator:	NA
Status vs Recovery:	Pass
Upper % Recovery Limit:	135%
Lower % Recovery Limit:	80%

Duplicate Sample Assessment	
Sample I.D.:	LCS58095
Duplicate Sample I.D.:	LCS058095
Sample Result (pCi/L, g, F):	5.581
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.255
Sample Duplicate Result (pCi/L, g, F):	5.412
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.220
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.790
(Based on the LCS1,CS0 Percent Recoveries) Duplicate RPD:	3.25%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	58%

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

Comments:

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

Sample Matrix Spike Control Assessment	
Sample Collection Date:	Sample I.D.
Sample MS I.D.	Sample MS I.D.
Sample MSD I.D.	Sample MSD I.D.
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike I.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):
MSD Aliquot (L, g, F):	MSD Target Conc. (pCi/L, g, F):
MS Spike Uncertainty (Calculated):	MS Spike Uncertainty (Calculated):
MSD Spike Uncertainty (Calculated):	MSD Spike Uncertainty (Calculated):
Sample Result 2 Sigma CSU (pCi/L, g, F):	Sample Result:
Sample Matrix Spike Result:	Sample Matrix Spike Result:
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Matrix Spike Duplicate Result:
MS Numerical Performance Indicator:	MS Numerical Performance Indicator:
MSD Numerical Performance Indicator:	MSD Numerical Performance Indicator:
MS Percent Recovery:	MS Percent Recovery:
MSD Percent Recovery:	MSD Percent Recovery:
MS Status vs Numerical Indicator:	MS Status vs Numerical Indicator:
MSD Status vs Numerical Indicator:	MSD Status vs Numerical Indicator:
MS/MSD Upper % Recovery Limit:	MS/MSD Upper % Recovery Limit:
MS/MSD Lower % Recovery Limit:	MS/MSD Lower % Recovery Limit:

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample I.D.
Sample MS I.D.:	Sample MS I.D.
Sample MSD I.D.:	Sample MSD I.D.
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):
Duplicate Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:	MS/MSD Duplicate Status vs RPD:
% RPD Limit:	% RPD Limit:

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: LAL
Date: 1/8/2021
Worksheet: 58138
Matrix: DW

Method Blank Assessment	
MB Sample ID	2073293
MB Concentration:	0.176
MB Counting Uncertainty:	0.125
MB %DC:	0.246
MB Numerical Performance Indicator:	2.56
Y/B Status vs Numerical Indicator:	N/A
Y/B Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD Y or N?	N
		LCSD58138
Decay Corrected Spike Concentration (pCi/mL)		
Count Date:	1/6/2021	
Spike I.D.:	18-033	
Volume Used (mL):	24.041	
Aliquot Volume (L, g, F):	0.10	
Target Conc. (pCi/L, g, F):	0.515	
Uncertainty (Calculated):	4.669	
Result (pCi/L, g, F):	0.056	
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	4.726	
Numerical Performance Indicator:	0.782	
Percent Recovery:	101.21%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCSD/LCSD in the space below.
Sample I.D.:	92512557001
Duplicate Sample I.D.:	92512557007 DUP
Sample Result (pCi/L, g, F):	0.259
Sample Result Counting Uncertainty (pCi/L, g, F):	0.248
Sample Duplicate Result (pCi/L, g, F):	0.181
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.219
Are sample and/or duplicate results below RL?	See below
Duplicate Numerical Performance Indicator:	35.10%
Duplicate RPD:	35.10%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail
% RPD Limit:	32%

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

Comments:

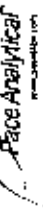
***Batch number 187E-319196 does not meet unacceptable precision. N/A

WAS
1-6-2021
VAN 1/6/21

WAS
1-6-2021

VAN 1/6/21

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Method Blank Assessment	
MB Sample ID	2073298
MB Concentration	0.176
MB Counting Uncertainty	0.135
MB MDC	0.246
MB Numerical Performance Indicator	2.55
MB Status vs Numerical Indicator	N/A
MB Status vs. MDC	Pass

Laboratory Control Sample Assessment	LOSD (Y or N)?	
	Y	N
Decay Corrected Spike Concentration (pCi/ml.)	Count Date	LCS58138
	Spike I.D.	1162021
	Volume Used (ml.)	19.033
	Aliquot Volume (l, g, F)	24.041
	Target Conc. (pCi/ml., g, F)	0.10
LCS/LCSD Counting Uncertainty (pCi/ml., g, F)	Result (pCi/ml., g, F)	0.507
	Uncertainty (Calculated)	4.669
	Percent Recovery	0.067
	Status vs Numerical Indicator	4.173
	Upper % Recovery Limit	0.736
Duplicate Sample Assessment	Numerical Performance Indicator	-1.51
	Status vs Recovery	87.98%
	Lower % Recovery Limit	N/A
	Upper % Recovery Limit	Pass
	Lower % Recovery Limit	75%

Duplicate Sample Assessment	LOSD (Y or N)?	
	Y	N
Decay Corrected Spike Concentration (pCi/ml.)	Count Date	LCS58138
	Spike I.D.	1162021
	Volume Used (ml.)	19.033
	Aliquot Volume (l, g, F)	24.041
	Target Conc. (pCi/ml., g, F)	0.10
LCS/LCSD Counting Uncertainty (pCi/ml., g, F)	Result (pCi/ml., g, F)	0.507
	Uncertainty (Calculated)	4.669
	Percent Recovery	0.067
	Status vs Numerical Indicator	4.173
	Upper % Recovery Limit	0.736
Duplicate Sample Assessment	Numerical Performance Indicator	-1.51
	Status vs Recovery	87.98%
	Lower % Recovery Limit	N/A
	Upper % Recovery Limit	Pass
	Lower % Recovery Limit	75%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D. MS/MSD 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/ml., g, F) MSD Aliquot (l, g, F) MSD Target Conc. (pCi/ml., g, F) MS Spike Uncertainty (Calculated) MSD Spike Uncertainty (Calculated) Sample Result Sample Result Counting Uncertainty (pCi/ml., g, F) Sample Matrix Spike Result Sample Matrix Spike Duplicate Result Matrix Spike Duplicate Result Counting Uncertainty (pCi/ml., 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/MSD Upper % Recovery Limit MS/MSD Lower % Recovery Limit		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D. Sample MS I.D. Sample MSD I.D. Matrix Spike Result Counting Uncertainty (pCi/ml., g, F) Sample Matrix Spike Duplicate Result Matrix Spike Duplicate Result Counting Uncertainty (pCi/ml., g, F) Duplicate Numerical Performance Indicator MS/MSD Duplicate RPD MS/MSD Duplicate Status vs Numerical Indicator MS/MSD Duplicate Status vs RPD % RPD Limit

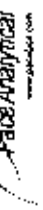
*** Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

11-6-2021
MDC

WAM 1/10/21

Quality Control Sample Performance Assessment



Test: Ra-228
Analyst: VAL
Date: 12/01/2020
Worklist: 58095
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2071932
MB Concentration:	0.894
MB 2 Sigma CSU:	0.340
MB X DC:	0.676
MB Numerical Performance Indicator:	3.58
MB Status vs. Numerical Indicator:	Fail
MB Status vs. MDC:	See Comment

Laboratory Control Sample Assessment	
LCS ID	Y or N?
LCS58095	Y
LCS58095	1/5/2021
Count Date:	1/5/2021
Spike ID:	X-030
Decay Corrected Spike Concentration (pCi/mL):	37.002
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.803
Target Conc. (pCi/L, g, F):	4.810
Uncertainty (Calculated):	0.226
Result (pCi/L, g, F):	5.591
LCS1,CSU 2 Sigma CSU (pCi/L, g, F):	1.255
Numerical Performance Indicator:	1.49
Percent Recovery:	121.08%
Status vs Numerical Indicator:	Pass
Status vs Recovery:	Pass
Upper % Recovery Limit:	135%
Lower % Recovery Limit:	60%

Duplicate Sample Assessment	
Sample I.D.:	LCS58095
Duplicate Sample I.D.:	LCS058095
Sample Result (pCi/L, g, F):	5.581
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.255
Sample Duplicate Result (pCi/L, g, F):	5.412
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.220
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.790
(Based on the LCS1,CSU Percent Recoveries) Duplicate RPD:	3.25%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	58%

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

Comments:

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

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample I.D.
Sample MS I.D.	Sample MS I.D.
Sample MSD I.D.	Sample MSD I.D.
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	Sample Matrix Spike Result:
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Duplicate Numerical Performance Indicator:
Duplicate Numerical Performance Indicator:	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:
MS/MSD Duplicate Status vs RPD:	% RPD Limit:

January 2021

February 03, 2021

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

RE: Project: HAMMOND AP-1 BKG 04
Pace Project No.: 92517888

Dear Joju Abraham:

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

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

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

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-1 BKG 04

Pace Project No.: 92517888

Pace Analytical Services Charlotte

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-1 BKG 04

Pace Project No.: 92517888

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92517888001	HGWA-43D	Water	01/19/21 16:45	01/21/21 11:30
92517888002	HGWA-44D	Water	01/19/21 17:42	01/21/21 11:30
92517888003	EB-01	Water	01/20/21 14:00	01/21/21 11:30

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 BKG 04

Pace Project No.: 92517888

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92517888001	HGWA-43D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92517888002	HGWA-44D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92517888003	EB-01	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2450C-2011	AW1	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 BKG 04

Pace Project No.: 92517888

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92517888001	HGWA-43D					
	Performed by	CUSTOMER			01/21/21 15:22	
	pH	7.39	Std. Units		01/21/21 15:22	
EPA 6010D	Calcium	60.1	mg/L	1.0	02/02/21 09:19	
EPA 6020B	Antimony	0.00029J	mg/L	0.0030	02/02/21 19:23	B
EPA 6020B	Arsenic	0.0011J	mg/L	0.0050	02/02/21 19:23	
EPA 6020B	Barium	0.32	mg/L	0.010	02/02/21 19:23	
EPA 6020B	Boron	0.049J	mg/L	0.10	02/02/21 19:23	
EPA 6020B	Lead	0.000044J	mg/L	0.0050	02/02/21 19:23	
EPA 6020B	Lithium	0.0025J	mg/L	0.030	02/02/21 19:23	
EPA 6020B	Molybdenum	0.0038J	mg/L	0.010	02/02/21 19:23	
SM 2450C-2011	Total Dissolved Solids	270	mg/L	10.0	01/22/21 09:38	
EPA 300.0 Rev 2.1 1993	Chloride	4.1	mg/L	1.0	01/24/21 23:50	
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	01/24/21 23:50	
EPA 300.0 Rev 2.1 1993	Sulfate	37.3	mg/L	1.0	01/24/21 23:50	
92517888002	HGWA-44D					
	Performed by	CUSTOMER			01/21/21 15:22	
	pH	7.86	Std. Units		01/21/21 15:22	
EPA 6010D	Calcium	33.0	mg/L	1.0	02/02/21 14:34	
EPA 6020B	Antimony	0.00067J	mg/L	0.0030	02/02/21 19:29	B
EPA 6020B	Barium	0.41	mg/L	0.010	02/02/21 19:29	
EPA 6020B	Boron	0.40	mg/L	0.10	02/02/21 19:29	
EPA 6020B	Chromium	0.0011J	mg/L	0.010	02/02/21 19:29	
EPA 6020B	Lead	0.00019J	mg/L	0.0050	02/02/21 19:29	
EPA 6020B	Lithium	0.034	mg/L	0.030	02/02/21 19:29	
EPA 6020B	Molybdenum	0.0035J	mg/L	0.010	02/02/21 19:29	
SM 2450C-2011	Total Dissolved Solids	278	mg/L	10.0	01/22/21 09:39	
EPA 300.0 Rev 2.1 1993	Chloride	9.5	mg/L	1.0	01/25/21 00:04	
EPA 300.0 Rev 2.1 1993	Fluoride	0.74	mg/L	0.10	01/25/21 00:04	
EPA 300.0 Rev 2.1 1993	Sulfate	7.4	mg/L	1.0	01/25/21 00:04	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 BKG 04
Pace Project No.: 92517888

Sample: HGWA-43D		Lab ID: 92517888001		Collected: 01/19/21 16:45		Received: 01/21/21 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/21/21 15:22		
pH	7.39	Std. Units			1		01/21/21 15:22		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	60.1	mg/L	1.0	0.070	1	02/01/21 11:28	02/02/21 09:19	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00029J	mg/L	0.0030	0.00028	1	02/02/21 09:23	02/02/21 19:23	7440-36-0	B
Arsenic	0.0011J	mg/L	0.0050	0.00078	1	02/02/21 09:23	02/02/21 19:23	7440-38-2	
Barium	0.32	mg/L	0.010	0.00071	1	02/02/21 09:23	02/02/21 19:23	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/02/21 09:23	02/02/21 19:23	7440-41-7	
Boron	0.049J	mg/L	0.10	0.0052	1	02/02/21 09:23	02/02/21 19:23	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/02/21 09:23	02/02/21 19:23	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/02/21 09:23	02/02/21 19:23	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/02/21 09:23	02/02/21 19:23	7440-48-4	
Lead	0.000044J	mg/L	0.0050	0.000036	1	02/02/21 09:23	02/02/21 19:23	7439-92-1	
Lithium	0.0025J	mg/L	0.030	0.00081	1	02/02/21 09:23	02/02/21 19:23	7439-93-2	
Molybdenum	0.0038J	mg/L	0.010	0.00069	1	02/02/21 09:23	02/02/21 19:23	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/02/21 09:23	02/02/21 19:23	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/02/21 09:23	02/02/21 19:23	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	01/26/21 07:45	01/26/21 10:33	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	270	mg/L	10.0	10.0	1		01/22/21 09:38		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	4.1	mg/L	1.0	0.60	1		01/24/21 23:50	16887-00-6	
Fluoride	0.16	mg/L	0.10	0.050	1		01/24/21 23:50	16984-48-8	
Sulfate	37.3	mg/L	1.0	0.50	1		01/24/21 23:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 BKG 04
Pace Project No.: 92517888

Sample: HGWA-44D		Lab ID: 92517888002		Collected: 01/19/21 17:42		Received: 01/21/21 11:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/21/21 15:22		
pH	7.86	Std. Units			1		01/21/21 15:22		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	33.0	mg/L	1.0	0.070	1	02/01/21 11:28	02/02/21 14:34	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00067J	mg/L	0.0030	0.00028	1	02/02/21 09:23	02/02/21 19:29	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	02/02/21 09:23	02/02/21 19:29	7440-38-2	
Barium	0.41	mg/L	0.010	0.00071	1	02/02/21 09:23	02/02/21 19:29	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/02/21 09:23	02/02/21 19:29	7440-41-7	
Boron	0.40	mg/L	0.10	0.0052	1	02/02/21 09:23	02/02/21 19:29	7440-42-8	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/02/21 09:23	02/02/21 19:29	7440-43-9	
Chromium	0.0011J	mg/L	0.010	0.00055	1	02/02/21 09:23	02/02/21 19:29	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/02/21 09:23	02/02/21 19:29	7440-48-4	
Lead	0.00019J	mg/L	0.0050	0.000036	1	02/02/21 09:23	02/02/21 19:29	7439-92-1	
Lithium	0.034	mg/L	0.030	0.00081	1	02/02/21 09:23	02/02/21 19:29	7439-93-2	
Molybdenum	0.0035J	mg/L	0.010	0.00069	1	02/02/21 09:23	02/02/21 19:29	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/02/21 09:23	02/02/21 19:29	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/02/21 09:23	02/02/21 19:29	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	01/26/21 07:45	01/26/21 10:35	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	278	mg/L	10.0	10.0	1		01/22/21 09:39		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	9.5	mg/L	1.0	0.60	1		01/25/21 00:04	16887-00-6	
Fluoride	0.74	mg/L	0.10	0.050	1		01/25/21 00:04	16984-48-8	
Sulfate	7.4	mg/L	1.0	0.50	1		01/25/21 00:04	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 BKG 04
Pace Project No.: 92517888

Sample: EB-01		Lab ID: 92517888003		Collected: 01/20/21 14:00	Received: 01/21/21 11:30	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	02/01/21 11:28	02/02/21 14:39	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/02/21 09:23	02/02/21 19:34	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	02/02/21 09:23	02/02/21 19:34	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	02/02/21 09:23	02/02/21 19:34	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	02/02/21 09:23	02/02/21 19:34	7440-41-7		
Boron	ND	mg/L	0.10	0.0052	1	02/02/21 09:23	02/02/21 19:34	7440-42-8		
Cadmium	ND	mg/L	0.0025	0.00012	1	02/02/21 09:23	02/02/21 19:34	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	02/02/21 09:23	02/02/21 19:34	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	02/02/21 09:23	02/02/21 19:34	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	02/02/21 09:23	02/02/21 19:34	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	02/02/21 09:23	02/02/21 19:34	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	02/02/21 09:23	02/02/21 19:34	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	02/02/21 09:23	02/02/21 19:34	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	02/02/21 09:23	02/02/21 19:34	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	01/26/21 07:45	01/26/21 10:38	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2450C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		01/22/21 16:44			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		01/25/21 00:19	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		01/25/21 00:19	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		01/25/21 00:19	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 BKG 04
Pace Project No.: 92517888

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: 92517888001, 92517888002, 92517888003

METHOD BLANK: 3146677 Matrix: Water
Associated Lab Samples: 92517888001, 92517888002, 92517888003

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

LABORATORY CONTROL SAMPLE: 3146678

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3146679 3146681

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3146682 3146683

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 BKG 04
Pace Project No.: 92517888

QC Batch: 596887 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92517888001, 92517888002, 92517888003

METHOD BLANK: 3147679 Matrix: Water

Associated Lab Samples: 92517888001, 92517888002, 92517888003

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

LABORATORY CONTROL SAMPLE: 3147680

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3147681 3147682

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 BKG 04

Pace Project No.: 92517888

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 BKG 04
Pace Project No.: 92517888

QC Batch: 594784 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92517888001, 92517888002, 92517888003

METHOD BLANK: 3138045 Matrix: Water
Associated Lab Samples: 92517888001, 92517888002, 92517888003

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

LABORATORY CONTROL SAMPLE: 3138046

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3138047 3138048

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 BKG 04

Pace Project No.: 92517888

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: 92517888001, 92517888002

METHOD BLANK: 3137200

Matrix: Water

Associated Lab Samples: 92517888001, 92517888002

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

LABORATORY CONTROL SAMPLE: 3137201

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

SAMPLE DUPLICATE: 3137203

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

SAMPLE DUPLICATE: 3137350

Parameter	Units	92517894002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	64.0	67.0	5	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 BKG 04
Pace Project No.: 92517888

QC Batch: 594779	Analysis Method: SM 2450C-2011
QC Batch Method: SM 2450C-2011	Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 92517888003	Laboratory: Pace Analytical Services - Peachtree Corners, GA

METHOD BLANK: 3137995 Matrix: Water
Associated Lab Samples: 92517888003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	01/22/21 16:40	

LABORATORY CONTROL SAMPLE: 3137996

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	394	98	84-108	

SAMPLE DUPLICATE: 3137997

Parameter	Units	92517969001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

SAMPLE DUPLICATE: 3138171

Parameter	Units	92517909004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	289	270	7	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 BKG 04

Pace Project No.: 92517888

QC Batch: 594878 Analysis Method: EPA 300.0 Rev 2.1 1993
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
 Laboratory: Pace Analytical Services - Asheville
 Associated Lab Samples: 92517888001, 92517888002, 92517888003

METHOD BLANK: 3138480 Matrix: Water
 Associated Lab Samples: 92517888001, 92517888002, 92517888003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	01/24/21 21:50	
Fluoride	mg/L	ND	0.10	0.050	01/24/21 21:50	
Sulfate	mg/L	ND	1.0	0.50	01/24/21 21:50	

LABORATORY CONTROL SAMPLE: 3138481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.9	106	90-110	
Fluoride	mg/L	2.5	2.4	95	90-110	
Sulfate	mg/L	50	54.7	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3138482 3138483

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92517740005	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	ND	50	50	53.9	53.4	108	107	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	103	98	90-110	5	10		
Sulfate	mg/L	ND	50	50	55.4	54.9	111	110	90-110	1	10 M1		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3138484 3138485

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92517704001	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	377	50	50	439	424	124	93	90-110	3	10 M6		
Fluoride	mg/L	0.23	2.5	2.5	ND	ND	-9	-9	90-110		10 M1		
Sulfate	mg/L	597	50	50	676	646	158	99	90-110	4	10 M6		

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QUALIFIERS

Project: HAMMOND AP-1 BKG 04

Pace Project No.: 92517888

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 BKG 04
Pace Project No.: 92517888

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92517888001	HGWA-43D				
92517888002	HGWA-44D				
92517888001	HGWA-43D	EPA 3010A	596653	EPA 6010D	596772
92517888002	HGWA-44D	EPA 3010A	596653	EPA 6010D	596772
92517888003	EB-01	EPA 3010A	596653	EPA 6010D	596772
92517888001	HGWA-43D	EPA 3005A	596887	EPA 6020B	597015
92517888002	HGWA-44D	EPA 3005A	596887	EPA 6020B	597015
92517888003	EB-01	EPA 3005A	596887	EPA 6020B	597015
92517888001	HGWA-43D	EPA 7470A	594784	EPA 7470A	595259
92517888002	HGWA-44D	EPA 7470A	594784	EPA 7470A	595259
92517888003	EB-01	EPA 7470A	594784	EPA 7470A	595259
92517888001	HGWA-43D	SM 2450C-2011	594633		
92517888002	HGWA-44D	SM 2450C-2011	594633		
92517888003	EB-01	SM 2450C-2011	594779		
92517888001	HGWA-43D	EPA 300.0 Rev 2.1 1993	594878		
92517888002	HGWA-44D	EPA 300.0 Rev 2.1 1993	594878		
92517888003	EB-01	EPA 300.0 Rev 2.1 1993	594878		

REPORT OF LABORATORY ANALYSIS

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Document Name:
Sample Condition Upon Receipt(SCUR)
 Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
 Page 1 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
Upon Receipt

Client Name:
GA Power

Project #:

WO# : 92517888



Courier: Fed Ex UPS USPS Client
 Commercial Pace Other:

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: **1/21/21 C/4**

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Thermometer: IR Gun ID: **233** Type of Ice: Wet Blue None

Yes No N/A

Cooler Temp: **4.1** Correction Factor: Add/Subtract (°C) **-0.2**

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C) **3.9**

USDA Regulated Soil (N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



Document Name:
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, Collform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHG

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

Project #

WO# : 92517888

PM: KLH1

Due Date: 02/04/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGJU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-VPH/Gas kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	P69U-40 mL Amber Unpreserved vials (N/A)		
1																													
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

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

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



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

Section A Required Client Information
 Company: GA Power
 Address: Atlanta, GA
 Email To: SCS Contacts
 Phone: _____
 Requested Due Date/TIME: 10 Day

Section B Required Project Information
 Report To: SCS Contacts
 Copy To: Geosyntec Contacts
 Purchase Order No.: _____
 Project Name: Plant Hammond AP-1 BKG 04
 Project Number: GW65818

Section C Invoice Information
 Attention: Southern Co.
 Company Name: _____
 Address: _____
 Reference: _____
 Project Manager: Kevin Herring
 Pace Profile #: 10839-4

REGULATORY AGENCY
 NPODES GROUND WATER DRINKING WATER
 UST RCRA OTHER (see _____)
 Site Location STATE: GA

Page: 1 of 3

ITEM #	Section D Required Client Information	VALID MATRIX CODES MATER CODE SERIES: WATER DIV WT WATER WASTE WATER WW PRODUCT P SOL/SOLID SL OIL WP WIRE WPT X OTHER AR 1895C 75	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION		# OF CONTAINERS	Preservatives						Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH = 7.68		
					DATE	TIME	DATE	TIME		Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃					Methanol	Other
1	HGWA-43D								5												
2	HGWA-44D								2												
3	EB-01								2												
4									2												
5									3												
6									3												
7									3												
8									3												
9									3												
10									3												
11									3												
12									3												

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

RELINQUISHED BY / AFFILIATION
 DATE TIME
 ACCEPTED BY / AFFILIATION
 DATE TIME

SAMPLER NAME AND SIGNATURE
 PRINT NAME of SAMPLER: GANNON Cain
 SIGNATURE of SAMPLER: _____
 DATE Signed: 1/20/21

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



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

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

Section B Required Project Information: Report for SCS Contacts, Copy to: Geosynce Contacts

Section C Invoice Information: Attention: Southern Co., Company Name: Southern Co., Address: [Redacted], City: [Redacted], State: GA

Requested Due Date/TAT: 10 Day

Project Name: Plant Hammond AP-1 BKG 04
 Project Number: GW6581B

Requested Analysis Filtered (Y/N)

REGULATORY AGENCY: NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

Site Location: _____ STATE: GA

Page: 2 of 3

ITEM #	Section D Requested Client Information	Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Requested Analysis Filtered (Y/N)				Residual Chlorine (Y/N)	pH
				DATE	TIME				DATE	TIME	Chloride, Fluoride, Sulfate	TDS		
1	HQWA-43D	WT G	G	1/19	1742	19	5 2	Unpreserved	X	X	X	X	N	
2	HQWA-44D	WT G	G	1/19	1742	19	5 2	H ₂ SO ₄	X	X	X	X	N	
3	EB-01	WT G	G				5 2	HNO ₃	X	X	X	X	N	
4							5 2	HCl	X	X	X	X	N	
5							5 2	NaOH	X	X	X	X	N	
6							5 2	Na ₂ S ₂ O ₃	X	X	X	X	N	
7							5 2	Methanol	X	X	X	X	N	
8							5 2	Other	X	X	X	X	N	
9							5 2	Analysis Test	X	X	X	X	N	
10							5 2	Chloride, Fluoride, Sulfate	X	X	X	X	N	
11							5 2	TDS	X	X	X	X	N	
12							5 2	Full App. III&IV Metals 6010/6020	X	X	X	X	N	
							5 2	RAD 226/228	X	X	X	X	N	

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION: [Signature] DATE: 1/24/21 TIME: 1600

ACCEPTED BY / AFFILIATION: [Signature] DATE: 1/20/21 TIME: 1600

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chad Rosta
 SIGNATURE of SAMPLER: [Signature] DATE Signed: 1/19/21

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

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information Company: GA Power Address: Atlanta, GA Email To: SCS Contacts Phone: _____ Fax: _____ Requested Due Date/TAT: 10 day	Section B Required Project Information: Report To: SCS Contacts Copy To: Geosyntec Contacts Purchase Order No.: _____ Project Name: Plant Hammond AP-1 BKG 04 Project Number: GW6581B
Section C Invoice Information: Attention: Southern Co. Company Name: _____ Address: _____ Pace Quote Reference: _____ Pace Project Manager: Kevin Herring Pace Profile #: 10839-4	
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER: _____ Site Location: _____ STATE: GA	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservative/ies						Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH=
				DATE	TIME					Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	NH ₂ S ₂ O ₅				
1	HGWMA-43D	WT G	G						5										
2	HGWMA-44D	WT G	G						5										
3	EB-01	WT G	G	1/26	1400				5										
4									5										
5									5										
6									5										
7									5										
8									5										
9									5										
10									5										
11									5										
12									5										

ADDITIONAL COMMENTS Please note: dry wells, strike through any wells not sampled, and note when the last sample for the event has been taken. Full App. III & IV Metals: Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, U, Hg, Mo, Se, Ti One sample set submitted for HGWMA-43D and HGWMA-44D but they will be reported for AP-1/2/3 SDGs. One sample set submitted for EB-01 but it will be reported for AP-1/2/3 SDGs.			
RELINQUISHED BY / AFFILIATION CR 1320 [Signature] Pace		ACCEPTED BY / AFFILIATION 1/26/21 1600 1/27/21 1130 1/28/21 1300 [Signature] Pace	
SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: [Signature] SIGNATURE of SAMPLER: [Signature]		DATE Signed (MM/DD/YYYY) 1/20/21	
Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

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

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

February 11, 2021

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

RE: Project: HAMMOND AP-1 BKG 04 RADS
Pace Project No.: 92517856

Dear Joju Abraham:

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

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-1 BKG 04 RADS
Pace Project No.: 92517856

Pace Analytical Services Pennsylvania

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-1 BKG 04 RADS
Pace Project No.: 92517856

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92517856001	HGWA-43D	Water	01/19/21 16:45	01/21/21 11:30
92517856002	HGWA-44D	Water	01/19/21 17:42	01/21/21 11:30
92517856003	EB-01	Water	01/20/21 14:00	01/21/21 11:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 BKG 04 RADS

Pace Project No.: 92517856

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92517856001	HGWA-43D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92517856002	HGWA-44D	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92517856003	EB-01	EPA 9315	JJY	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 BKG 04 RADS
Pace Project No.: 92517856

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92517856001	HGWA-43D					
EPA 9315	Radium-226	0.203 ± 0.224 (0.445) C:90% T:NA	pCi/L		02/09/21 07:43	
EPA 9320	Radium-228	0.482 ± 0.373 (0.741) C:82% T:84%	pCi/L		02/04/21 11:54	
Total Radium Calculation	Total Radium	0.685 ± 0.597 (1.19)	pCi/L		02/10/21 08:43	
92517856002	HGWA-44D					
EPA 9315	Radium-226	0.259 ± 0.225 (0.402) C:101% T:NA	pCi/L		02/09/21 07:43	
EPA 9320	Radium-228	0.531 ± 0.589 (1.24) C:73% T:80%	pCi/L		02/04/21 14:43	
Total Radium Calculation	Total Radium	0.790 ± 0.814 (1.64)	pCi/L		02/10/21 08:43	
92517856003	EB-01					
EPA 9315	Radium-226	0.0391 ± 0.180 (0.466) C:86% T:NA	pCi/L		02/09/21 07:43	
EPA 9320	Radium-228	0.365 ± 0.434 (0.916) C:78% T:72%	pCi/L		02/04/21 14:59	
Total Radium Calculation	Total Radium	0.404 ± 0.614 (1.38)	pCi/L		02/10/21 08:43	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 BKG 04 RADS

Pace Project No.: 92517856

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-43D Lab ID: 92517856001 Collected: 01/19/21 16:45 Received: 01/21/21 11:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.203 ± 0.224 (0.445) C:90% T:NA	pCi/L	02/09/21 07:43	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.482 ± 0.373 (0.741) C:82% T:84%	pCi/L	02/04/21 11:54	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.685 ± 0.597 (1.19)	pCi/L	02/10/21 08:43	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 BKG 04 RADS

Pace Project No.: 92517856

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-44D Lab ID: 92517856002 Collected: 01/19/21 17:42 Received: 01/21/21 11:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.259 ± 0.225 (0.402) C:101% T:NA	pCi/L	02/09/21 07:43	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.531 ± 0.589 (1.24) C:73% T:80%	pCi/L	02/04/21 14:43	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.790 ± 0.814 (1.64)	pCi/L	02/10/21 08:43	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 BKG 04 RADS

Pace Project No.: 92517856

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EB-01 Lab ID: 92517856003 Collected: 01/20/21 14:00 Received: 01/21/21 11:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0391 ± 0.180 (0.466) C:86% T:NA	pCi/L	02/09/21 07:43	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.365 ± 0.434 (0.916) C:78% T:72%	pCi/L	02/04/21 14:59	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.404 ± 0.614 (1.38)	pCi/L	02/10/21 08:43	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 BKG 04 RADS

Pace Project No.: 92517856

QC Batch: 432561

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92517856001, 92517856002, 92517856003

METHOD BLANK: 2088957

Matrix: Water

Associated Lab Samples: 92517856001, 92517856002, 92517856003

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 BKG 04 RADS

Pace Project No.: 92517856

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: 92517856001, 92517856002, 92517856003

METHOD BLANK: 2092294 Matrix: Water

Associated Lab Samples: 92517856001, 92517856002, 92517856003

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

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: HAMMOND AP-1 BKG 04 RADS

Pace Project No.: 92517856

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE


Project: HAMMOND AP-1 BKG 04 RADS

Pace Project No.: 92517856

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92517856001	HGWA-43D	EPA 9315	433326		
92517856002	HGWA-44D	EPA 9315	433326		
92517856003	EB-01	EPA 9315	433326		
92517856001	HGWA-43D	EPA 9320	432561		
92517856002	HGWA-44D	EPA 9320	432561		
92517856003	EB-01	EPA 9320	432561		
92517856001	HGWA-43D	Total Radium Calculation	434325		
92517856002	HGWA-44D	Total Radium Calculation	434325		
92517856003	EB-01	Total Radium Calculation	434325		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: October 28, 2020 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.07	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: KA Power

Project #: **WO# : 92517856**



92517856

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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 11/21/21 CSH

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 233 Type of Ice: Wet Blue None

Cooler Temp: 4.1 Correction Factor: Add/Subtract (°C) -0.2

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

Cooler Temp Corrected (°C) 3.9

USDA Regulated Soil (N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Document Name:
Sample Condition Upon Receipt(SCUR)
 Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
 Page 2 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

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

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

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

Project #

WO# : 92517856

PM: KLH1

Due Date: 02/11/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WG9U-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1																													
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information	Section B Required Project Information
Company: GA Power	Project To: SCS Contacts
Address: Atlanta, GA	Copy To: Geosyntec Contacts
Email To: SCS Contacts	Purchase Order No.:
Phone: Fax	Project Name: Plant Hammond AP-1 BKG 04
Requested Due Date/TAT: 10 Day	Project Number: GW6581B
Section C Invoice Information	
Attention: Southern Co.	
Company Name:	
Address:	
Page Quote:	
Reference:	
Pace Project Manager:	
Page Prefix #: 10839-4	
REGULATORY AGENCY	
<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER
<input type="checkbox"/> UST	<input type="checkbox"/> RCRA
Site Location	<input type="checkbox"/> DRINKING WATER
STATE: GA	<input type="checkbox"/> OTHER (see)

Section D Required Client Information	Valid Matrix Codes	Requested Analysis Filtered (Y/N)								
<p style="text-align: center;">SAMPLE ID</p> <p style="text-align: center;">(A-Z, 0-9 / -)</p> <p style="text-align: center;">Sample IDs MUST BE UNIQUE</p>	DW WATER WV WASTE WATER P PRODUCT SOL/SOLID DL DIRT WIFE AIR OT OTHER TISSE	DW WV WV P SL DL WP AR OT TS	Y N Y N N N N N Y N N N N N Y N N N N N Y N N N N N Y N N N N N Y N N N N N Y N N N N N Y N N N N N Y N N N N N Y N N N N N Y N N N N N							
	MATRIX CODE (see valid codes to left)	DATE	TIME	DATE	TIME	DATE	TIME			
	SAMPLE TYPE (G=GRAB C=COMP)	WT	G	WT	G	WT	G			
	DATE	11/1/21	12:45	11/2/21	11:25	11/2/21	11:30			
	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other
	Analysis Test	Chloride, Fluoride, Sulfate	TDS	Full App. III&IV Metals 6010/6020*	RAD 226/228	Residual Chlorine (Y/N)	Pace Project No./Lab I.D. 92517656			
	PH	7.68								

ITEM #	ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS				
								Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)	
1	HQWA-43D											
2	HQWA-44D											
3	EB-01											
4												
5												
6												
7												
8												
9												
10												
11												
12												

PRINT Name of SAMPLER: Connor Cain

SIGNATURE of SAMPLER: *[Signature]*

DATE Signed (MM/DD/YYYY): 1/20/21

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: GA Power, Address: Atlanta, GA, Email To: SCS Contacts, Phone: [blank], Requested Due Date/TAT: 10 Day

Section B Required Project Information: Report For: SCS Contacts, Copy To: Geosyntec Contacts, Purchase Order No.: [blank], Project Name: Plant Hammond AP-1 BKG 04, Project Number: GW65818

Section C Invoice Information: Attention: Southern Co., Company Name: [blank], Address: [blank], Reference: [blank], Pace Project Manager: Kevin Herring, Pace Profile #: 10839-4

Page: 2 of 3

Section D Valid Matrix Codes MATRIX CODE (see valid codes to left)

DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
SEWAGE	SW
SOLUBLE	SL
SOIL	SO
WIP	WP
AIR	AI
OTHER	OT
TISSUE	TS

Section D Required Client Information: MATRIX CODE, SAMPLE TYPE (G=GRAB C=COMP), DATE, TIME, DATE, TIME, SAMPLE TEMP AT COLLECTION, # OF CONTAINERS, Unpreserved, H₂SO₄, HNO₃, HCl, NaOH, Na₂S₂O₃, Methanol, Other, Analysis Test (Chloride, Fluoride, Sulfate, TDS, Full App III&IV Metals 6010/6020*, RAD 226/228), Residual Chlorine (Y/N), pH, Pace Project No./ Lab ID.

ITEM #	Matrix Code	Sample Type	Collected		Sample Temp at Collection		# of Containers		Preservatives		Requested Analysis Filtered (Y/N)				Residual Chlorine (Y/N)	pH	Pace Project No./ Lab ID.	
			DATE	TIME	DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other				Chloride, Fluoride, Sulfate
1	HGWA-43D	WT G	1/19	1742	-	-	5	2	3									
2	HGWA-44D	WT G	1/19	1742	-	-	5	2	3									
3	EB-01	WT G					5	2	3									
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

ADDITIONAL COMMENTS: [blank]

RELINQUISHED BY / AFFILIATION: [Signature], DATE: 1/20/21, TIME: 1600

ACCEPTED BY / AFFILIATION: [Signature], DATE: 1/20/21, TIME: 1600

SAMPLER NAME AND SIGNATURE: [Signature], DATE Signed: 1/19/21

Temp in °C: [blank], Received on Ice (Y/N): [blank], Custody Sealed Cooler (N/A): [blank], Samples Intact (N/A): [blank]

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

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



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

Section A	Section B	Section C	Page: 3 of 3
Required Client Information	Required Project Information	Invoice Information:	
Company: GA Power	Report to: SCS Contacts	Attention: Southern Co.	
Address: Atlanta, GA	Copy to: Geosynlec Contacts	Company Name:	
		Address:	
REGULATORY AGENCY		Requestor Information:	
NPDES <input type="checkbox"/>	GROUND WATER <input type="checkbox"/>	Page Quote Reference: Kevin Herring	
UST <input type="checkbox"/>	RCRA <input type="checkbox"/>	Page Project Manager: Kevin Herring	
OTHER CERL <input type="checkbox"/>		Page Profile #: 10839-4	

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9, / -) Sample IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX CODE Drinking Water DW Waste Water WW Wastewater WWT F S G C S O T P P M L S M S C S O T	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
			DATE	TIME			DATE	TIME	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃							
1	HGWA-43D		WT	G			5	2												
2	HGWA-44D		WT	G			5	2												
3	EB-01		WT	G	1/20	1400	-													
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
ADDITIONAL COMMENTS																				

RELIQUISHED BY / AFFILIATION *CR 1320* **DATE** *1/20/21* **TIME** *1600*

ACCEPTED BY / AFFILIATION *John G. King* **DATE** *1/20/21* **TIME** *1130*

SAMPLER NAME AND SIGNATURE *John G. King*

PRINT Name of SAMPLER: *John G. King*

SIGNATURE of SAMPLER: *John G. King*

DATE Signed (mm/dd/yyyy): *1/20/21*

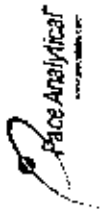
Important Note: By signing this form you are accepting Pace's, NET 30 day laymost terms, and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: JJY
Date: 2/8/2021
Worksheet: 58638
Matrix: QW



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

Laboratory Control Sample Assessment	
LCSD, LY or NY?	Y
LC556838	LCSD58638
29/2021	29/2021
Count Date:	19-033
Spike I.D.	24-040
Decay Corrected Spike Concentration (pCi/mL)	0.10
Volume Used (mL)	0.505
Aliquot Volume (L, g, F)	4.765
Target Conc. (pCi/L, g, F)	0.057
Uncertainty (Calculated) Result (pCi/L, g, F)	4.773
LCSD/LCSD Counting Uncertainty (pCi/L, g, F)	0.809
Numerical Performance Indicator	0.02
Percent Recovery	100.16%
Status vs Numerical Indicator	N/A
Status vs Recovery	Pass
Upper % Recovery Limit	125%
Lower % Recovery Limit	75%

Duplicate Sample Assessment	
Sample I.D.:	LC556838
Duplicate Sample I.D.	LCSD58638
Sample Result (pCi/L, g, F)	4.773
Sample Duplicate Result (pCi/L, g, F)	0.609
Sample Duplicate Counting Uncertainty (pCi/L, g, F)	5.375
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	0.663
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator	-0.939
(Based on the LCSD/LCSD Percent Recoveries) Duplicate RPD	12.31%
Duplicate Status vs Numerical Indicator	N/A
Duplicate Status vs RPD	Pass
% RPD Limit	25%

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

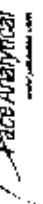
Comments:

WJY 2/19/21

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

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

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Method Blank Assessment	
MB Sample ID	2092254
MB Concentration	0.150
XRF Counting Uncertainty	0.192
MB MDC	0.397
MB Numerical Performance Indicator	1.53
MB Status vs Numerical Indicator	N/A
MB Status vs MDC	Pass

Laboratory Control Sample Assessment	
LCSD, Y or N?	N
LCSD58638	LCSD58638
Count Date	2/5/2021
Spike I.D.	15-033
Decay Corrected Spike Concentration (pCi/mL)	24.040
Volume Used (mL)	0.10
Aliquot Volume (L, g, F)	0.505
Target Conc. (pCi/L, g, F)	4.765
Uncertainty (Calculation)	0.057
result (pCi/L, g, F)	4.773
LCSD/CSO Counting Uncertainty (pCi/L, g, F)	0.808
Numerical Performance Indicator	0.92
Percent Recovery	100.16%
Status vs Numerical Indicator	N/A
Status vs Recovery	Pass
Upper % Recovery Limits	125%
Lower % Recovery Limits	75%

Duplicate Sample Assessment	
Sample I.D.	92517856001
Duplicate Sample I.D.	92517856001DUP
Sample Result (pCi/L, g, F)	0.203
Sample Duplicate Result (pCi/L, g, F)	0.222
Sample Duplicate Counting Uncertainty (pCi/L, g, F)	0.681
Are sample and/or duplicate results below RL?	0.370
Duplicate Numerical Performance Indicator	See Below ##
Duplicate RPD	-4.171
Duplicate Status vs Numerical Indicator	108.17%
Duplicate Status vs RPD	N/A
% RPD Limit	Fail 25%

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

Comments:

NI C3 acceptable
 JW 2/9/21

***Batch must be reprocessed due to unacceptable precision.

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

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

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

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



Method Blank Assessment	
MB Sample ID	2089957
MB Concentration:	0.421
MB 2 Sigma CSU	0.354
MB MDC:	0.709
MB Numerical Performance Indicator:	2.34
MB Status vs Numerical Indicator:	Warning
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment	
LCS# (Y or N)?	Y
LCS#58538	LCS#58538
Count Date:	2/4/2021
Spike I.D.	20-030
Decay Corrected Spike Concentration (pCi/mL)	36.635
Volume Used (mL)	0.10
Aliquot Volume (L, g, F)	0.803
Target Conc. (pCi/L, g, F)	4.543
Uncertainty (Calculated):	0.224
Result (pCi/L, g, F):	2.734
LCS#LCS# 2 Sigma CSU (pCi/L, g, F):	0.942
Numerical Performance Indicator:	-3.70
Percent Recovery:	59.92%
Status vs Numerical Indicator:	Fail**
Status vs Recovery:	Fail Low**
Upper % Recovery Limit:	155%
Lower % Recovery Limit:	60%

Duplicate Sample Assessment	
Sample I.D.:	LCS#58538
Duplicate Sample I.D.:	LCS#58538
Sample Result (pCi/L, g, F):	2.734
Sample Duplicate Result (pCi/L, g, F):	0.842
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	3.105
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.887
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.563
(Based on the LCS#LCS# Percent Recoveries) Duplicate RPD:	13.75%
Duplicate Status vs Numerical Indicator:	Pass
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.

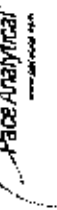
Comments:

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

Sample Matrix Spike Control Assessment	MSMSD 1	MSMSD 2
Sample Collection Date: Sample I.D.: Sample MS I.D.: Sample MSD I.D.: Spike I.D.:		
MSMSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): MS Adjust (L, g, F): MS 1 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:		
Main Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Sample Matrix Spike Duplicate Result: Main Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator:		
MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MSMSD Upper % Recovery Limit: MSMSD Lower % Recovery Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.:	Sample MS I.D.:	Sample MSD I.D.:
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Duplicate Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:
		% RPD Limit:

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

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

Method Blank Assessment

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

Laboratory Control Sample Assessment		LCSD (Y or N)?	Y
Count Date:	2/8/2021	LCSD58538	2/8/2021
Spike I.D.:	20-030		20-030
Decay Corrected Spike Concentration (pCi/mL):	36.590		36.590
Volume Used (mL):	0.10		0.10
Aliquot Volume (L, g, F):	0.803		0.803
Target Conc. (pCi/L, g, F):	4.557		4.536
Uncertainty (Calculated):	0.223		0.222
Retur (pCi/L, g, F):	4.275		4.409
Numerical Performance Indicator:	1.024		1.024
Percent Recovery:	-0.53		-0.24
Status vs Numerical Indicator:	93.80%		97.10%
Upper % Recovery Limits:	N/A		N/A
Lower % Recovery Limits:	Pass		Pass
	135%		135%
	60%		60%

Duplicate Sample Assessment		LCSD (Y or N)?	Y
Sample I.D.:	LCSD58538		
Duplicate Sample I.D.:	LCSD58538		
Sample Result (pCi/L, g, F):	4.275		
Duplicate Result (pCi/L, g, F):	1.024		
Sample Duplicate Result (pCi/L, g, F):	4.409		
Duplicate Duplicate Result (pCi/L, g, F):	1.024		
Are sample and/or duplicate results below RL?	NO		
Duplicate Numerical Performance Indicator:	-0.182		
Duplicate Percent Recovery:	3.53%		
Duplicate Status vs Numerical Indicator:	Pass		
Duplicate Status vs RPD:	Pass		
% RPD Limit:	35%		

Sample Matrix Spike Control Assessment

Sample Collection Date:
 Sample I.D.:
 Sample MS I.D.:
 Sample MSD I.D.:
 Spike I.D.:

MS/MSD Decay Corrected Spike Concentration (pCi/mL):
 Spike Volume Used in MS (mL):
 Spike Volume Used in MSD (mL):
 MS Aliquot (L, g, F):
 MS Target Conc. (pCi/L, g, F):
 MSD Aliquot (L, g, F):
 MSD Target Conc. (pCi/L, g, F):
 MS Spike Uncertainty (calculated):
 MSD Spike Uncertainty (calculated):
 Sample Result:

Sample Matrix Spike Result:
 Sample Matrix Spike Duplicate Result:
 MS Numerical Performance Indicator:
 MSD Numerical Performance Indicator:
 MS Percent Recovery:
 MSD Percent Recovery:
 MS Status vs Numerical Indicator:
 MSD Status vs Numerical Indicator:
 MS Status vs Recovery:
 MSD Status vs Recovery:
 MS/MSD Upper % Recovery Limits:
 MS/MSD Lower % Recovery Limits:

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:
 Sample MS I.D.:
 Sample MSD I.D.:
 Sample Matrix Spike Result:
 Sample Matrix Spike Duplicate Result:

Duplicate Numerical Performance Indicator:
 Duplicate Percent Recovery:
 Duplicate Status vs Numerical Indicator:
 Duplicate Status vs RPD:
 Duplicate % RPD Limit:

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

Comments:

Handwritten signature: RA 2/9/21

February 2021

March 09, 2021

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

RE: Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between February 09, 2021 and February 23, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Pace Analytical Services Charlotte

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

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

Pace Analytical Services Asheville

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

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

Pace Analytical Services Peachtree Corners

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92521151001	HGWA-1	Water	02/08/21 16:13	02/09/21 12:33
92521151002	HGWA-2	Water	02/09/21 10:38	02/10/21 09:56
92521151003	HGWA-3	Water	02/09/21 11:56	02/10/21 09:56
92521151004	HGWA-43D	Water	02/09/21 17:58	02/10/21 09:56
92521151005	HGWA-44D	Water	02/09/21 13:09	02/10/21 09:56
92521151006	HGWC-7	Water	02/10/21 12:11	02/11/21 09:19
92521151007	MW-28D	Water	02/10/21 17:31	02/11/21 09:19
92521151008	MW-28D FILTERED	Water	02/10/21 17:31	02/11/21 09:19
92521151009	MW-20	Water	02/11/21 11:59	02/12/21 09:36
92521151010	HGWC-11	Water	02/12/21 12:45	02/15/21 09:45
92521151011	HGWC-12	Water	02/12/21 14:51	02/15/21 09:45
92521151012	MW-19	Water	02/12/21 13:40	02/15/21 09:45
92521151013	DUP-1	Water	02/12/21 00:00	02/15/21 09:45
92521151014	MW-25D	Water	02/12/21 10:31	02/15/21 09:45
92521151015	FB-1	Water	02/12/21 15:30	02/15/21 09:45
92521151016	EB-1	Water	02/12/21 15:35	02/15/21 09:45
92521151017	HGWC-10	Water	02/15/21 13:31	02/17/21 11:54
92521151018	MW-7	Water	02/15/21 17:17	02/17/21 11:54
92521151019	MW-29	Water	02/15/21 14:45	02/17/21 11:54
92521151020	HGWC-8	Water	02/16/21 15:05	02/17/21 11:54
92521151021	HGWC-9	Water	02/16/21 18:39	02/17/21 11:54
92521151022	MW-5	Water	02/16/21 16:27	02/17/21 11:54
92521151023	MW-6	Water	02/16/21 15:12	02/17/21 11:54
92521151024	MW-24D	Water	02/16/21 12:44	02/17/21 11:54
92521151025	MW-26D	Water	02/16/21 18:03	02/17/21 11:54
92521151026	MW-27D	Water	02/16/21 11:11	02/17/21 11:54
92521151027	MW-27D FILTERED	Water	02/16/21 11:11	02/17/21 11:54
92521151028	HGWC-13	Water	02/22/21 13:54	02/23/21 09:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92521151001	HGWA-1	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521151002	HGWA-2	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151003	HGWA-3	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151004	HGWA-43D	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151005	HGWA-44D	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151006	HGWC-7	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521151007	MW-28D	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521151008	MW-28D FILTERED	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521151009	MW-20	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521151010	HGWC-11	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521151011	HGWC-12	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151012	MW-19	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151013	DUP-1	EPA 6020B	CW1	12

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151014	MW-25D	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151015	FB-1	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151016	EB-1	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1
92521151017	HGWC-10	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151018	MW-7	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151019	MW-29	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151020	HGWC-8	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151021	HGWC-9	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151022	MW-5	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151023	MW-6	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151024	MW-24D	EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92521151025	MW-26D	EPA 6020B	CW1	12
		EPA 7470A	VB	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92521151026	MW-27D	EPA 300.0 Rev 2.1 1993	CDC	1
		EPA 6020B	CW1	12
		EPA 7470A	VB	1
92521151027	MW-27D FILTERED	EPA 300.0 Rev 2.1 1993	CDC	1
		EPA 6020B	CW1	12
		EPA 7470A	VB	1
92521151028	HGWC-13	EPA 300.0 Rev 2.1 1993	CDC	1
		EPA 6020B	CW1	12
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JLH	1

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92521151001	HGWA-1					
	Performed by	CUSTOME			02/24/21 07:44	
		R				
	pH	7.11	Std. Units		02/24/21 07:44	
EPA 6020B	Barium	0.032	mg/L	0.010	02/23/21 18:06	
EPA 6020B	Lead	0.000058J	mg/L	0.0050	02/23/21 18:06	
EPA 6020B	Lithium	0.00086J	mg/L	0.030	02/23/21 18:06	
EPA 300.0 Rev 2.1 1993	Fluoride	0.078J	mg/L	0.10	02/10/21 17:59	
92521151002	HGWA-2					
	Performed by	CUSTOME			02/24/21 07:44	
		R				
	pH	5.42	Std. Units		02/24/21 07:44	
EPA 6020B	Antimony	0.00062J	mg/L	0.0030	02/23/21 18:41	B
EPA 6020B	Barium	0.12	mg/L	0.010	02/23/21 18:41	
EPA 6020B	Beryllium	0.00014J	mg/L	0.0030	02/23/21 18:41	
EPA 6020B	Cadmium	0.00016J	mg/L	0.0025	02/23/21 18:41	
EPA 6020B	Cobalt	0.020	mg/L	0.0050	02/23/21 18:41	
EPA 6020B	Lead	0.000094J	mg/L	0.0050	02/23/21 18:41	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	02/23/21 18:41	
92521151003	HGWA-3					
	Performed by	CUSTOME			02/24/21 07:44	
		R				
	pH	7.23	Std. Units		02/24/21 07:44	
EPA 6020B	Antimony	0.00031J	mg/L	0.0030	02/23/21 18:46	B
EPA 6020B	Barium	0.13	mg/L	0.010	02/23/21 18:46	
EPA 6020B	Lithium	0.0032J	mg/L	0.030	02/23/21 18:46	
EPA 300.0 Rev 2.1 1993	Fluoride	0.074J	mg/L	0.10	02/11/21 18:16	
92521151004	HGWA-43D					
	Performed by	CUSTOME			02/24/21 07:44	
		R				
	pH	7.44	Std. Units		02/24/21 07:44	
EPA 6020B	Antimony	0.00037J	mg/L	0.0030	02/23/21 19:15	B
EPA 6020B	Arsenic	0.0017J	mg/L	0.0050	02/23/21 19:15	B
EPA 6020B	Barium	0.34	mg/L	0.010	02/23/21 19:15	
EPA 6020B	Chromium	0.00095J	mg/L	0.010	02/23/21 19:15	
EPA 6020B	Lead	0.00029J	mg/L	0.0050	02/23/21 19:15	
EPA 6020B	Lithium	0.0026J	mg/L	0.030	02/23/21 19:15	
EPA 6020B	Molybdenum	0.0045J	mg/L	0.010	02/23/21 19:15	
EPA 300.0 Rev 2.1 1993	Fluoride	0.19	mg/L	0.10	02/11/21 19:36	
92521151005	HGWA-44D					
	Performed by	CUSTOME			02/24/21 07:44	
		R				
	pH	7.84	Std. Units		02/24/21 07:44	
EPA 6020B	Antimony	0.00042J	mg/L	0.0030	02/23/21 19:21	B
EPA 6020B	Arsenic	0.00083J	mg/L	0.0050	02/23/21 19:21	B
EPA 6020B	Barium	0.46	mg/L	0.010	02/23/21 19:21	
EPA 6020B	Chromium	0.00066J	mg/L	0.010	02/23/21 19:21	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92521151005	HGWA-44D					
EPA 6020B	Lead	0.00010J	mg/L	0.0050	02/23/21 19:21	
EPA 6020B	Lithium	0.026J	mg/L	0.030	02/23/21 19:21	
EPA 6020B	Molybdenum	0.0038J	mg/L	0.010	02/23/21 19:21	
EPA 300.0 Rev 2.1 1993	Fluoride	0.44	mg/L	0.10	02/11/21 19:52	
92521151006	HGWC-7					
	Performed by	CUSTOMER			02/24/21 07:44	
	pH	7.29	Std. Units		02/24/21 07:44	
EPA 6020B	Barium	0.069	mg/L	0.010	02/24/21 14:42	
EPA 6020B	Beryllium	0.000081J	mg/L	0.0030	02/24/21 14:42	
EPA 6020B	Chromium	0.0014J	mg/L	0.010	02/24/21 14:42	
EPA 6020B	Cobalt	0.00081J	mg/L	0.0050	02/24/21 14:42	
EPA 6020B	Lead	0.00056J	mg/L	0.0050	02/24/21 14:42	
EPA 6020B	Lithium	0.0032J	mg/L	0.030	02/24/21 14:42	
EPA 6020B	Molybdenum	0.051	mg/L	0.010	02/24/21 14:42	
EPA 300.0 Rev 2.1 1993	Fluoride	0.085J	mg/L	0.10	02/16/21 01:43	
92521151007	MW-28D					
	Performed by	CUSTOMER			02/24/21 07:44	
	pH	7.54	Std. Units		02/24/21 07:44	
EPA 6020B	Antimony	0.0019J	mg/L	0.0030	02/24/21 15:05	
EPA 6020B	Arsenic	0.0011J	mg/L	0.0050	02/24/21 15:05	
EPA 6020B	Barium	0.26	mg/L	0.010	02/24/21 15:05	
EPA 6020B	Beryllium	0.000054J	mg/L	0.0030	02/24/21 15:05	
EPA 6020B	Chromium	0.0014J	mg/L	0.010	02/24/21 15:05	
EPA 6020B	Lead	0.00044J	mg/L	0.0050	02/24/21 15:05	
EPA 6020B	Lithium	0.0092J	mg/L	0.030	02/24/21 15:05	
EPA 6020B	Molybdenum	0.020	mg/L	0.010	02/24/21 15:05	
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	02/16/21 01:58	
92521151008	MW-28D FILTERED					
	Performed by	CUSTOMER			02/24/21 07:44	
	pH	7.54	Std. Units		02/24/21 07:44	
EPA 6020B	Antimony	0.00054J	mg/L	0.0030	02/24/21 15:11	
EPA 6020B	Arsenic	0.0014J	mg/L	0.0050	02/24/21 15:11	
EPA 6020B	Barium	0.25	mg/L	0.010	02/24/21 15:11	
EPA 6020B	Cadmium	0.00021J	mg/L	0.0025	02/24/21 15:11	
EPA 6020B	Lithium	0.0083J	mg/L	0.030	02/24/21 15:11	
EPA 6020B	Molybdenum	0.018	mg/L	0.010	02/24/21 15:11	
EPA 300.0 Rev 2.1 1993	Fluoride	0.15	mg/L	0.10	02/16/21 02:12	
92521151009	MW-20					
	Performed by	CUSTOMER			02/24/21 07:44	
	pH	6.93	Std. Units		02/24/21 07:44	
EPA 6020B	Arsenic	0.00094J	mg/L	0.0050	02/24/21 15:39	
EPA 6020B	Barium	0.093	mg/L	0.010	02/24/21 15:39	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521151009	MW-20					
EPA 6020B	Lead	0.000039J	mg/L	0.0050	02/24/21 15:39	
EPA 6020B	Lithium	0.0010J	mg/L	0.030	02/24/21 15:39	
92521151010	HGWC-11					
	Performed by	CUSTOMER			02/24/21 07:44	
	pH	7.27	Std. Units		02/24/21 07:44	
EPA 6020B	Arsenic	0.0020J	mg/L	0.0050	02/24/21 16:08	
EPA 6020B	Barium	0.039	mg/L	0.010	02/24/21 16:08	
EPA 6020B	Molybdenum	0.023	mg/L	0.010	02/24/21 16:08	
EPA 6020B	Selenium	0.0079J	mg/L	0.010	02/24/21 16:08	
EPA 300.0 Rev 2.1 1993	Fluoride	0.17	mg/L	0.10	02/16/21 22:15	
92521151011	HGWC-12					
	Performed by	CUSTOMER			02/24/21 07:44	
	pH	6.23	Std. Units		02/24/21 07:44	
EPA 6020B	Arsenic	0.0045J	mg/L	0.0050	02/24/21 16:14	
EPA 6020B	Barium	0.090	mg/L	0.010	02/24/21 16:14	
EPA 6020B	Cobalt	0.0012J	mg/L	0.0050	02/24/21 16:14	
EPA 6020B	Lead	0.000067J	mg/L	0.0050	02/24/21 16:14	
EPA 6020B	Lithium	0.0094J	mg/L	0.030	02/24/21 16:14	
EPA 6020B	Molybdenum	0.048	mg/L	0.010	02/24/21 16:14	
EPA 300.0 Rev 2.1 1993	Fluoride	0.19	mg/L	0.10	02/20/21 15:05	
92521151012	MW-19					
	Performed by	CUSTOMER			02/24/21 07:44	
	pH	6.36	Std. Units		02/24/21 07:44	
EPA 6020B	Barium	0.051	mg/L	0.010	02/24/21 16:19	
EPA 6020B	Cadmium	0.00020J	mg/L	0.0025	02/24/21 16:19	
EPA 6020B	Chromium	0.00059J	mg/L	0.010	02/24/21 16:19	
EPA 6020B	Cobalt	0.037	mg/L	0.0050	02/24/21 16:19	
EPA 6020B	Lead	0.000071J	mg/L	0.0050	02/24/21 16:19	
EPA 6020B	Lithium	0.012J	mg/L	0.030	02/24/21 16:19	
EPA 6020B	Molybdenum	0.046	mg/L	0.010	02/24/21 16:19	
EPA 6020B	Selenium	0.0021J	mg/L	0.010	02/24/21 16:19	
EPA 6020B	Thallium	0.00019J	mg/L	0.0010	02/24/21 16:19	
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	02/20/21 15:21	
92521151013	DUP-1					
EPA 6020B	Barium	0.049	mg/L	0.010	02/24/21 16:25	
EPA 6020B	Cadmium	0.00015J	mg/L	0.0025	02/24/21 16:25	
EPA 6020B	Cobalt	0.036	mg/L	0.0050	02/24/21 16:25	
EPA 6020B	Lead	0.000071J	mg/L	0.0050	02/24/21 16:25	
EPA 6020B	Lithium	0.011J	mg/L	0.030	02/24/21 16:25	
EPA 6020B	Molybdenum	0.046	mg/L	0.010	02/24/21 16:25	
EPA 6020B	Selenium	0.0028J	mg/L	0.010	02/24/21 16:25	
EPA 6020B	Thallium	0.00019J	mg/L	0.0010	02/24/21 16:25	
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	02/20/21 15:37	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92521151014	MW-25D					
	Performed by	CUSTOME			02/24/21 07:44	
		R				
	pH	7.77	Std. Units		02/24/21 07:44	
EPA 6020B	Barium	0.46	mg/L	0.010	02/24/21 16:31	
EPA 6020B	Lithium	0.045	mg/L	0.030	02/24/21 16:31	
EPA 300.0 Rev 2.1 1993	Fluoride	1.6	mg/L	0.10	02/20/21 15:53	
92521151017	HGWC-10					
	Performed by	CUSTOME			02/24/21 07:44	
		R				
	pH	6.83	Std. Units		02/24/21 07:44	
EPA 6020B	Antimony	0.00065J	mg/L	0.0030	03/04/21 17:27	
EPA 6020B	Barium	0.060	mg/L	0.0050	03/04/21 17:27	
EPA 6020B	Selenium	0.0028J	mg/L	0.0050	03/04/21 17:27	
EPA 300.0 Rev 2.1 1993	Fluoride	0.080J	mg/L	0.10	02/20/21 18:14	
92521151018	MW-7					
	Performed by	CUSTOME			02/24/21 07:44	
		R				
	pH	6.77	Std. Units		02/24/21 07:44	
EPA 6020B	Antimony	0.0021J	mg/L	0.0030	03/04/21 17:50	
EPA 6020B	Barium	0.048	mg/L	0.0050	03/04/21 17:50	
EPA 6020B	Chromium	0.0015J	mg/L	0.0050	03/04/21 17:50	
EPA 6020B	Molybdenum	0.0015J	mg/L	0.010	03/04/21 17:50	
92521151019	MW-29					
	Performed by	CUSTOME			02/24/21 07:44	
		R				
	pH	7.09	Std. Units		02/24/21 07:44	
EPA 6020B	Antimony	0.00094J	mg/L	0.0030	03/04/21 17:56	
EPA 6020B	Barium	0.081	mg/L	0.0050	03/04/21 17:56	
EPA 6020B	Cobalt	0.00097J	mg/L	0.0050	03/04/21 17:56	
EPA 6020B	Lead	0.000052J	mg/L	0.0010	03/04/21 17:56	
EPA 6020B	Lithium	0.0024J	mg/L	0.030	03/04/21 17:56	
EPA 6020B	Molybdenum	0.0029J	mg/L	0.010	03/04/21 17:56	
92521151020	HGWC-8					
	Performed by	CUSTOME			02/24/21 07:44	
		R				
	pH	7.16	Std. Units		02/24/21 07:44	
EPA 6020B	Antimony	0.00064J	mg/L	0.0030	03/04/21 18:01	
EPA 6020B	Barium	0.069	mg/L	0.0050	03/04/21 18:01	
EPA 6020B	Beryllium	0.000071J	mg/L	0.00050	03/04/21 18:01	
EPA 6020B	Cadmium	0.00037J	mg/L	0.00050	03/04/21 18:01	
EPA 6020B	Cobalt	0.0020J	mg/L	0.0050	03/04/21 18:01	
EPA 6020B	Lead	0.000086J	mg/L	0.0010	03/04/21 18:01	
EPA 6020B	Lithium	0.0027J	mg/L	0.030	03/04/21 18:01	
EPA 6020B	Molybdenum	0.46	mg/L	0.010	03/04/21 18:01	
EPA 300.0 Rev 2.1 1993	Fluoride	0.47	mg/L	0.10	02/20/21 18:59	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92521151021	HGWC-9					
	Performed by	CUSTOME			02/24/21 07:44	
		R				
	pH	7.26	Std. Units		02/24/21 07:44	
EPA 6020B	Antimony	0.00043J	mg/L	0.0030	03/04/21 18:07	
EPA 6020B	Barium	0.11	mg/L	0.0050	03/04/21 18:07	
EPA 6020B	Chromium	0.00067J	mg/L	0.0050	03/04/21 18:07	
EPA 6020B	Cobalt	0.00061J	mg/L	0.0050	03/04/21 18:07	
EPA 6020B	Lead	0.00020J	mg/L	0.0010	03/04/21 18:07	
EPA 6020B	Lithium	0.0045J	mg/L	0.030	03/04/21 18:07	
EPA 6020B	Molybdenum	0.035	mg/L	0.010	03/04/21 18:07	
EPA 300.0 Rev 2.1 1993	Fluoride	0.096J	mg/L	0.10	02/20/21 19:44	
92521151022	MW-5					
	Performed by	CUSTOME			02/24/21 07:44	
		R				
	pH	5.95	Std. Units		02/24/21 07:44	
EPA 6020B	Barium	0.050	mg/L	0.0050	03/04/21 18:24	
EPA 6020B	Chromium	0.0032J	mg/L	0.0050	03/04/21 18:24	
EPA 6020B	Selenium	0.0035J	mg/L	0.0050	03/04/21 18:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.051J	mg/L	0.10	02/20/21 19:59	
92521151023	MW-6					
	Performed by	CUSTOME			02/24/21 07:44	
		R				
	pH	7.00	Std. Units		02/24/21 07:44	
EPA 6020B	Barium	0.085	mg/L	0.0050	03/04/21 18:30	
EPA 6020B	Cobalt	0.00045J	mg/L	0.0050	03/04/21 18:30	
EPA 6020B	Lead	0.000084J	mg/L	0.0010	03/04/21 18:30	
EPA 6020B	Molybdenum	0.0025J	mg/L	0.010	03/04/21 18:30	
EPA 300.0 Rev 2.1 1993	Fluoride	0.059J	mg/L	0.10	02/20/21 20:14	
92521151024	MW-24D					
	Performed by	CUSTOME			02/24/21 07:44	
		R				
	pH	7.69	Std. Units		02/24/21 07:44	
EPA 6020B	Barium	0.062	mg/L	0.0050	03/04/21 18:36	
EPA 6020B	Lead	0.00012J	mg/L	0.0010	03/04/21 18:36	
EPA 6020B	Lithium	0.0028J	mg/L	0.030	03/04/21 18:36	
EPA 6020B	Molybdenum	0.00096J	mg/L	0.010	03/04/21 18:36	
92521151025	MW-26D					
	Performed by	CUSTOME			02/24/21 07:44	
		R				
	pH	7.27	Std. Units		02/24/21 07:44	
EPA 6020B	Arsenic	0.00080J	mg/L	0.0050	03/04/21 18:42	
EPA 6020B	Barium	0.093	mg/L	0.0050	03/04/21 18:42	
EPA 6020B	Chromium	0.0010J	mg/L	0.0050	03/04/21 18:42	
EPA 6020B	Cobalt	0.00045J	mg/L	0.0050	03/04/21 18:42	
EPA 6020B	Lead	0.000080J	mg/L	0.0010	03/04/21 18:42	
EPA 6020B	Lithium	0.0038J	mg/L	0.030	03/04/21 18:42	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521151025	MW-26D					
EPA 6020B	Molybdenum	0.022	mg/L	0.010	03/04/21 18:42	
EPA 300.0 Rev 2.1 1993	Fluoride	0.071J	mg/L	0.10	02/20/21 20:43	
92521151026	MW-27D					
	Performed by	CUSTOMER			02/24/21 07:44	
	pH	7.96	Std. Units		02/24/21 07:44	
EPA 6020B	Antimony	0.00038J	mg/L	0.0030	03/04/21 18:47	
EPA 6020B	Arsenic	0.0010J	mg/L	0.0050	03/04/21 18:47	
EPA 6020B	Barium	1.0	mg/L	0.025	03/05/21 14:35	
EPA 6020B	Chromium	0.00082J	mg/L	0.0050	03/04/21 18:47	
EPA 6020B	Cobalt	0.00040J	mg/L	0.0050	03/04/21 18:47	
EPA 6020B	Lead	0.00043J	mg/L	0.0010	03/04/21 18:47	
EPA 6020B	Lithium	0.0078J	mg/L	0.030	03/04/21 18:47	
EPA 6020B	Molybdenum	0.0019J	mg/L	0.010	03/04/21 18:47	
EPA 300.0 Rev 2.1 1993	Fluoride	0.25	mg/L	0.10	02/20/21 21:28	
92521151027	MW-27D FILTERED					
	Performed by	CUSTOMER			02/24/21 07:44	
	pH	7.96	Std. Units		02/24/21 07:44	
EPA 6020B	Antimony	0.00038J	mg/L	0.0030	03/04/21 18:53	
EPA 6020B	Barium	1.1	mg/L	0.025	03/05/21 14:41	
EPA 6020B	Lithium	0.0084J	mg/L	0.030	03/04/21 18:53	
EPA 6020B	Molybdenum	0.0015J	mg/L	0.010	03/04/21 18:53	
EPA 300.0 Rev 2.1 1993	Fluoride	0.25	mg/L	0.10	02/20/21 21:43	
92521151028	HGWC-13					
	Performed by	CUSTOMER			02/24/21 07:44	
	pH	7.27	Std. Units		02/24/21 07:44	
EPA 6020B	Antimony	0.00047J	mg/L	0.0030	03/04/21 18:59	
EPA 6020B	Arsenic	0.45	mg/L	0.0050	03/04/21 18:59	
EPA 6020B	Barium	0.061	mg/L	0.0050	03/04/21 18:59	
EPA 6020B	Beryllium	0.000097J	mg/L	0.00050	03/04/21 18:59	
EPA 6020B	Cobalt	0.0030J	mg/L	0.0050	03/04/21 18:59	
EPA 6020B	Lead	0.00018J	mg/L	0.0010	03/04/21 18:59	
EPA 6020B	Lithium	0.032	mg/L	0.030	03/04/21 18:59	
EPA 6020B	Molybdenum	0.036	mg/L	0.010	03/04/21 18:59	
EPA 6020B	Thallium	0.00030J	mg/L	0.0010	03/04/21 18:59	
EPA 300.0 Rev 2.1 1993	Fluoride	0.55	mg/L	0.10	03/08/21 11:46	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: HGWA-1		Lab ID: 92521151001		Collected: 02/08/21 16:13		Received: 02/09/21 12:33		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.11	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 18:06	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 18:06	7440-38-2	
Barium	0.032	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 18:06	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 18:06	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 18:06	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 18:06	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 18:06	7440-48-4	
Lead	0.00058J	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 18:06	7439-92-1	
Lithium	0.00086J	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 18:06	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 18:06	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 18:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 18:06	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 12:38	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.078J	mg/L	0.10	0.050	1		02/10/21 17:59	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Sample: HGWA-2 **Lab ID: 92521151002** Collected: 02/09/21 10:38 Received: 02/10/21 09:56 Matrix: Water

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

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	CUSTOMER				1		02/24/21 07:44		
pH	5.42	Std. Units			1		02/24/21 07:44		

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	0.00062J	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 18:41	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 18:41	7440-38-2	
Barium	0.12	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 18:41	7440-39-3	
Beryllium	0.00014J	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 18:41	7440-41-7	
Cadmium	0.00016J	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 18:41	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 18:41	7440-47-3	
Cobalt	0.020	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 18:41	7440-48-4	
Lead	0.000094J	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 18:41	7439-92-1	
Lithium	0.0012J	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 18:41	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 18:41	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 18:41	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 18:41	7440-28-0	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 12:57	7439-97-6	
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300.0 IC Anions 28 Days

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

Fluoride	ND	mg/L	0.10	0.050	1		02/11/21 17:28	16984-48-8	
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Sample: HGWA-3 **Lab ID: 92521151003** Collected: 02/09/21 11:56 Received: 02/10/21 09:56 Matrix: Water

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

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.23	Std. Units			1		02/24/21 07:44		

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	0.00031J	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 18:46	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 18:46	7440-38-2	
Barium	0.13	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 18:46	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 18:46	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 18:46	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 18:46	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 18:46	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 18:46	7439-92-1	
Lithium	0.0032J	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 18:46	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 18:46	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 18:46	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 18:46	7440-28-0	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 12:59	7439-97-6	
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300.0 IC Anions 28 Days

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

Fluoride	0.074J	mg/L	0.10	0.050	1		02/11/21 18:16	16984-48-8	
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: HGWA-43D Lab ID: 92521151004 Collected: 02/09/21 17:58 Received: 02/10/21 09:56 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.44	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00037J	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:15	7440-36-0	B
Arsenic	0.0017J	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:15	7440-38-2	B
Barium	0.34	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:15	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:15	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:15	7440-43-9	
Chromium	0.00095J	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:15	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:15	7440-48-4	
Lead	0.00029J	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:15	7439-92-1	
Lithium	0.0026J	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:15	7439-93-2	
Molybdenum	0.0045J	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:15	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:15	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:15	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:06	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.19	mg/L	0.10	0.050	1		02/11/21 19:36	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: HGWA-44D		Lab ID: 92521151005		Collected: 02/09/21 13:09		Received: 02/10/21 09:56		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.84	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00042J	mg/L	0.0030	0.00028	1	02/23/21 11:55	02/23/21 19:21	7440-36-0	B
Arsenic	0.00083J	mg/L	0.0050	0.00078	1	02/23/21 11:55	02/23/21 19:21	7440-38-2	B
Barium	0.46	mg/L	0.010	0.00071	1	02/23/21 11:55	02/23/21 19:21	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 11:55	02/23/21 19:21	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 11:55	02/23/21 19:21	7440-43-9	
Chromium	0.00066J	mg/L	0.010	0.00055	1	02/23/21 11:55	02/23/21 19:21	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 11:55	02/23/21 19:21	7440-48-4	
Lead	0.00010J	mg/L	0.0050	0.000036	1	02/23/21 11:55	02/23/21 19:21	7439-92-1	
Lithium	0.026J	mg/L	0.030	0.00081	1	02/23/21 11:55	02/23/21 19:21	7439-93-2	
Molybdenum	0.0038J	mg/L	0.010	0.00069	1	02/23/21 11:55	02/23/21 19:21	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 11:55	02/23/21 19:21	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 11:55	02/23/21 19:21	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/17/21 15:30	02/18/21 13:09	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.44	mg/L	0.10	0.050	1		02/11/21 19:52	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Sample: HGWC-7		Lab ID: 92521151006		Collected: 02/10/21 12:11	Received: 02/11/21 09:19	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.29	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 14:42	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 14:42	7440-38-2	
Barium	0.069	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 14:42	7440-39-3	
Beryllium	0.00081J	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 14:42	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 14:42	7440-43-9	
Chromium	0.0014J	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 14:42	7440-47-3	
Cobalt	0.00081J	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 14:42	7440-48-4	
Lead	0.00056J	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 14:42	7439-92-1	
Lithium	0.0032J	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 14:42	7439-93-2	
Molybdenum	0.051	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 14:42	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 14:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 14:42	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 13:19	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.085J	mg/L	0.10	0.050	1		02/16/21 01:43	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: MW-28D Lab ID: 92521151007 Collected: 02/10/21 17:31 Received: 02/11/21 09:19 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.54	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0019J	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 15:05	7440-36-0	
Arsenic	0.0011J	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 15:05	7440-38-2	
Barium	0.26	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 15:05	7440-39-3	
Beryllium	0.00054J	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 15:05	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 15:05	7440-43-9	
Chromium	0.0014J	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 15:05	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 15:05	7440-48-4	
Lead	0.00044J	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 15:05	7439-92-1	
Lithium	0.0092J	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 15:05	7439-93-2	
Molybdenum	0.020	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 15:05	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 15:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 15:05	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 13:21	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.16	mg/L	0.10	0.050	1		02/16/21 01:58	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: MW-28D FILTERED Lab ID: 92521151008 Collected: 02/10/21 17:31 Received: 02/11/21 09:19 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.54	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00054J	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 15:11	7440-36-0	
Arsenic	0.0014J	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 15:11	7440-38-2	
Barium	0.25	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 15:11	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 15:11	7440-41-7	
Cadmium	0.00021J	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 15:11	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 15:11	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 15:11	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 15:11	7439-92-1	
Lithium	0.0083J	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 15:11	7439-93-2	
Molybdenum	0.018	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 15:11	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 15:11	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 15:11	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 13:24	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.15	mg/L	0.10	0.050	1		02/16/21 02:12	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Sample: MW-20		Lab ID: 92521151009		Collected: 02/11/21 11:59		Received: 02/12/21 09:36		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	6.93	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 15:39	7440-36-0	
Arsenic	0.00094J	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 15:39	7440-38-2	
Barium	0.093	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 15:39	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 15:39	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 15:39	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 15:39	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 15:39	7440-48-4	
Lead	0.000039J	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 15:39	7439-92-1	
Lithium	0.0010J	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 15:39	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 15:39	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 15:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 15:39	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 13:26	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		02/16/21 18:01	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: HGWC-11		Lab ID: 92521151010		Collected: 02/12/21 12:45		Received: 02/15/21 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.27	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 16:08	7440-36-0	
Arsenic	0.0020J	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 16:08	7440-38-2	
Barium	0.039	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 16:08	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 16:08	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 16:08	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 16:08	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 16:08	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 16:08	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 16:08	7439-93-2	
Molybdenum	0.023	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 16:08	7439-98-7	
Selenium	0.0079J	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 16:08	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 16:08	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 13:29	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.17	mg/L	0.10	0.050	1		02/16/21 22:15	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Sample: HGWC-12		Lab ID: 92521151011		Collected: 02/12/21 14:51		Received: 02/15/21 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	6.23	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 16:14	7440-36-0	
Arsenic	0.0045J	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 16:14	7440-38-2	
Barium	0.090	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 16:14	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 16:14	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 16:14	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 16:14	7440-47-3	
Cobalt	0.0012J	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 16:14	7440-48-4	
Lead	0.00067J	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 16:14	7439-92-1	
Lithium	0.0094J	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 16:14	7439-93-2	
Molybdenum	0.048	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 16:14	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 16:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 16:14	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 13:31	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.19	mg/L	0.10	0.050	1		02/20/21 15:05	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: MW-19		Lab ID: 92521151012		Collected: 02/12/21 13:40		Received: 02/15/21 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	6.36	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 16:19	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 16:19	7440-38-2	
Barium	0.051	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 16:19	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 16:19	7440-41-7	
Cadmium	0.00020J	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 16:19	7440-43-9	
Chromium	0.00059J	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 16:19	7440-47-3	
Cobalt	0.037	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 16:19	7440-48-4	
Lead	0.000071J	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 16:19	7439-92-1	
Lithium	0.012J	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 16:19	7439-93-2	
Molybdenum	0.046	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 16:19	7439-98-7	
Selenium	0.0021J	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 16:19	7782-49-2	
Thallium	0.00019J	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 16:19	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 13:33	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.16	mg/L	0.10	0.050	1		02/20/21 15:21	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: DUP-1		Lab ID: 92521151013		Collected: 02/12/21 00:00	Received: 02/15/21 09:45	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 16:25	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 16:25	7440-38-2		
Barium	0.049	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 16:25	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 16:25	7440-41-7		
Cadmium	0.00015J	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 16:25	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 16:25	7440-47-3		
Cobalt	0.036	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 16:25	7440-48-4		
Lead	0.000071J	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 16:25	7439-92-1		
Lithium	0.011J	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 16:25	7439-93-2		
Molybdenum	0.046	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 16:25	7439-98-7		
Selenium	0.0028J	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 16:25	7782-49-2		
Thallium	0.00019J	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 16:25	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 13:36	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	0.16	mg/L	0.10	0.050	1		02/20/21 15:37	16984-48-8		

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Sample: MW-25D		Lab ID: 92521151014		Collected: 02/12/21 10:31		Received: 02/15/21 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.77	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 16:31	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 16:31	7440-38-2	
Barium	0.46	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 16:31	7440-39-3	
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 16:31	7440-41-7	
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 16:31	7440-43-9	
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 16:31	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 16:31	7440-48-4	
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 16:31	7439-92-1	
Lithium	0.045	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 16:31	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 16:31	7439-98-7	
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 16:31	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 16:31	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 13:43	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	1.6	mg/L	0.10	0.050	1		02/20/21 15:53	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Sample: FB-1		Lab ID: 92521151015		Collected: 02/12/21 15:30	Received: 02/15/21 09:45	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 17:20	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 17:20	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 17:20	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 17:20	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 17:20	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 17:20	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 17:20	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 17:20	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 17:20	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 17:20	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 17:20	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 17:20	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 02:15	02/23/21 13:45	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	ND	mg/L	0.10	0.050	1		02/20/21 16:09	16984-48-8		

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: EB-1		Lab ID: 92521151016		Collected: 02/12/21 15:35	Received: 02/15/21 09:45	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	02/23/21 13:13	02/24/21 16:02	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	02/23/21 13:13	02/24/21 16:02	7440-38-2		
Barium	ND	mg/L	0.010	0.00071	1	02/23/21 13:13	02/24/21 16:02	7440-39-3		
Beryllium	ND	mg/L	0.0030	0.000046	1	02/23/21 13:13	02/24/21 16:02	7440-41-7		
Cadmium	ND	mg/L	0.0025	0.00012	1	02/23/21 13:13	02/24/21 16:02	7440-43-9		
Chromium	ND	mg/L	0.010	0.00055	1	02/23/21 13:13	02/24/21 16:02	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	02/23/21 13:13	02/24/21 16:02	7440-48-4		
Lead	ND	mg/L	0.0050	0.000036	1	02/23/21 13:13	02/24/21 16:02	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	02/23/21 13:13	02/24/21 16:02	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	02/23/21 13:13	02/24/21 16:02	7439-98-7		
Selenium	ND	mg/L	0.010	0.0016	1	02/23/21 13:13	02/24/21 16:02	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	02/23/21 13:13	02/24/21 16:02	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 09:50	02/22/21 13:46	7439-97-6		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Fluoride	ND	mg/L	0.10	0.050	1		02/16/21 21:15	16984-48-8		

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: HGWC-10 Lab ID: 92521151017 Collected: 02/15/21 13:31 Received: 02/17/21 11:54 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	6.83	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00065J	mg/L	0.0030	0.00028	1	03/03/21 10:21	03/04/21 17:27	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/03/21 10:21	03/04/21 17:27	7440-38-2	
Barium	0.060	mg/L	0.0050	0.00071	1	03/03/21 10:21	03/04/21 17:27	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/03/21 10:21	03/04/21 17:27	7440-41-7	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/03/21 10:21	03/04/21 17:27	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/03/21 10:21	03/04/21 17:27	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/03/21 10:21	03/04/21 17:27	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/03/21 10:21	03/04/21 17:27	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/03/21 10:21	03/04/21 17:27	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/03/21 10:21	03/04/21 17:27	7439-98-7	
Selenium	0.0028J	mg/L	0.0050	0.0016	1	03/03/21 10:21	03/04/21 17:27	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/03/21 10:21	03/04/21 17:27	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 09:50	02/22/21 14:10	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.080J	mg/L	0.10	0.050	1		02/20/21 18:14	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: MW-7		Lab ID: 92521151018		Collected: 02/15/21 17:17		Received: 02/17/21 11:54		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	6.77	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0021J	mg/L	0.0030	0.00028	1	03/03/21 10:21	03/04/21 17:50	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/03/21 10:21	03/04/21 17:50	7440-38-2	
Barium	0.048	mg/L	0.0050	0.00071	1	03/03/21 10:21	03/04/21 17:50	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/03/21 10:21	03/04/21 17:50	7440-41-7	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/03/21 10:21	03/04/21 17:50	7440-43-9	
Chromium	0.0015J	mg/L	0.0050	0.00055	1	03/03/21 10:21	03/04/21 17:50	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/03/21 10:21	03/04/21 17:50	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/03/21 10:21	03/04/21 17:50	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/03/21 10:21	03/04/21 17:50	7439-93-2	
Molybdenum	0.0015J	mg/L	0.010	0.00069	1	03/03/21 10:21	03/04/21 17:50	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/03/21 10:21	03/04/21 17:50	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/03/21 10:21	03/04/21 17:50	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 09:50	02/22/21 14:13	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		02/20/21 18:29	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: MW-29		Lab ID: 92521151019		Collected: 02/15/21 14:45		Received: 02/17/21 11:54		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.09	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00094J	mg/L	0.0030	0.00028	1	03/03/21 10:21	03/04/21 17:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/03/21 10:21	03/04/21 17:56	7440-38-2	
Barium	0.081	mg/L	0.0050	0.00071	1	03/03/21 10:21	03/04/21 17:56	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/03/21 10:21	03/04/21 17:56	7440-41-7	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/03/21 10:21	03/04/21 17:56	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/03/21 10:21	03/04/21 17:56	7440-47-3	
Cobalt	0.00097J	mg/L	0.0050	0.00038	1	03/03/21 10:21	03/04/21 17:56	7440-48-4	
Lead	0.00052J	mg/L	0.0010	0.000036	1	03/03/21 10:21	03/04/21 17:56	7439-92-1	
Lithium	0.0024J	mg/L	0.030	0.00081	1	03/03/21 10:21	03/04/21 17:56	7439-93-2	
Molybdenum	0.0029J	mg/L	0.010	0.00069	1	03/03/21 10:21	03/04/21 17:56	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/03/21 10:21	03/04/21 17:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/03/21 10:21	03/04/21 17:56	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 09:50	02/22/21 14:15	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	ND	mg/L	0.10	0.050	1		02/20/21 18:44	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: HGWC-8		Lab ID: 92521151020		Collected: 02/16/21 15:05	Received: 02/17/21 11:54	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.16	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00064J	mg/L	0.0030	0.00028	1	03/03/21 10:21	03/04/21 18:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/03/21 10:21	03/04/21 18:01	7440-38-2	
Barium	0.069	mg/L	0.0050	0.00071	1	03/03/21 10:21	03/04/21 18:01	7440-39-3	
Beryllium	0.000071J	mg/L	0.00050	0.000046	1	03/03/21 10:21	03/04/21 18:01	7440-41-7	
Cadmium	0.00037J	mg/L	0.00050	0.00012	1	03/03/21 10:21	03/04/21 18:01	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/03/21 10:21	03/04/21 18:01	7440-47-3	
Cobalt	0.0020J	mg/L	0.0050	0.00038	1	03/03/21 10:21	03/04/21 18:01	7440-48-4	
Lead	0.000086J	mg/L	0.0010	0.000036	1	03/03/21 10:21	03/04/21 18:01	7439-92-1	
Lithium	0.0027J	mg/L	0.030	0.00081	1	03/03/21 10:21	03/04/21 18:01	7439-93-2	
Molybdenum	0.46	mg/L	0.010	0.00069	1	03/03/21 10:21	03/04/21 18:01	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/03/21 10:21	03/04/21 18:01	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/03/21 10:21	03/04/21 18:01	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/22/21 09:50	02/22/21 14:17	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.47	mg/L	0.10	0.050	1		02/20/21 18:59	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: HGWC-9 Lab ID: 92521151021 Collected: 02/16/21 18:39 Received: 02/17/21 11:54 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.26	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00043J	mg/L	0.0030	0.00028	1	03/03/21 10:21	03/04/21 18:07	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/03/21 10:21	03/04/21 18:07	7440-38-2	
Barium	0.11	mg/L	0.0050	0.00071	1	03/03/21 10:21	03/04/21 18:07	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/03/21 10:21	03/04/21 18:07	7440-41-7	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/03/21 10:21	03/04/21 18:07	7440-43-9	
Chromium	0.00067J	mg/L	0.0050	0.00055	1	03/03/21 10:21	03/04/21 18:07	7440-47-3	
Cobalt	0.00061J	mg/L	0.0050	0.00038	1	03/03/21 10:21	03/04/21 18:07	7440-48-4	
Lead	0.00020J	mg/L	0.0010	0.000036	1	03/03/21 10:21	03/04/21 18:07	7439-92-1	
Lithium	0.0045J	mg/L	0.030	0.00081	1	03/03/21 10:21	03/04/21 18:07	7439-93-2	
Molybdenum	0.035	mg/L	0.010	0.00069	1	03/03/21 10:21	03/04/21 18:07	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/03/21 10:21	03/04/21 18:07	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/03/21 10:21	03/04/21 18:07	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/24/21 08:00	02/24/21 12:32	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.096J	mg/L	0.10	0.050	1		02/20/21 19:44	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: MW-5		Lab ID: 92521151022		Collected: 02/16/21 16:27		Received: 02/17/21 11:54		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	5.95	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/03/21 10:21	03/04/21 18:24	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/03/21 10:21	03/04/21 18:24	7440-38-2	
Barium	0.050	mg/L	0.0050	0.00071	1	03/03/21 10:21	03/04/21 18:24	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/03/21 10:21	03/04/21 18:24	7440-41-7	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/03/21 10:21	03/04/21 18:24	7440-43-9	
Chromium	0.0032J	mg/L	0.0050	0.00055	1	03/03/21 10:21	03/04/21 18:24	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/03/21 10:21	03/04/21 18:24	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/03/21 10:21	03/04/21 18:24	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/03/21 10:21	03/04/21 18:24	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/03/21 10:21	03/04/21 18:24	7439-98-7	
Selenium	0.0035J	mg/L	0.0050	0.0016	1	03/03/21 10:21	03/04/21 18:24	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/03/21 10:21	03/04/21 18:24	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/24/21 08:00	02/24/21 12:42	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.051J	mg/L	0.10	0.050	1		02/20/21 19:59	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: MW-6		Lab ID: 92521151023		Collected: 02/16/21 15:12	Received: 02/17/21 11:54	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.00	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/03/21 10:21	03/04/21 18:30	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/03/21 10:21	03/04/21 18:30	7440-38-2	
Barium	0.085	mg/L	0.0050	0.00071	1	03/03/21 10:21	03/04/21 18:30	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/03/21 10:21	03/04/21 18:30	7440-41-7	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/03/21 10:21	03/04/21 18:30	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/03/21 10:21	03/04/21 18:30	7440-47-3	
Cobalt	0.00045J	mg/L	0.0050	0.00038	1	03/03/21 10:21	03/04/21 18:30	7440-48-4	
Lead	0.00084J	mg/L	0.0010	0.000036	1	03/03/21 10:21	03/04/21 18:30	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/03/21 10:21	03/04/21 18:30	7439-93-2	
Molybdenum	0.0025J	mg/L	0.010	0.00069	1	03/03/21 10:21	03/04/21 18:30	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/03/21 10:21	03/04/21 18:30	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/03/21 10:21	03/04/21 18:30	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/24/21 08:00	02/24/21 12:44	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.059J	mg/L	0.10	0.050	1		02/20/21 20:14	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Sample: MW-24D **Lab ID: 92521151024** Collected: 02/16/21 12:44 Received: 02/17/21 11:54 Matrix: Water

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

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.69	Std. Units			1		02/24/21 07:44		

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00028	1	03/03/21 10:21	03/04/21 18:36	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/03/21 10:21	03/04/21 18:36	7440-38-2	
Barium	0.062	mg/L	0.0050	0.00071	1	03/03/21 10:21	03/04/21 18:36	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/03/21 10:21	03/04/21 18:36	7440-41-7	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/03/21 10:21	03/04/21 18:36	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/03/21 10:21	03/04/21 18:36	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/03/21 10:21	03/04/21 18:36	7440-48-4	
Lead	0.00012J	mg/L	0.0010	0.000036	1	03/03/21 10:21	03/04/21 18:36	7439-92-1	
Lithium	0.0028J	mg/L	0.030	0.00081	1	03/03/21 10:21	03/04/21 18:36	7439-93-2	
Molybdenum	0.00096J	mg/L	0.010	0.00069	1	03/03/21 10:21	03/04/21 18:36	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/03/21 10:21	03/04/21 18:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/03/21 10:21	03/04/21 18:36	7440-28-0	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00050	0.000078	1	02/24/21 08:00	02/24/21 12:46	7439-97-6	
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300.0 IC Anions 28 Days

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

Fluoride	ND	mg/L	0.10	0.050	1		02/20/21 20:28	16984-48-8	
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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Sample: MW-26D		Lab ID: 92521151025		Collected: 02/16/21 18:03		Received: 02/17/21 11:54		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.27	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/03/21 10:21	03/04/21 18:42	7440-36-0	
Arsenic	0.00080J	mg/L	0.0050	0.00078	1	03/03/21 10:21	03/04/21 18:42	7440-38-2	
Barium	0.093	mg/L	0.0050	0.00071	1	03/03/21 10:21	03/04/21 18:42	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/03/21 10:21	03/04/21 18:42	7440-41-7	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/03/21 10:21	03/04/21 18:42	7440-43-9	
Chromium	0.0010J	mg/L	0.0050	0.00055	1	03/03/21 10:21	03/04/21 18:42	7440-47-3	
Cobalt	0.00045J	mg/L	0.0050	0.00038	1	03/03/21 10:21	03/04/21 18:42	7440-48-4	
Lead	0.00080J	mg/L	0.0010	0.000036	1	03/03/21 10:21	03/04/21 18:42	7439-92-1	
Lithium	0.0038J	mg/L	0.030	0.00081	1	03/03/21 10:21	03/04/21 18:42	7439-93-2	
Molybdenum	0.022	mg/L	0.010	0.00069	1	03/03/21 10:21	03/04/21 18:42	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/03/21 10:21	03/04/21 18:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/03/21 10:21	03/04/21 18:42	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/24/21 08:00	02/24/21 12:49	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.071J	mg/L	0.10	0.050	1		02/20/21 20:43	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: MW-27D		Lab ID: 92521151026		Collected: 02/16/21 11:11		Received: 02/17/21 11:54		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.96	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00038J	mg/L	0.0030	0.00028	1	03/03/21 10:21	03/04/21 18:47	7440-36-0	
Arsenic	0.0010J	mg/L	0.0050	0.00078	1	03/03/21 10:21	03/04/21 18:47	7440-38-2	
Barium	1.0	mg/L	0.025	0.0036	5	03/03/21 10:21	03/05/21 14:35	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/03/21 10:21	03/04/21 18:47	7440-41-7	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/03/21 10:21	03/04/21 18:47	7440-43-9	
Chromium	0.00082J	mg/L	0.0050	0.00055	1	03/03/21 10:21	03/04/21 18:47	7440-47-3	
Cobalt	0.00040J	mg/L	0.0050	0.00038	1	03/03/21 10:21	03/04/21 18:47	7440-48-4	
Lead	0.00043J	mg/L	0.0010	0.000036	1	03/03/21 10:21	03/04/21 18:47	7439-92-1	
Lithium	0.0078J	mg/L	0.030	0.00081	1	03/03/21 10:21	03/04/21 18:47	7439-93-2	
Molybdenum	0.0019J	mg/L	0.010	0.00069	1	03/03/21 10:21	03/04/21 18:47	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/03/21 10:21	03/04/21 18:47	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/03/21 10:21	03/04/21 18:47	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/24/21 08:00	02/24/21 12:56	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.25	mg/L	0.10	0.050	1		02/20/21 21:28	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Sample: MW-27D FILTERED Lab ID: 92521151027 Collected: 02/16/21 11:11 Received: 02/17/21 11:54 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.96	Std. Units			1		02/24/21 07:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00038J	mg/L	0.0030	0.00028	1	03/03/21 10:21	03/04/21 18:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/03/21 10:21	03/04/21 18:53	7440-38-2	
Barium	1.1	mg/L	0.025	0.0036	5	03/03/21 10:21	03/05/21 14:41	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/03/21 10:21	03/04/21 18:53	7440-41-7	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/03/21 10:21	03/04/21 18:53	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/03/21 10:21	03/04/21 18:53	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/03/21 10:21	03/04/21 18:53	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/03/21 10:21	03/04/21 18:53	7439-92-1	
Lithium	0.0084J	mg/L	0.030	0.00081	1	03/03/21 10:21	03/04/21 18:53	7439-93-2	
Molybdenum	0.0015J	mg/L	0.010	0.00069	1	03/03/21 10:21	03/04/21 18:53	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/03/21 10:21	03/04/21 18:53	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/03/21 10:21	03/04/21 18:53	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00050	0.000078	1	02/24/21 08:00	02/24/21 12:58	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.25	mg/L	0.10	0.050	1		02/20/21 21:43	16984-48-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Sample: HGWC-13 **Lab ID: 92521151028** Collected: 02/22/21 13:54 Received: 02/23/21 09:10 Matrix: Water

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

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	CUSTOMER				1		02/24/21 07:44		
pH	7.27	Std. Units			1		02/24/21 07:44		

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	0.00047J	mg/L	0.0030	0.00028	1	03/03/21 10:21	03/04/21 18:59	7440-36-0	
Arsenic	0.45	mg/L	0.0050	0.00078	1	03/03/21 10:21	03/04/21 18:59	7440-38-2	
Barium	0.061	mg/L	0.0050	0.00071	1	03/03/21 10:21	03/04/21 18:59	7440-39-3	
Beryllium	0.000097J	mg/L	0.00050	0.000046	1	03/03/21 10:21	03/04/21 18:59	7440-41-7	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/03/21 10:21	03/04/21 18:59	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/03/21 10:21	03/04/21 18:59	7440-47-3	
Cobalt	0.0030J	mg/L	0.0050	0.00038	1	03/03/21 10:21	03/04/21 18:59	7440-48-4	
Lead	0.00018J	mg/L	0.0010	0.000036	1	03/03/21 10:21	03/04/21 18:59	7439-92-1	
Lithium	0.032	mg/L	0.030	0.00081	1	03/03/21 10:21	03/04/21 18:59	7439-93-2	
Molybdenum	0.036	mg/L	0.010	0.00069	1	03/03/21 10:21	03/04/21 18:59	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/03/21 10:21	03/04/21 18:59	7782-49-2	
Thallium	0.00030J	mg/L	0.0010	0.00014	1	03/03/21 10:21	03/04/21 18:59	7440-28-0	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00050	0.000078	1	02/24/21 15:10	02/25/21 11:18	7439-97-6	
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300.0 IC Anions 28 Days

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

Fluoride	0.55	mg/L	0.10	0.050	1		03/08/21 11:46	16984-48-8	
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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

QC Batch: 601892 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92521151001, 92521151002, 92521151003, 92521151004, 92521151005

METHOD BLANK: 3171327 Matrix: Water
Associated Lab Samples: 92521151001, 92521151002, 92521151003, 92521151004, 92521151005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00030J	0.0030	0.00028	02/23/21 17:55	
Arsenic	mg/L	0.00094J	0.0050	0.00078	02/23/21 17:55	
Barium	mg/L	ND	0.010	0.00071	02/23/21 17:55	
Beryllium	mg/L	ND	0.0030	0.000046	02/23/21 17:55	
Cadmium	mg/L	ND	0.0025	0.00012	02/23/21 17:55	
Chromium	mg/L	ND	0.010	0.00055	02/23/21 17:55	
Cobalt	mg/L	ND	0.0050	0.00038	02/23/21 17:55	
Lead	mg/L	ND	0.0050	0.000036	02/23/21 17:55	
Lithium	mg/L	ND	0.030	0.00081	02/23/21 17:55	
Molybdenum	mg/L	ND	0.010	0.00069	02/23/21 17:55	
Selenium	mg/L	ND	0.010	0.0016	02/23/21 17:55	
Thallium	mg/L	ND	0.0010	0.00014	02/23/21 17:55	

LABORATORY CONTROL SAMPLE: 3171328

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	108	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.098	98	80-120	
Cadmium	mg/L	0.1	0.10	102	80-120	
Chromium	mg/L	0.1	0.10	102	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Lithium	mg/L	0.1	0.097	97	80-120	
Molybdenum	mg/L	0.1	0.10	102	80-120	
Selenium	mg/L	0.1	0.094	94	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3171329 3171330

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92521143002 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Antimony	mg/L	ND	0.1	0.1	0.11	0.10	108	104	75-125	3	20	
Arsenic	mg/L	ND	0.1	0.1	0.097	0.093	97	93	75-125	5	20	
Barium	mg/L	0.040	0.1	0.1	0.14	0.14	99	96	75-125	2	20	
Beryllium	mg/L	0.00023J	0.1	0.1	0.095	0.090	95	90	75-125	6	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Parameter	Units	3171329		3171330		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92521143002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Cadmium	mg/L	ND	0.1	0.1	0.10	0.098	101	98	75-125	3	20		
Chromium	mg/L	ND	0.1	0.1	0.10	0.098	101	98	75-125	3	20		
Cobalt	mg/L	0.00074J	0.1	0.1	0.10	0.098	100	97	75-125	3	20		
Lead	mg/L	0.00024J	0.1	0.1	0.10	0.098	101	98	75-125	3	20		
Lithium	mg/L	0.0013J	0.1	0.1	0.094	0.091	93	89	75-125	4	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.099	103	99	75-125	4	20		
Selenium	mg/L	ND	0.1	0.1	0.093	0.091	93	91	75-125	3	20		
Thallium	mg/L	ND	0.1	0.1	0.098	0.095	98	95	75-125	3	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

QC Batch: 601924 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92521151006, 92521151007, 92521151008, 92521151009, 92521151010, 92521151011, 92521151012, 92521151013, 92521151014, 92521151015, 92521151016

METHOD BLANK: 3171451 Matrix: Water
Associated Lab Samples: 92521151006, 92521151007, 92521151008, 92521151009, 92521151010, 92521151011, 92521151012, 92521151013, 92521151014, 92521151015, 92521151016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	02/24/21 14:31	
Arsenic	mg/L	ND	0.0050	0.00078	02/24/21 14:31	
Barium	mg/L	ND	0.010	0.00071	02/24/21 14:31	
Beryllium	mg/L	ND	0.0030	0.000046	02/24/21 14:31	
Cadmium	mg/L	ND	0.0025	0.00012	02/24/21 14:31	
Chromium	mg/L	ND	0.010	0.00055	02/24/21 14:31	
Cobalt	mg/L	ND	0.0050	0.00038	02/24/21 14:31	
Lead	mg/L	ND	0.0050	0.000036	02/24/21 14:31	
Lithium	mg/L	ND	0.030	0.00081	02/24/21 14:31	
Molybdenum	mg/L	ND	0.010	0.00069	02/24/21 14:31	
Selenium	mg/L	ND	0.010	0.0016	02/24/21 14:31	
Thallium	mg/L	ND	0.0010	0.00014	02/24/21 14:31	

LABORATORY CONTROL SAMPLE: 3171452

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	107	80-120	
Arsenic	mg/L	0.1	0.094	94	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.097	97	80-120	
Cobalt	mg/L	0.1	0.098	98	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.10	102	80-120	
Selenium	mg/L	0.1	0.093	93	80-120	
Thallium	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3171453 3171454

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result								
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	102	104	75-125	2	20		
Arsenic	mg/L	ND	0.1	0.1	0.098	0.10	98	101	75-125	3	20		
Barium	mg/L	0.069	0.1	0.1	0.16	0.17	95	96	75-125	1	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Parameter	Units	3171453		3171454		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92521151006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Beryllium	mg/L	0.000081J	0.1	0.1	0.093	0.096	93	96	75-125	4	20		
Cadmium	mg/L	ND	0.1	0.1	0.097	0.10	97	101	75-125	4	20		
Chromium	mg/L	0.0014J	0.1	0.1	0.099	0.10	98	99	75-125	1	20		
Cobalt	mg/L	0.00081J	0.1	0.1	0.096	0.099	95	98	75-125	2	20		
Lead	mg/L	0.00056J	0.1	0.1	0.095	0.096	95	95	75-125	1	20		
Lithium	mg/L	0.0032J	0.1	0.1	0.098	0.10	95	98	75-125	3	20		
Molybdenum	mg/L	0.051	0.1	0.1	0.15	0.15	101	99	75-125	1	20		
Selenium	mg/L	ND	0.1	0.1	0.093	0.098	92	98	75-125	6	20		
Thallium	mg/L	ND	0.1	0.1	0.093	0.094	93	94	75-125	2	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

QC Batch: 603830 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92521151017, 92521151018, 92521151019, 92521151020, 92521151021, 92521151022, 92521151023, 92521151024, 92521151025, 92521151026, 92521151027, 92521151028

METHOD BLANK: 3180953 Matrix: Water
Associated Lab Samples: 92521151017, 92521151018, 92521151019, 92521151020, 92521151021, 92521151022, 92521151023, 92521151024, 92521151025, 92521151026, 92521151027, 92521151028

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	03/04/21 17:16	
Arsenic	mg/L	ND	0.0050	0.00078	03/04/21 17:16	
Barium	mg/L	ND	0.0050	0.00071	03/04/21 17:16	
Beryllium	mg/L	ND	0.00050	0.000046	03/04/21 17:16	
Cadmium	mg/L	ND	0.00050	0.00012	03/04/21 17:16	
Chromium	mg/L	ND	0.0050	0.00055	03/04/21 17:16	
Cobalt	mg/L	ND	0.0050	0.00038	03/04/21 17:16	
Lead	mg/L	ND	0.0010	0.000036	03/04/21 17:16	
Lithium	mg/L	ND	0.030	0.00081	03/04/21 17:16	
Molybdenum	mg/L	ND	0.010	0.00069	03/04/21 17:16	
Selenium	mg/L	ND	0.0050	0.0016	03/04/21 17:16	
Thallium	mg/L	ND	0.0010	0.00014	03/04/21 17:16	

LABORATORY CONTROL SAMPLE: 3180954

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	103	80-120	
Arsenic	mg/L	0.1	0.10	101	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.10	103	80-120	
Cadmium	mg/L	0.1	0.10	103	80-120	
Chromium	mg/L	0.1	0.097	97	80-120	
Cobalt	mg/L	0.1	0.096	96	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.097	97	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	
Selenium	mg/L	0.1	0.11	107	80-120	
Thallium	mg/L	0.1	0.095	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3180955 3180956

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92521151017 Result	Spike Conc.	Spike Conc.	Result							Result
Antimony	mg/L	0.00065J	0.1	0.1	0.11	0.11	111	110	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	104	104	75-125	0	20	
Barium	mg/L	0.060	0.1	0.1	0.17	0.16	107	103	75-125	2	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Parameter	Units	3180955		3180956		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92521151017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Beryllium	mg/L	ND	0.1	0.1	0.097	0.099	97	99	75-125	2	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	1	20	
Chromium	mg/L	ND	0.1	0.1	0.094	0.094	94	94	75-125	1	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	0.094	0.094	94	94	75-125	0	20	
Lithium	mg/L	ND	0.1	0.1	0.096	0.095	95	95	75-125	1	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20	
Selenium	mg/L	0.0028J	0.1	0.1	0.11	0.11	107	104	75-125	3	20	
Thallium	mg/L	ND	0.1	0.1	0.094	0.094	94	94	75-125	0	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

QC Batch: 600377 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92521151001, 92521151002, 92521151003, 92521151004, 92521151005

METHOD BLANK: 3164783 Matrix: Water
Associated Lab Samples: 92521151001, 92521151002, 92521151003, 92521151004, 92521151005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	02/18/21 12:33	

LABORATORY CONTROL SAMPLE: 3164784

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3164785 3164786

Parameter	Units	92521143001		3164786		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0026	99	104	75-125	5	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

QC Batch: 601295

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92521151006, 92521151007, 92521151008, 92521151009, 92521151010, 92521151011, 92521151012, 92521151013, 92521151014, 92521151015

METHOD BLANK: 3168813

Matrix: Water

Associated Lab Samples: 92521151006, 92521151007, 92521151008, 92521151009, 92521151010, 92521151011, 92521151012, 92521151013, 92521151014, 92521151015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	02/23/21 13:14	

LABORATORY CONTROL SAMPLE: 3168814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0023	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3168815 3168816

Parameter	Units	92521578011 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Mercury	mg/L	ND	0.0025	0.0022	0.0025	0.0022	88	89	75-125	1	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

QC Batch: 601590 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92521151016, 92521151017, 92521151018, 92521151019, 92521151020

METHOD BLANK: 3170068 Matrix: Water
Associated Lab Samples: 92521151016, 92521151017, 92521151018, 92521151019, 92521151020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	02/22/21 13:27	

LABORATORY CONTROL SAMPLE: 3170069

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0023	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3170070 3170071

Parameter	Units	92521143021		3170071		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0022	0.0023	85	90	75-125	6	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

QC Batch:	601883	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92521151021, 92521151022, 92521151023, 92521151024, 92521151025, 92521151026, 92521151027

METHOD BLANK: 3171311 Matrix: Water
Associated Lab Samples: 92521151021, 92521151022, 92521151023, 92521151024, 92521151025, 92521151026, 92521151027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	02/24/21 12:27	

LABORATORY CONTROL SAMPLE: 3171312

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0026	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3171313 3171314

Parameter	Units	3171313		3171314		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0025	100	100	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

QC Batch: 602268	Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A	Analysis Description: 7470 Mercury
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92521151028

METHOD BLANK: 3173354 Matrix: Water

Associated Lab Samples: 92521151028

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00050	0.000078	02/25/21 10:11	

LABORATORY CONTROL SAMPLE: 3173355

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3173356 3173357

Parameter	Units	3173356		3173357		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	92523277011 ND	0.0025	0.0025	0.0025	97	94	75-125	2	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

QC Batch: 598903 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92521151001

METHOD BLANK: 3157390 Matrix: Water
Associated Lab Samples: 92521151001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/10/21 16:04	

LABORATORY CONTROL SAMPLE: 3157391

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.6	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3157392 3157393

Parameter	Units	92520887002		3157392		3157393		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Fluoride	mg/L	0.42	0.42	2.5	2.5	2.9	2.9	100	98	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3157394 3157395

Parameter	Units	92521223018		3157394		3157395		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Fluoride	mg/L	ND	ND	2.5	2.5	2.2	2.2	85	88	90-110	2	10 M1	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

QC Batch: 599257 Analysis Method: EPA 300.0 Rev 2.1 1993
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92521151002, 92521151003, 92521151004, 92521151005

METHOD BLANK: 3159217 Matrix: Water
 Associated Lab Samples: 92521151002, 92521151003, 92521151004, 92521151005

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

LABORATORY CONTROL SAMPLE: 3159218

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.6	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3159221 3159222

Parameter	Units	3159221		3159222		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92521143004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Fluoride	mg/L	ND	2.5	2.5	2.3	2.4	93	96	90-110	4	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3159223 3159224

Parameter	Units	3159223		3159224		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92521359001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Fluoride	mg/L	2.1	2.5	2.5	4.4	4.4	92	91	90-110	0	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

QC Batch: 599863	Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993	Analysis Description: 300.0 IC Anions
	Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92521151006, 92521151007, 92521151008

METHOD BLANK: 3162426 Matrix: Water

Associated Lab Samples: 92521151006, 92521151007, 92521151008

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

LABORATORY CONTROL SAMPLE: 3162427

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.6	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3162428 3162429

Parameter	Units	3162428		3162429		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Fluoride	mg/L	0.41	2.5	2.5	2.7	2.8	93	95	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3162430 3162431

Parameter	Units	3162430		3162431		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Fluoride	mg/L	0.15	2.5	2.5	2.7	2.6	102	97	90-110	5	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

QC Batch: 600235	Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993	Analysis Description: 300.0 IC Anions
	Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92521151009, 92521151010, 92521151016

METHOD BLANK: 3164171 Matrix: Water

Associated Lab Samples: 92521151009, 92521151010, 92521151016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/16/21 14:16	

LABORATORY CONTROL SAMPLE: 3164172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3164173 3164174

Parameter	Units	3164173		3164174		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92522138001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Fluoride	mg/L	ND	2.5	2.5	2.4	2.5	95	97	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3164175 3164176

Parameter	Units	3164175		3164176		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		92521578011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Fluoride	mg/L	0.068J	2.5	2.5	2.6	2.6	100	100	90-110	1	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

QC Batch: 600783 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: 92521151011, 92521151012, 92521151013, 92521151014, 92521151015

METHOD BLANK: 3166590 Matrix: Water
 Associated Lab Samples: 92521151011, 92521151012, 92521151013, 92521151014, 92521151015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/20/21 11:54	

LABORATORY CONTROL SAMPLE: 3166591

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.6	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3166592 3166593

Parameter	Units	92522456002		3166592		3166593		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.					
Fluoride	mg/L	0.34	2.5	2.5	2.5	3.1	3.0	108	105	90-110	3	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3166594 3166595

Parameter	Units	92521151015		3166594		3166595		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.					
Fluoride	mg/L	ND	2.5	2.5	2.5	2.7	2.5	106	101	90-110	5	10

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

QC Batch: 601397 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92521151017, 92521151018, 92521151019, 92521151020, 92521151021, 92521151022, 92521151023, 92521151024, 92521151025, 92521151026, 92521151027

METHOD BLANK: 3169354 Matrix: Water
Associated Lab Samples: 92521151017, 92521151018, 92521151019, 92521151020, 92521151021, 92521151022, 92521151023, 92521151024, 92521151025, 92521151026, 92521151027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	02/20/21 16:44	

LABORATORY CONTROL SAMPLE: 3169355

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3169356 3169357

Parameter	Units	92521143022 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	2.5	2.5	2.6	2.7	104	105	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3169358 3169359

Parameter	Units	92521151025 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.071J	2.5	2.5	2.4	2.4	95	95	90-110	0	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

QC Batch: 604773 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: 92521151028

METHOD BLANK: 3186355 Matrix: Water
Associated Lab Samples: 92521151028

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.10	0.050	03/08/21 05:16	

LABORATORY CONTROL SAMPLE: 3186356

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186357 3186358

Parameter	Units	92526098004		3186357		3186358		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Fluoride	mg/L	ND	ND	2.5	2.5	ND	ND	0	0	90-110	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3186359 3186360

Parameter	Units	92526099009		3186359		3186360		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Fluoride	mg/L	ND	ND	2.5	2.5	3.2	2.8	129	113	90-110	13	10 M1,R1

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QUALIFIERS

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

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

R1 RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92521151001	HGWA-1				
92521151002	HGWA-2				
92521151003	HGWA-3				
92521151004	HGWA-43D				
92521151005	HGWA-44D				
92521151006	HGWC-7				
92521151007	MW-28D				
92521151008	MW-28D FILTERED				
92521151009	MW-20				
92521151010	HGWC-11				
92521151011	HGWC-12				
92521151012	MW-19				
92521151014	MW-25D				
92521151017	HGWC-10				
92521151018	MW-7				
92521151019	MW-29				
92521151020	HGWC-8				
92521151021	HGWC-9				
92521151022	MW-5				
92521151023	MW-6				
92521151024	MW-24D				
92521151025	MW-26D				
92521151026	MW-27D				
92521151027	MW-27D FILTERED				
92521151028	HGWC-13				
92521151001	HGWA-1	EPA 3005A	601892	EPA 6020B	601999
92521151002	HGWA-2	EPA 3005A	601892	EPA 6020B	601999
92521151003	HGWA-3	EPA 3005A	601892	EPA 6020B	601999
92521151004	HGWA-43D	EPA 3005A	601892	EPA 6020B	601999
92521151005	HGWA-44D	EPA 3005A	601892	EPA 6020B	601999
92521151006	HGWC-7	EPA 3005A	601924	EPA 6020B	602022
92521151007	MW-28D	EPA 3005A	601924	EPA 6020B	602022
92521151008	MW-28D FILTERED	EPA 3005A	601924	EPA 6020B	602022
92521151009	MW-20	EPA 3005A	601924	EPA 6020B	602022
92521151010	HGWC-11	EPA 3005A	601924	EPA 6020B	602022
92521151011	HGWC-12	EPA 3005A	601924	EPA 6020B	602022
92521151012	MW-19	EPA 3005A	601924	EPA 6020B	602022
92521151013	DUP-1	EPA 3005A	601924	EPA 6020B	602022
92521151014	MW-25D	EPA 3005A	601924	EPA 6020B	602022
92521151015	FB-1	EPA 3005A	601924	EPA 6020B	602022
92521151016	EB-1	EPA 3005A	601924	EPA 6020B	602022
92521151017	HGWC-10	EPA 3005A	603830	EPA 6020B	603941
92521151018	MW-7	EPA 3005A	603830	EPA 6020B	603941
92521151019	MW-29	EPA 3005A	603830	EPA 6020B	603941
92521151020	HGWC-8	EPA 3005A	603830	EPA 6020B	603941
92521151021	HGWC-9	EPA 3005A	603830	EPA 6020B	603941
92521151022	MW-5	EPA 3005A	603830	EPA 6020B	603941

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 APP IV

Pace Project No.: 92521151

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92521151023	MW-6	EPA 3005A	603830	EPA 6020B	603941
92521151024	MW-24D	EPA 3005A	603830	EPA 6020B	603941
92521151025	MW-26D	EPA 3005A	603830	EPA 6020B	603941
92521151026	MW-27D	EPA 3005A	603830	EPA 6020B	603941
92521151027	MW-27D FILTERED	EPA 3005A	603830	EPA 6020B	603941
92521151028	HGWC-13	EPA 3005A	603830	EPA 6020B	603941
92521151001	HGWA-1	EPA 7470A	600377	EPA 7470A	600865
92521151002	HGWA-2	EPA 7470A	600377	EPA 7470A	600865
92521151003	HGWA-3	EPA 7470A	600377	EPA 7470A	600865
92521151004	HGWA-43D	EPA 7470A	600377	EPA 7470A	600865
92521151005	HGWA-44D	EPA 7470A	600377	EPA 7470A	600865
92521151006	HGWC-7	EPA 7470A	601295	EPA 7470A	601814
92521151007	MW-28D	EPA 7470A	601295	EPA 7470A	601814
92521151008	MW-28D FILTERED	EPA 7470A	601295	EPA 7470A	601814
92521151009	MW-20	EPA 7470A	601295	EPA 7470A	601814
92521151010	HGWC-11	EPA 7470A	601295	EPA 7470A	601814
92521151011	HGWC-12	EPA 7470A	601295	EPA 7470A	601814
92521151012	MW-19	EPA 7470A	601295	EPA 7470A	601814
92521151013	DUP-1	EPA 7470A	601295	EPA 7470A	601814
92521151014	MW-25D	EPA 7470A	601295	EPA 7470A	601814
92521151015	FB-1	EPA 7470A	601295	EPA 7470A	601814
92521151016	EB-1	EPA 7470A	601590	EPA 7470A	601621
92521151017	HGWC-10	EPA 7470A	601590	EPA 7470A	601621
92521151018	MW-7	EPA 7470A	601590	EPA 7470A	601621
92521151019	MW-29	EPA 7470A	601590	EPA 7470A	601621
92521151020	HGWC-8	EPA 7470A	601590	EPA 7470A	601621
92521151021	HGWC-9	EPA 7470A	601883	EPA 7470A	602188
92521151022	MW-5	EPA 7470A	601883	EPA 7470A	602188
92521151023	MW-6	EPA 7470A	601883	EPA 7470A	602188
92521151024	MW-24D	EPA 7470A	601883	EPA 7470A	602188
92521151025	MW-26D	EPA 7470A	601883	EPA 7470A	602188
92521151026	MW-27D	EPA 7470A	601883	EPA 7470A	602188
92521151027	MW-27D FILTERED	EPA 7470A	601883	EPA 7470A	602188
92521151028	HGWC-13	EPA 7470A	602268	EPA 7470A	602517
92521151001	HGWA-1	EPA 300.0 Rev 2.1 1993	598903		
92521151002	HGWA-2	EPA 300.0 Rev 2.1 1993	599257		
92521151003	HGWA-3	EPA 300.0 Rev 2.1 1993	599257		
92521151004	HGWA-43D	EPA 300.0 Rev 2.1 1993	599257		
92521151005	HGWA-44D	EPA 300.0 Rev 2.1 1993	599257		
92521151006	HGWC-7	EPA 300.0 Rev 2.1 1993	599863		
92521151007	MW-28D	EPA 300.0 Rev 2.1 1993	599863		
92521151008	MW-28D FILTERED	EPA 300.0 Rev 2.1 1993	599863		
92521151009	MW-20	EPA 300.0 Rev 2.1 1993	600235		
92521151010	HGWC-11	EPA 300.0 Rev 2.1 1993	600235		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 APP IV
Pace Project No.: 92521151


Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92521151011	HGWC-12	EPA 300.0 Rev 2.1 1993	600783		
92521151012	MW-19	EPA 300.0 Rev 2.1 1993	600783		
92521151013	DUP-1	EPA 300.0 Rev 2.1 1993	600783		
92521151014	MW-25D	EPA 300.0 Rev 2.1 1993	600783		
92521151015	FB-1	EPA 300.0 Rev 2.1 1993	600783		
92521151016	EB-1	EPA 300.0 Rev 2.1 1993	600235		
92521151017	HGWC-10	EPA 300.0 Rev 2.1 1993	601397		
92521151018	MW-7	EPA 300.0 Rev 2.1 1993	601397		
92521151019	MW-29	EPA 300.0 Rev 2.1 1993	601397		
92521151020	HGWC-8	EPA 300.0 Rev 2.1 1993	601397		
92521151021	HGWC-9	EPA 300.0 Rev 2.1 1993	601397		
92521151022	MW-5	EPA 300.0 Rev 2.1 1993	601397		
92521151023	MW-6	EPA 300.0 Rev 2.1 1993	601397		
92521151024	MW-24D	EPA 300.0 Rev 2.1 1993	601397		
92521151025	MW-26D	EPA 300.0 Rev 2.1 1993	601397		
92521151026	MW-27D	EPA 300.0 Rev 2.1 1993	601397		
92521151027	MW-27D FILTERED	EPA 300.0 Rev 2.1 1993	601397		
92521151028	HGWC-13	EPA 300.0 Rev 2.1 1993	604773		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt	Client Name: <u>GA Power</u>	Project #: WO#: 92521151
	Courier: <input type="checkbox"/> Commercial <input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Pace <input type="checkbox"/> Other: _____	 92521151

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: MC 2/4/21

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 233 Type of Ice: Wet Blue None

Cooler Temp: 3.6 Correction Factor: Add/Subtract (°C) ± 0.4

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

Cooler Temp Corrected (°C): 4.0

USDA Regulated Soil (N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document

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



Section A
Requester Contact Information

Company: GA Power
Address: Atlanta GA
Phone: _____ Fax: _____
Requested Date/Time: 11/27/02

Section B
Requested Project Information

Project To: SCS Contacts
Project Name: Plant Hammond AP-1 App. IV Scan
Project Number: GW5561B

Section C
Analyte Information

Company Name: Southern Co.
Address: _____
City/State: _____

Page: 1 of 1

REGULATORY AGENCY

IRDES GROUND WATER DRINKING WATER
 UST RCRA OTHER
 Site Location: _____ STATE: GA

ITEM #	Section D Requested Chain of Custody	VALID MATRIX CODES MATRIX	MATRIX CODE	SAMPLE TYPE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES			ANALYTE TEST	REQUESTED ANALYTE (Y/N)	RESIDUAL CHLORINE (Y/N)
					DATE	TIME			UNPRESERVED	H ₂ SO ₄	HNO ₃			
1	HQWA-1	WT G	WT G	WT G	11/27/02	11:13	4	1	1	1	1	1	1	N
2	HQWA-2	WT G	WT G	WT G	11/27/02	11:13	4	1	1	1	1	1	1	N
3	HQWA-3	WT G	WT G	WT G	11/27/02	11:13	4	1	1	1	1	1	1	N
4	HQWA-4SD	WT G	WT G	WT G	11/27/02	11:13	4	1	1	1	1	1	1	N
5	HQWA-4AD	WT G	WT G	WT G	11/27/02	11:13	4	1	1	1	1	1	1	N
6	HQWC-7	WT G	WT G	WT G	11/27/02	11:13	4	1	1	1	1	1	1	N
7	HQWC-8	WT G	WT G	WT G	11/27/02	11:13	4	1	1	1	1	1	1	N
8	HQWC-9	WT G	WT G	WT G	11/27/02	11:13	4	1	1	1	1	1	1	N
9	HQWC-10	WT G	WT G	WT G	11/27/02	11:13	4	1	1	1	1	1	1	N
10	HQWC-11	WT G	WT G	WT G	11/27/02	11:13	4	1	1	1	1	1	1	N
11	HQWC-12	WT G	WT G	WT G	11/27/02	11:13	4	1	1	1	1	1	1	N
12	HQWC-13	WT G	WT G	WT G	11/27/02	11:13	4	1	1	1	1	1	1	N

ADDITIONAL COMMENTS

REMOVED BY / REVISION

ACCEPTED BY / REVISION

SAMPLE CONDITIONS

Temp in °C: _____
 Received on Ice (Y/N): _____
 Custody Shaded Cooler (Y/N): _____
 Samples In tact (N/Y): _____

SAMPLER NAME AND SIGNATURE

PRINT NAME OF SAMPLER: Chad Russo
 SIGNATURE OF SAMPLER: [Signature]

DATE SIGNED (MM/DD/YY): 11/28/02

Important Note: By signing this form you are accepting Project No. 11-020707-02. No any payment terms and agreeing to the charges of 1 \$80 per month for any charges not paid within 30 days.

FALL-020707-02 15-F-80-2007



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



Section A
 Required Client Information

Company: **GA Power**
 Address: **Atlanta GA**
 Email To: **SCS Contacts**
 Phone: **770** Fax: **404**
 Requested Date of Report: **16 day**

Section B
 Required Project Information

Report to: **SCS Contacts**
 Copy To: **Geosynthetic Contacts**
 Purchase Order No.: **770**
 Project Name: **Port Hammond AP-1 App. IV Scan**
 Project Number: **GW05818**

Section C
 Receiver Information

Address: **Southern CO.**
 Company Name: **Southern CO.**
 Project Name: **Keenan Fleming**
 Name: **Keenan Fleming**
 Title: **Project Mgr**

REGULATORY AGENCY

MDES GROUND WATER DRINKING WATER
 USE RCRA OTHER USE
 State Location: **GA**
 STAFF: _____

Page: **2 of 2**

ITEM #	Section D Revised Client Information	VALID Matrix Codes MATERIALS: CONTAMINANT, METALS, PESTICIDES, OIL, GREASE, AIR, OTHER	SCS CODE A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES							ANALYSIS TEST	Requester Analytical Filtered (Y/N)	Residual Chlorine (Y/N)					
												Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₈	Methanol				Other	Fluoride	USE App. IV Metals 6020/7410	RAD 220/226	
1	HQWNC-1																									
2	HQWNC-2																									
3	HQWMA-3																									
4	HQWMA-430																									
5	HQWMA-44D																									
6	HQWNC-7																									
7	HQWNC-8																									
8	HQWNC-9																									
9	HQWNC-10																									
10	HQWNC-11																									
11	HQWNC-12																									
12	HQWNC-13																									

RECEIVED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLER NAME AND SIGNATURE	PRINT NAME OF SAMPLER	SIGNATURE OF SAMPLER	DATE SIGNED (MM/DD/YYYY)	Temp in °C	Received on (Y/N)	Custody Sealed Cooler (Y/N)	Sampler Intact (Y/N)
<i>[Signature]</i>	7/10/21	0733	<i>[Signature]</i>	7/16/21	0936	<i>[Signature]</i>	Chad Corso	<i>[Signature]</i>	2/19/2021				
<i>[Signature]</i>	7/10/21	1235	<i>[Signature]</i>	7/16/21	0936	<i>[Signature]</i>	Chad Corso	<i>[Signature]</i>	2/19/2021				

Print name of sampler: **Chad Corso**
 Signature of sampler: *[Signature]*
 Date signed: **2/19/2021**
 Temp in °C: _____
 Received on (Y/N): _____
 Custody Sealed Cooler (Y/N): _____
 Sampler Intact (Y/N): _____



CHAIN-OF-CU... DY / Analytical Request Document

Page: 2

Section A
Requested Client Information

Company: GA Power
Address: Atlanta, GA
Email To: SCS Contacts
Phone: Per
Requested Date/Time: 11 Oct

Section B
Requested Project Information

Report To: SCS Contacts
Copy To: Geographic Contacts
Purchase Order No.
Project Name: Plant Hamilton AP-1 App. IV Scan
Project Number: GW065818

Section C
Invoicing Information

Company Name: Southern Co.
Address: Savannah, GA
Billing Name: Kevin Hering
Billing Address: Savannah, GA

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST ROBA OTHER
Site Location: GA
STATE: GA

ITEM #	Section D Shipment Case Information	Valid Matrix Coding MATRIX CODE	SCS CODE	COLLECTED DATE TIME	SAMPLE TYPE (G=GRAB C=COMP)	DATE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES		ANALYSIS TEST	REQUESTED ANALYSIS FILTERED (Y/N)	Residual Chlorine (Y/N)	PACS Project No./ Lab ID 62521151
									Unpreserved	H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₅ Methanol Other				
1	HGMW-1	WT G	WT G		WT G			4			X			
2	HGMW-2	WT G	WT G		WT G			4			X			
3	HGMW-9	WT G	WT G		WT G			4			X			
4	HEMMA-AD	WT G	WT G		WT G			4			X			
5	HOWARD	WT G	WT G		WT G			4			X			
6	HGMW-7	WT G	WT G		WT G			4			X			
7	HOWCS	WT G	WT G		WT G			4			X			
8	HGMW-9	WT G	WT G		WT G			4			X			
9	HOWVCH70	WT G	WT G		WT G			4			X			
10	HGMW-11	WT G	WT G		WT G			4			X			
11	HGMW-10	WT G	WT G		WT G			4			X			
12	HGMW-13	WT G	WT G		WT G			4			X			

ADDITIONAL COMMENTS
Please note dry wells, data through any wells not sampled and other when the field reports for the report data location.
Full App. IV Available: AL, BG, BR, CA, C, CA, PH, U, WH, WA, SA, N

REQUESTED BY / APPROVAL: *[Signature]*
DATE: 2/11/21

ACCEPTED BY / APPROVAL: *[Signature]*
DATE: 2/11/21

DATE SIGNED: 2/10/21

Temp in °C
Received on (Y/N)
Custody Sealed Container (Y/N)
Samples intact (Y/N)



CHAIN-OF-CUSTODY / Analytical Request Document

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



Section A

Requested Client Information

Company: GA Power

Address: Atlanta, GA

Phone: SCS Contacts

Requested Date/Time: N/A

Section B

Requested Project Information:

Request To: SCS Contacts

Case No.: Geographic Contacts

Project Name: Plant Hammond Air-T1 App. IV Scan

Project Number: GWS5518

Section C

Physical Information

Address: Southport, GA

County Name: Spalding

Post Office: Southport

Requester Name: Kevin Fleming

Requester Title: Plant Manager

Requester Phone: 706-368-1326

Requester Email: kevin.fleming@ga.gov

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
 USE RCRA OTHER USE
 No Location Other Location

Page: 2 of 2

ITEM #	Section B Requested Client Information	Section D Valid Matrix Codes	MATRIX CODE	SAMPLE TYPE (G=GRAS C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Method (Y/N)	Residual Chlorine (Y/N)
					DATE	TIME						
1	WATER	MALDI	WT G	WT G				Unpreserved	Fluoride	N	N	
2	WATER	WASTEWATER	WT G	WT G				H ₂ SO ₄	Full App. IV Method 6020/7470	N	N	
3	WATER	WASTEWATER	WT G	WT G				HNO ₃	RAD 228/228	N	N	
4	WATER	WASTEWATER	WT G	WT G				HCl		N	N	
5	WATER	WASTEWATER	WT G	WT G				NaOH		N	N	
6	WATER	WASTEWATER	WT G	WT G				Na ₂ S ₂ O ₅		N	N	
7	WATER	WASTEWATER	WT G	WT G				Methanol		N	N	
8	WATER	WASTEWATER	WT G	WT G				Other		N	N	
9	WATER	WASTEWATER	WT G	WT G						N	N	
10	WATER	WASTEWATER	WT G	WT G						N	N	
11	WATER	WASTEWATER	WT G	WT G						N	N	
12	WATER	WASTEWATER	WT G	WT G						N	N	

ADDITIONAL COMMENTS:

Requester Name and Signature: Kevin Fleming Date: 2/11/21 Time: 0830

Requester Name and Signature: Kevin Fleming Date: 2/11/21 Time: 0915

Requester Name and Signature: Kevin Fleming Date: 2/11/21 Time: 1326

RECEIVED BY / AFFILIATION:

Requester Name and Signature: Kevin Fleming Date: 2/11/21 Time: 0830

Requester Name and Signature: Kevin Fleming Date: 2/11/21 Time: 0919

ANALYSIS TESTS:

Fluoride: N Full App. IV Method 6020/7470: N RAD 228/228: N

RESIDUAL CHLORINE: 7.54 7.54 2.54

Pace Product Mfg. Lab. I.D. 42521151

Transportation: By signing this form you are accepting Pace's NET-30 day service guarantee and agreeing to the charges of 12¢ per month for any retention not paid within 30 days.

F-ALL-Q-020/rev. 07.15 (6-6-2007)



CHAIN-OF-CUSTODY / Analytical Request Document

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



Section A Requested Client Information Company: GA Power Address: Atlanta, GA Contact: SCS Contacts Email To: SCS Contacts Requested Date: 10/20/11	Section B Requested Project Information Project To: SCS Contacts Copy To: Geosyntec Contacts Purchase Order No.: Project Name: Plant Hammond App-1 App. IV Scan Project Number: GWS6818
Section C Invoice Information Attention: Southern Co. Company Name: Address: Contact: Project Name: Ketch Herring Project Manager: Phone Number:	REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> UST <input checked="" type="checkbox"/> GROUND WATER <input checked="" type="checkbox"/> RQRA <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> OTHER
Requested Analyte Filtered (Y/N) <input type="checkbox"/> STATE: <u>GA</u>	Residual Chlorine (Y/N) Pace Project No./ Lab ID: <u>ACS21151</u>

ITEM #	Section D Requested Client Information Matrix Code	VALUABLE Matrix Codes ANALYZES: Cu, Ni, Pb, Zn, Cd, Cr, Mn, Fe, V, W, As, Se, Hg, Ag, Al, Si, Ti, S, P, B, I, Br, K, Rb, Cs, Sr, Ba, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Sc, Zr, Hf, Ta, Nb, Mo, Sn, Sb, Te, Bi, Po, At, Rn, Fr, Ra, Ac, Th, U, Np, Pu, Am, Cm, Bk, Cf, Es, Fm, Md, No, Lr	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test			Residual Chlorine (Y/N)						
											Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol	Other	W	N		N					
1	MMW-0		WT 0							1																	
2	MMW-0		WT 0							1																	
3	MMW-7		WT 0							1																	
4	MMW-19		WT 0							1																	
5	MMW-20		WT 0	ZC/R/VA	11/5/11				58	1																	
6	MMW-20		WT 0							1																	
7	MMW-20		WT 0							1																	
8	MMW-20		WT 0							1																	
9	MMW-20		WT 0							1																	
10	MMW-20		WT 0							1																	
11	MMW-20		WT 0							1																	
12	MMW-20		WT 0							1																	

ADDITIONAL COMMENTS		REQUISITIONED BY / AFFILIATION		ACCEPTED BY / AFFILIATION		SAMPLE CONDITIONS	
Please note dry weight, strike through any wet and sampled, and other notes when the last sample for this event has been taken. Full App IV Metals - SR, AS, BR, BA, CA, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33, D34, D35, D36, D37, D38, D39, D40, D41, D42, D43, D44, D45, D46, D47, D48, D49, D50, D51, D52, D53, D54, D55, D56, D57, D58, D59, D60, D61, D62, D63, D64, D65, D66, D67, D68, D69, D70, D71, D72, D73, D74, D75, D76, D77, D78, D79, D80, D81, D82, D83, D84, D85, D86, D87, D88, D89, D90, D91, D92, D93, D94, D95, D96, D97, D98, D99, D100.		Pace Project No./ Lab ID		Pace Project No./ Lab ID		Temp in °C	
One sample set submitted for THGA-10264004 and Eb-1 but they will be reported per AP-1/2 SDCS.		Date: 10/20/11		Date: 10/20/11		Received on (M/YR)	
Signature: [Handwritten]		Signature: [Handwritten]		Signature: [Handwritten]		Custody Sealed Cooler (Y/N)	
Signature: [Handwritten]		Signature: [Handwritten]		Signature: [Handwritten]		Samples intact (Y/N)	
Signature: [Handwritten]		Signature: [Handwritten]		Signature: [Handwritten]			
Signature: [Handwritten]		Signature: [Handwritten]		Signature: [Handwritten]			
Signature: [Handwritten]		Signature: [Handwritten]		Signature: [Handwritten]			
Signature: [Handwritten]		Signature: [Handwritten]		Signature: [Handwritten]			



CHAIN-OF-CUSTODY / Analytical Request Document

The On-site Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Requested Chain Information Company: <u>GA Power</u> Address: <u>Atlanta, GA</u>		Section B Requested Project Information Request for: <u>SCS Contacts</u> Order for: <u>Geophysical Contacts</u>		Section C Vendor Information Supplier: <u>Southern Co.</u> Address: _____ City/State: _____	
Email to: <u>SCS Contacts</u> Phone: _____ Requested Due Date/Time: _____ to _____		Purchase Order No.: _____ Project Name: <u>Petal Hammond AP-1 APD TV Scan</u> Project Number: <u>GWS5818</u>		Carrying Name: _____ Address: _____ City/State: _____	
Analyte(s): _____ Sample ID: _____ Sample ID(s) must be unique		Matrix Code: _____ Sample Type: <u>Grab Comp</u> Date: _____ Time: _____		# of Containers: _____ Unpreserved: _____ H ₂ SO ₄ : _____ HNO ₃ : _____ HCl: _____ NaOH: _____ H ₂ O ₂ : _____ Methanol: _____ Other: _____	
Section D Preserve Cool Inversion Matrix Code: _____ Sample Type: _____ Date: _____ Time: _____		Analyte Test: Fluoride: _____ FAI App JV Label: <u>60207470</u> RAD: <u>226225</u>		Residual Chlorine (Y/N): _____ Free Project No./ Lab ID: <u>62521171</u>	

ITEM #	Section D Preserve Cool Inversion	Matrix Code	Sample Type	Collected		Sample Temp at Collection	# of Containers	Preservatives		Analyte Test	Residual Chlorine (Y/N)	Free Project No./ Lab ID
				DATE	TIME			UNPRESERVED	OTHER			
1	HQWA-1	WT G	WT G	2/12/11	1:51	16	4	1	1	X	X	
2	HQWA-2	WT G	WT G	2/12/11	1:51	16	4	1	1	X	X	
3	HQWA-3	WT G	WT G	2/12/11	1:51	16	4	1	1	X	X	
4	HQWA-4	WT G	WT G	2/12/11	1:51	16	4	1	1	X	X	
5	HQWA-5	WT G	WT G	2/12/11	1:51	16	4	1	1	X	X	
6	HQWA-6	WT G	WT G	2/12/11	1:51	16	4	1	1	X	X	
7	HQWA-7	WT G	WT G	2/12/11	1:51	16	4	1	1	X	X	
8	HQWA-8	WT G	WT G	2/12/11	1:51	16	4	1	1	X	X	
9	HQWA-9	WT G	WT G	2/12/11	1:51	16	4	1	1	X	X	
10	HQWA-10	WT G	WT G	2/12/11	1:51	16	4	1	1	X	X	
11	HQWA-11	WT G	WT G	2/12/11	1:51	16	4	1	1	X	X	
12	HQWA-12	WT G	WT G	2/12/11	1:51	16	4	1	1	X	X	

Additional Comments: _____

Relinquished By: Thomas Bush Date: 2/12/11 Time: 1:51

Accepted By: Thomas Bush Date: 2/12/11 Time: 1:51

Sampler Name and Signature: _____

Print Name of Sampler: Thomas Bush

Signature of Sampler: _____

Date Signed: 02/12/11

Temp in °C: _____

Received on Ice (Y/N): _____

Custody Sealed Cooler (Y/N): _____

Sat. of Ice Melted (Y/N): _____



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

Page: **3** of **4**

Section A Required Client Information Company: GA Power Address: Atlanta, GA		Section B Required Project Information Request to: SCS Contacts Order to: Geographic Contacts		Section C Analytical Information Analyte: _____ Matrix: _____ Method: Kevin Herring Project Name: Hight Hampton A.P. 1 App. IV Scan Project Number: STW00818	
From to: SCS Contacts From: _____ To: _____		Analytical Information Analyte: _____ Matrix: _____ Method: Kevin Herring Project Name: Hight Hampton A.P. 1 App. IV Scan Project Number: STW00818		Analytical Information Analyte: _____ Matrix: _____ Method: Kevin Herring Project Name: Hight Hampton A.P. 1 App. IV Scan Project Number: STW00818	

ITEM #	Section D Required Client Information	Section E Required Project Information	Section F Analytical Information	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES	ANALYSIS TESTS	RESIDUAL CHLORINE (Y/N)	SAMPLER CONDITIONS
				DATE	TIME						
1	SAMPLE ID (A-Z, 0-9 / - /) Sample IDs MUST BE UNIQUE	MATRIX CODE (0-9999999999) SAMPLE TYPE (0-9999999999)	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME
2	MWV-5	WT G									
3	MWV-6	WT G									
4	MWV-7	WT G									
5	MWV-19	WT G									
6	MWV-29	WT G									
7	MWV-2KD	WT G									
8	MWV-2SD	WT G									
9	MWV-28D	WT G									
10	MWV-27D	WT G									
11	MWV-28D	WT G									
12	DUP-1	WT G									

ADDITIONAL COMMENTS:
 Please note dry work, straw through dry mass not sampled, and
 include when possible, sample for the analytical determination.
 *Full list of methods: X4, P4, B4, C4, G4, H4, I4, J4, K4, L4,
 M4, N4, O4, P4, Q4, R4, S4, T4, U4, V4, W4, X4, Y4, Z4,
 AA4, AB4, AC4, AD4, AE4, AF4, AG4, AH4, AI4, AJ4, AK4, AL4,
 AM4, AN4, AO4, AP4, AQ4, AR4, AS4, AT4, AU4, AV4, AW4, AX4,
 AY4, AZ4, BA4, BB4, BC4, BD4, BE4, BF4, BG4, BH4, BI4, BJ4,
 BK4, BL4, BM4, BN4, BO4, BP4, BQ4, BR4, BS4, BT4, BU4, BV4,
 BW4, BX4, BY4, BZ4, CA4, CB4, CC4, CD4, CE4, CF4, CG4, CH4,
 CI4, CJ4, CK4, CL4, CM4, CN4, CO4, CP4, CQ4, CR4, CS4, CT4,
 CU4, CV4, CW4, CX4, CY4, CZ4, DA4, DB4, DC4, DD4, DE4, DF4,
 DG4, DH4, DI4, DJ4, DK4, DL4, DM4, DN4, DO4, DP4, DQ4, DR4,
 DS4, DT4, DU4, DV4, DW4, DX4, DY4, DZ4, EA4, EB4, EC4, ED4,
 EE4, EF4, EG4, EH4, EI4, EJ4, EK4, EL4, EM4, EN4, EO4, EP4,
 EQ4, ER4, ES4, ET4, EU4, EV4, EW4, EX4, EY4, EZ4, FA4, FB4,
 FC4, FD4, FE4, FF4, FG4, FH4, FI4, FJ4, FK4, FL4, FM4, FN4,
 FO4, FP4, FQ4, FR4, FS4, FT4, FU4, FV4, FW4, FX4, FY4, FZ4,
 GA4, GB4, GC4, GD4, GE4, GF4, GG4, GH4, GI4, GJ4, GK4, GL4,
 GM4, GN4, GO4, GP4, GQ4, GR4, GS4, GT4, GU4, GV4, GW4,
 GX4, GY4, GZ4, HA4, HB4, HC4, HD4, HE4, HF4, HG4, HH4, HI4,
 HJ4, HK4, HL4, HM4, HN4, HO4, HP4, HQ4, HR4, HS4, HT4,
 HU4, HV4, HW4, HX4, HY4, HZ4, IA4, IB4, IC4, ID4, IE4, IF4,
 IG4, IH4, II4, IJ4, IK4, IL4, IM4, IN4, IO4, IP4, IQ4, IR4,
 IS4, IT4, IU4, IV4, IW4, IX4, IY4, IZ4, JA4, JB4, JC4, JD4,
 JE4, JF4, JG4, JH4, JI4, JJ4, JK4, JL4, JM4, JN4, JO4, JP4,
 JQ4, JR4, JS4, JT4, JU4, JV4, JW4, JX4, JY4, JZ4, KA4, KB4,
 KC4, KD4, KE4, KF4, KG4, KH4, KI4, KJ4, KK4, KL4, KM4, KN4,
 KO4, KP4, KQ4, KR4, KS4, KT4, KU4, KV4, KW4, KX4, KY4,
 KZ4, LA4, LB4, LC4, LD4, LE4, LF4, LG4, LH4, LI4, LJ4, LK4,
 LL4, LM4, LN4, LO4, LP4, LQ4, LR4, LS4, LT4, LU4, LV4, LW4,
 LX4, LY4, LZ4, MA4, MB4, MC4, MD4, ME4, MF4, MG4, MH4,
 MI4, MJ4, MK4, ML4, MM4, MN4, MO4, MP4, MQ4, MR4, MS4,
 MT4, MU4, MV4, MW4, MX4, MY4, MZ4, NA4, NB4, NC4, ND4,
 NE4, NF4, NG4, NH4, NI4, NJ4, NK4, NL4, NM4, NN4, NO4,
 NP4, NQ4, NR4, NS4, NT4, NU4, NV4, NW4, NX4, NY4, NZ4,
 OA4, OB4, OC4, OD4, OE4, OF4, OG4, OH4, OI4, OJ4, OK4,
 OL4, OM4, ON4, OO4, OP4, OQ4, OR4, OS4, OT4, OU4, OV4,
 OW4, OX4, OY4, OZ4, PA4, PB4, PC4, PD4, PE4, PF4, PG4,
 PH4, PI4, PJ4, PK4, PL4, PM4, PN4, PO4, PP4, PQ4, PR4,
 PS4, PT4, PU4, PV4, PW4, PX4, PY4, PZ4, QA4, QB4, QC4,
 QD4, QE4, QF4, QG4, QH4, QI4, QJ4, QK4, QL4, QM4, QN4,
 QO4, QP4, QQ4, QR4, QS4, QT4, QU4, QV4, QW4, QX4, QY4,
 QZ4, RA4, RB4, RC4, RD4, RE4, RF4, RG4, RH4, RI4, RJ4,
 RK4, RL4, RM4, RN4, RO4, RP4, RQ4, RR4, RS4, RT4, RU4,
 RV4, RW4, RX4, RY4, RZ4, SA4, SB4, SC4, SD4, SE4, SF4,
 SG4, SH4, SI4, SJ4, SK4, SL4, SM4, SN4, SO4, SP4, SQ4,
 SR4, SS4, ST4, SU4, SV4, SW4, SX4, SY4, SZ4, TA4, TB4,
 TC4, TD4, TE4, TF4, TG4, TH4, TI4, TJ4, TK4, TL4, TM4,
 TN4, TO4, TP4, TQ4, TR4, TS4, TT4, TU4, TV4, TW4, TX4,
 TY4, TZ4, UA4, UB4, UC4, UD4, UE4, UF4, UG4, UH4, UI4,
 UJ4, UK4, UL4, UM4, UN4, UO4, UP4, UQ4, UR4, US4, UT4,
 UY4, UZ4, VA4, VB4, VC4, VD4, VE4, VF4, VG4, VH4, VI4,
 VJ4, VK4, VL4, VM4, VN4, VO4, VP4, VQ4, VR4, VS4, VT4,
 VU4, VV4, VW4, VX4, VY4, VZ4, WA4, WB4, WC4, WD4, WE4,
 WF4, WG4, WH4, WI4, WJ4, WK4, WL4, WM4, WN4, WO4,
 WP4, WQ4, WR4, WS4, WT4, WU4, WV4, WW4, WX4, WY4,
 WZ4, XA4, XB4, XC4, XD4, XE4, XF4, XG4, XH4, XI4, XJ4,
 XK4, XL4, XM4, XN4, XO4, XP4, XQ4, XR4, XS4, XT4, XU4,
 XV4, XW4, XX4, XY4, XZ4, YA4, YB4, YC4, YD4, YE4, YF4,
 YG4, YH4, YI4, YJ4, YK4, YL4, YM4, YN4, YO4, YP4, YQ4,
 YR4, YS4, YT4, YU4, YV4, YW4, YX4, YY4, YZ4, ZA4, ZB4,
 ZC4, ZD4, ZE4, ZF4, ZG4, ZH4, ZI4, ZJ4, ZK4, ZL4, ZM4,
 ZN4, ZO4, ZP4, ZQ4, ZR4, ZS4, ZT4, ZU4, ZV4, ZW4, ZX4,
 ZY4, ZZ4

ACQUIRED BY / AFFILIATION: **Wm. West**

DATE: **2/15/11**

ACCEPTED BY / AFFILIATION: **Kevin Herring**

DATE: **2/15/11**

DATE: **2/15/11**

TIME: **1600**

DATE: **2/15/11**

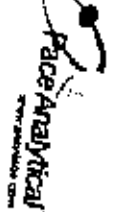
TIME: **0945**

Temp in °C: _____

Received on ice (Y/N): _____

Custody Sealed Cooler (Y/N): _____

Samples Intact (Y/N): _____



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

Page: 4 of 4

Section A Required Client Information: Company: GA Power Address: Atlanta, GA Phone: _____ Email to: SCS Contacts Project Name: Plant Expansion of AP-1 APP IV SCAM Requested Due Date/TIME: 10 day		Section B Required Project Information: Report to: SCS Contacts Copy to: Geophysical Contacts Purchase Order No.: _____ Project Name: Plant Expansion of AP-1 APP IV SCAM Project Number: GW8818		Section C Project Information: Analyst: Southern Co. Company Name: Southern Co. Address: _____ Project Code: _____ Material: Kona Mining Site Location: _____ State: GA	
Section D Required Analytical Method: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> LEAD <input type="checkbox"/> RCRA <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> OTHER USE		Section E Required Analytical Method: State: GA		Section F Residual Chlorine (Y/N) Pace Project New Lab 10.	

ITEM #	Section D Systemation Pathway	Vial Height Codes MATTER DATE/TIME PROJECT SCHEDULE CA MATERIAL ANALYST DATE	MATRIX CODE (See vial codes to left)	SAMPLE TYPE (G=GRAB D=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Requested Analytical Method (Y/N)			Residual Chlorine (Y/N)				
											Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol	Other	Fluoride	Full App. IV Method 06207A70		RAD 220228			
1	SB-1									5															
2	FB-1									1															
3	FB-1									1															
4										1															
5										1															
6										1															
7										1															
8										1															
9										1															
10										1															
11										1															
12										1															

ADDITIONAL COMMENTS	REQUISITIONED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE COMMENTS
Phase not in report. Find through any other not sampled, and with vial not in sample for the event. Please check with State Dept of Resources, Attn: Mr. Carter, On the 11th day May 2011	GA Power	2/12/11	1600	GA Power	2/12/11	1600	
One sample set submitted for TRICAL-103 (RAD-103) and ERI-1	GA Power	2/12/11	1600	GA Power	2/12/11	1600	
RII Dry will be reported by AF-402 SDCM	GA Power	2/12/11	1600	GA Power	2/12/11	1600	

SAMPLE NAME AND SIGNATURE PRINT Name of SAMPLE: PACIFIC RESEARCH SIGNATURE of SAMPLE: [Signature] DATE Signed: 02/13/2011 ANALYST: [Signature]	
---	--

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CHAIN OF CUSTODY / Analytical Request Document



Section A Required Client Information
 Company: GA Power
 Address: Atlanta, GA
 Email To: SCS Contacts
 Requested Date/Department: to be by

Section B Required Project Information
 Project To: SCS Contacts
 Copy To: Geographic Contacts
 Project Name: Plant Hammond AP-1 App IV Scan
 Project Number: GW8561B

Section C Facility Information
 Company Name: Southern Co
 Address: [Blank]
 Person: Kevin Harting
 Title: [Blank]

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER
 Site Location: [Blank] STATE: GA

Page 1 of 2

Section D Required Chain Information

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

ITEM #	Matrix Code	Sample Type (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test			Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)														
			DATE	TIME							DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME			DATE	TIME												
1	HQWA-1	WT G	WT G							Unpreserved																										
2	HQWA-2	WT G	WT G																																	
3	HQWA-3	WT G	WT G																																	
4	HQWA-4SD	WT G	WT G																																	
5	HQWA-4AD	WT G	WT G																																	
6	HQWA-7	WT G	WT G																																	
7	HQWC-8	WT G	WT G																																	
8	HQWC-9	WT G	WT G																																	
9	HQWC-10	WT G	WT G																																	
10	HQWC-11	WT G	WT G																																	
11	HQWC-12	WT G	WT G																																	
12	HQWC-13	WT G	WT G																																	

ADDITIONAL COMMENTS:
 Please note dry weight. Entry through any weight not weighed, and sample when the left sample for the standard, been taken.
 Full App IV Metals - SA, BA, BR, CR, CO, CP, CU, PB, LI, TH, Hg, SA, B
 One sample set submitted for HQWA-12, HQWA-13, HQWA-14 and HQWA-15.
 All they will be recorded for AP-12 SDCs

REQUISITIONED BY / AFFILIATION: [Signature] [Blank]

DATE: 2/15/2021

TIME: 11:31

ACCEPTED BY / AFFILIATION: [Signature] [Blank]

DATE: 2/15/2021

TIME: 11:31

SAMPLES CHECKED: [Blank]

Temp in °C

Received on ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

Request Analyte Filtered (Y/N)

Residual Chlorine (Y/N)

9252151
 Page Project No: LA010.

1-200701 Issue by Signing this form you are certifying that the data reported is true and accurate to the best of your knowledge and belief.



CHAIN-OF-CUSTODY / Analytical Request Document
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Section A Requested Client Information Company: GA Power Address: Atlanta, GA		Section B Requested Project Information Project For: SCS Contacts Order To: Geos/Neer Contacts		Section C Project Information Address: Southern Co Company Name: Southern Co	
Project No: SCS Contacts Project Name: Plant Hammond A/P-1 App. IV Scan		Purchase Order No: Project Number: GW65618		Address: Street: Plant Hammond City/State: Atlanta, GA Phone Number:	
Requested Date of Analysis: 19 day		Requested Analysis Method (VIN):		REGULATOR AGENCY:	
State: GA		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RORR <input type="checkbox"/> OTHER		Site Location: GA	

ITEM #	Section D Requested Client Information Matrix Code VAIL Matrix Codes DATE COLLECTED TIME COLLECTED DATE TIME	MATRIX CODE	SAMPLE TYPE (G-GRAS OR COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Requested Analysis Method (VIN)	Residual Chlorine (Y/N)	pH			
				DATE	TIME	TIME			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol				Other	Fluoride	Full App. IV Metals 60207610
1	MM05	WT G	2/15/17																		
2	MMW-7	WT G																			
3	MMW-19	WT G																			
4	MMW-20	WT G																			
5	MMW-24D	WT G																			
6	MMW-25D	WT G																			
7	MMW-26D	WT G																			
8	MMW-28D	WT G																			
9	MMW-27D	WT G																			
10	MMW-28D	WT G																			
11	MMW-29	WT G																			
12	MMW-29	WT G																			

ADDITIONAL COMMENTS:

Please note dry wells. Some though dry wells not sampled and only when the last sample for the sample has been taken. Full App. IV Metals-SP As Br Ba Cd Cr Co Cu Fe Hg Mn Ni Pb Se V Zn. One sample not identified for HGMW-120/240/400 and EP-1. Bad they will be reported for AD-172 SDGA.

Requested Date of Analysis: 19 day

Requested Analysis Method (VIN):

State: GA

REGULATOR AGENCY:

Site Location: GA

Temp in °C

Received on: Ke (Y/N)

Cooling Sealed Cooler (Y/N)

Samples Intact (Y/N)

Signature: Thomas Kestel

Date Signed: 2/15/17

Signature: Thomas Kestel

Date Signed: 2/15/17

Signature: Thomas Kestel

Date Signed: 2/15/17



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

Page: 1 of 3

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

Section B Required Project Information:
 Report to: SCS Contacts
 Copy to: Geographic Contacts

Section C Project Information:
 Address: Southern Ga.
 Company Name:
 Project Name: Plant Hammond AP-1 App. JV Scan
 Project Number: GW62818
 State: GA

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER 999-

ITEM #	System D Required Client Information	FIELD ANALYST CODES MAJORS MINORS ANALYST PROJECT NUMBER DATE TIME SITE	MATRIX CODE	SAMPLE TYPE (G-CRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)	PH
					DATE	TIME							
1	HQWA-1												
2	HQWA-2												
3	HQWA-3												
4	HQWA-4B												
5	HQWA-4B												
6	HQWA-4B												
7	HQWA-8												
8	HQWC-8												
9	HQWC-9												
10	HQWC-10												
11	HQWS-11												
12	HQWS-12												
13	HQWS-13												

ADDITIONAL COMMENTS:
 Please note any notes, times through any wells not sampled, and other information that may be relevant to the project. The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.
 One sample not submitted for HQWA-12504040 and 88-1 but they will be recorded for AP-02 SCQA.

RELEASER'S SIGNATURE: *[Signature]* DATE: 2/17/11 TIME: 15:41

ACCEPTED BY: *[Signature]* DATE: 2/18/11 TIME: 16:08

ANALYST SIGNATURE: *[Signature]* DATE: 2/18/11 TIME: 16:08

TEMPERATURE: 4.9 °C

RECEIVED ON: Y

CUSTODY SEALED: N

SAMPLES INTACT: Y



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a Legal Document. All relevant data must be completed accurately.



Page: 2 of 3

Section A Required Client Information
 Company: GA Power
 Address: Atlanta GA
 Contact: SCS Contacts
 Requested Date: 10 day

Section B Required Project Information
 Report To: SCS Contacts
 Order To: Geosyntec Contacts
 Project Name: Plant Hammond AP-1 App IV Scan
 Project Number: GWMS91B

Section C Service Information
 Address: Southern Co.
 Company Name: Southern Co.
 Project Name: Kevin Herring
 Requested Analysis: Full App IV Metals 60207420*

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RORA OTHER
 Site Location: GA
 STATE: GA

ITEM #	Section D Request Client Information	Valid Matrix Codes MATRIX CODES EPA SW-846 WATER WASTE WATER Hazardous Inorganic Organic Soil Air Sludge Leachate	Section E SLOPE	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)			Residual Chlorine (Y/N)	SAMPLE CONDITIONS			
						DATE	TIME					DATE	TIME	Fluoride			Full App IV Metals 60207420*	RAO 226228	
1	MW-5			WT G	2/16/2004	0627		17	4	1	Unpreserved								
2	MW-6			WT G	2/16/04	1512		17	4	1									
3	MW-7			WT G															
4	MW-19			WT G															
5	MW-20			WT G															
4	MW-24D			WT G	2/16/04	1244		17	4	1									
7	MW-26D			WT G															
8	MW-26D			WT G	2/16/04	1803		15	4	1									
9	MW-27D			WT G															
16	MW-28D			WT G															
11	MW-29			WT G															
12	Dwp-1			WT G															

ADDITIONAL COMMENTS
 Please note dry state: state through dry state not sampled and code when the last sample for the analytical batch.
 Full App IV Metals SW-846, As, Ba, Bi, Cd, Cr, Cu, Pb, Pt, Li, Hg, Mn, Se, II
 One sample not identified for HGWV-1250420420 and EG-1 and they will be re-coded for AP-12 SDCs

REPRODUCED BY / APPLICATION
 DATE: 2/17/2004 TIME: 0555
 SIGNATURE: Chad Russo

ACCEPTED BY / APPLICATION
 DATE: 2/18/2004 TIME: 1608
 SIGNATURE: Chad Russo

DATE SIGNED (HANDWRITTEN)
 2/16/2004

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

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

Section A Requested Client Information: Company: GA Power Address: Atlanta, GA		Section B Requested Project Information: Report to: SCS Contacts		Section C Inches Information: Location: Southwest	
City to: Atlanta, GA		Copy to: Georgia/Inch Contacts		Company Name: Southwest	
Email to: SCS Contacts		Purchase Order No.:		Address:	
Phone: Fax		Project Name: Plant Hammond AP-1 App. IV Scan		Site Code: Reference: Date Range: Kerni Heiting Manager: Pace Profile A	
Requested On: 18 Day		Project Number: GW85818		REGULATORY AGENCY: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> USE <input type="checkbox"/> ROQA <input checked="" type="checkbox"/> OTHER OAA Site Location: CA STATE: CA	

ITEM #	Section D Requested Client Information	Valid Matrix Codes ANALYSIS: METALS, AMMONIUM NITRATE, NITRATES, PHOSPHATE, NITROGEN, PESTICIDES, PCB'S, PHENOL, SILICA, SULFIDES, TOXIC METALS, TRACE ORGANICS, VOLATILES, WAXES, WAXES SCORER: DOY, K. A., CO, MS, AS, OT, TS	MATRIX CODE	SAMPLE TYPE (GAGRAB C/COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₈ Methanol Other	Requested Analytes Filtered (Y/N)			Residual Chlorine (Y/N)	SAMPLER CONDITIONS
												Fluoride	Full App.IV Metals 5020/7470	PAO 228/228		
1	ANV-5		WT G							4						
2	ANV-6		WT G							4						
3	ANV-2		WT G							4						
4	ANV-19		WT G							4						
5	ANV-28		WT G							4						
6	ANV-24D		WT G							4						
7	ANV-25B		WT G							4						
8	ANV-25D		WT G							4						
9	ANV-27D		WT G							4						
10	ANV-27D		WT G							4						
11	ANV-28		WT G							4						
12	ANV-28		WT G							4						
	DUP-1		WT G							4						

Requested by: Thomas Hayes Date: 2/17/12 Signature: <i>Thomas Hayes</i>			Accepted by: Thomas Hayes Date: 2/17/12 Signature: <i>Thomas Hayes</i>		
Requested by: Thomas Hayes Date: 2/17/12 Signature: <i>Thomas Hayes</i>			Accepted by: Thomas Hayes Date: 2/17/12 Signature: <i>Thomas Hayes</i>		
Requested by: Thomas Hayes Date: 2/17/12 Signature: <i>Thomas Hayes</i>			Accepted by: Thomas Hayes Date: 2/17/12 Signature: <i>Thomas Hayes</i>		
Requested by: Thomas Hayes Date: 2/17/12 Signature: <i>Thomas Hayes</i>			Accepted by: Thomas Hayes Date: 2/17/12 Signature: <i>Thomas Hayes</i>		

The Client-Customer is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Project Information
 Client: GA Power
 Address: Atlanta, GA

Section B Requested Project Information
 Report To: SCS Contacts
 Contact To: Geosyntec Contacts

Section C Project Information
 Project Name: Plant Hammond AP-1 App IV Scan
 Project Number: GWS65818

Section D Invoicing Information
 Invoice Information: American Southern Co.
 Company Name: Southern Co.
 Address: [Blank]
 Billing Cycle: [Blank]
 Billing Period: [Blank]
 Billing Month: [Blank]

REGULATORY AGENCY
 NPOES GROUND WATER DRINKING WATER
 UST RCRA OTHER (See...)

Site Location: GA
 STATE: GA

Section D Requested Client Information

SAMPLE ID
 (AZ-09/1)
 Sample IDs MUST BE UNIQUE

Matrix Code	Sample Type	DATE	TIME	DATE	TIME	Temp at Collection	# of Containers	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₈	Methanol	Other	Analysis Test	Requested Analysis Filled (Y/N)	Residual Chlorine (Y/N)	pH =
HGWA-1	G						4	1								Fluoride			
HGWA-2	G						4	1								Fluoride			
HGWA-3	G						4	1								Fluoride			
HGWA-43D	G						4	1								Fluoride			
HGWA-44D	G						4	1								Fluoride			
HGWC-7	G						4	1								Fluoride			
HGWC-8	G						4	1								Fluoride			
HGWC-9	G						4	1								Fluoride			
HGWC-10	G						4	1								Fluoride			
HGWC-11	G						4	1								Fluoride			
HGWC-12	G						4	1								Fluoride			
HGWC-13	G						4	1								Fluoride			

ADDITIONAL COMMENTS:

REMOVED BY / AFFILIATION: [Signature] / [Blank]

ACCEPTED BY / AFFILIATION: [Signature] / [Blank]

SAMPLE CONDITIONS
 pH = 7.27

Temp in °C

Received on ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Incept (Y/N)

SAMPLER NAME AND SIGNATURE:

PRINT Name of SAMPLER: [Blank]
 SIGNATURE of SAMPLER: [Signature]

DATE Signed: 2/22/21

DATE Signed (M/M/D/Y): 2/22/21

March 16, 2021

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

RE: Project: HAMMOND AP-1 APP IV RADS
Pace Project No.: 92521131

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between February 09, 2021 and February 23, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Pace Analytical Services Pennsylvania

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

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

Delaware Certification

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Florida: Cert E871149 SEKS WET

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3

Utah/TNI Certification #: PA014572017-9

USDA Soil Permit #: P330-17-00091

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 9526

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-1 APP IV RADS
Pace Project No.: 92521131

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92521131001	HGWA-1	Water	02/08/21 16:13	02/09/21 12:33
92521131002	HGWA-2	Water	02/09/21 10:38	02/10/21 09:56
92521131003	HGWA-3	Water	02/09/21 11:56	02/10/21 09:56
92521131004	HGWA-43D	Water	02/09/21 17:58	02/10/21 09:56
92521131005	HGWA-44D	Water	02/09/21 13:09	02/10/21 09:56
92521131006	HGWC-7	Water	02/10/21 12:11	02/11/21 09:19
92521131007	MW-28D	Water	02/10/21 17:31	02/11/21 09:19
92521131008	MW-28D FILTERED	Water	02/10/21 17:31	02/11/21 09:19
92521131009	MW-20	Water	02/11/21 11:59	02/12/21 09:36
92521131010	HGWC-11	Water	02/12/21 12:45	02/15/21 09:45
92521131011	HGWC-12	Water	02/12/21 14:51	02/15/21 09:45
92521131012	MW-19	Water	02/12/21 13:40	02/15/21 09:45
92521131013	DUP-1	Water	02/12/21 00:00	02/15/21 09:45
92521131014	MW-25D	Water	02/12/21 10:31	02/15/21 09:45
92521131015	FB-1	Water	02/12/21 15:30	02/15/21 09:45
92521131016	EB-1	Water	02/12/21 15:35	02/15/21 09:45
92521131017	HGWC-10	Water	02/15/21 13:31	02/17/21 11:54
92521131018	MW-7	Water	02/15/21 17:17	02/17/21 11:54
92521131019	MW-29	Water	02/15/21 14:45	02/17/21 11:54
92521131020	HGWC-8	Water	02/16/21 15:05	02/17/21 11:54
92521131021	HGWC-9	Water	02/16/21 18:39	02/17/21 11:54
92521131022	MW-5	Water	02/16/21 16:27	02/17/21 11:54
92521131023	MW-6	Water	02/16/21 15:12	02/17/21 11:54
92521131024	MW-24D	Water	02/16/21 12:44	02/17/21 11:54
92521131025	MW-26D	Water	02/16/21 18:03	02/17/21 11:54
92521131026	MW-27D	Water	02/16/21 11:11	02/17/21 11:54
92521131027	MW-27D FILTERED	Water	02/16/21 11:11	02/17/21 11:54
92521131028	HGWC-13	Water	02/22/21 13:54	02/23/21 09:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 APP IV RADS
Pace Project No.: 92521131

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92521131001	HGWA-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92521131002	HGWA-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521131003	HGWA-3	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521131004	HGWA-43D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521131005	HGWA-44D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521131006	HGWC-7	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521131007	MW-28D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521131008	MW-28D FILTERED	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521131009	MW-20	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521131010	HGWC-11	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521131011	HGWC-12	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521131012	MW-19	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521131013	DUP-1	EPA 9315	LAL	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 APP IV RADS
Pace Project No.: 92521131

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92521131014	MW-25D	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92521131015	FB-1	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521131016	EB-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92521131017	HGWC-10	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92521131018	MW-7	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521131019	MW-29	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92521131020	HGWC-8	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92521131021	HGWC-9	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521131022	MW-5	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92521131023	MW-6	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92521131024	MW-24D	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92521131025	MW-26D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92521131026	MW-27D	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92521131027	MW-27D FILTERED	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92521131028	HGWC-13	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 APP IV RADS
Pace Project No.: 92521131

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521131001	HGWA-1					
EPA 9315	Radium-226	0.0455 ± 0.0937 (0.218) C:84% T:NA	pCi/L		03/02/21 07:38	
EPA 9320	Radium-228	0.177 ± 0.371 (0.820) C:77% T:86%	pCi/L		02/24/21 15:30	
Total Radium Calculation	Total Radium	0.223 ± 0.465 (1.04)	pCi/L		03/05/21 14:01	
92521131002	HGWA-2					
EPA 9315	Radium-226	0.465 ± 0.189 (0.205) C:80% T:NA	pCi/L		03/08/21 08:33	
EPA 9320	Radium-228	0.256 ± 0.375 (0.807) C:77% T:89%	pCi/L		03/02/21 15:44	
Total Radium Calculation	Total Radium	0.721 ± 0.564 (1.01)	pCi/L		03/10/21 10:49	
92521131003	HGWA-3					
EPA 9315	Radium-226	0.161 ± 0.133 (0.248) C:80% T:NA	pCi/L		03/08/21 08:34	
EPA 9320	Radium-228	0.286 ± 0.395 (0.847) C:75% T:86%	pCi/L		03/02/21 15:44	
Total Radium Calculation	Total Radium	0.447 ± 0.528 (1.10)	pCi/L		03/10/21 10:49	
92521131004	HGWA-43D					
EPA 9315	Radium-226	0.138 ± 0.105 (0.176) C:87% T:NA	pCi/L		03/08/21 08:14	
EPA 9320	Radium-228	-0.0292 ± 0.272 (0.643) C:77% T:86%	pCi/L		03/02/21 11:24	
Total Radium Calculation	Total Radium	0.138 ± 0.377 (0.819)	pCi/L		03/10/21 10:49	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 APP IV RADS
Pace Project No.: 92521131

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521131005	HGWA-44D					
EPA 9315	Radium-226	0.171 ± 0.126 (0.217) C:84% T:NA	pCi/L		03/08/21 08:28	
EPA 9320	Radium-228	0.315 ± 0.398 (0.849) C:77% T:81%	pCi/L		03/02/21 11:24	
Total Radium Calculation	Total Radium	0.486 ± 0.524 (1.07)	pCi/L		03/10/21 10:49	
92521131006	HGWC-7					
EPA 9315	Radium-226	0.255 ± 0.156 (0.254) C:84% T:NA	pCi/L		03/08/21 08:08	
EPA 9320	Radium-228	0.0263 ± 0.311 (0.718) C:73% T:84%	pCi/L		03/02/21 11:25	
Total Radium Calculation	Total Radium	0.281 ± 0.467 (0.972)	pCi/L		03/10/21 10:49	
92521131007	MW-28D					
EPA 9315	Radium-226	0.0715 ± 0.101 (0.219) C:87% T:NA	pCi/L		03/08/21 08:12	
EPA 9320	Radium-228	0.129 ± 0.353 (0.790) C:73% T:80%	pCi/L		03/02/21 11:25	
Total Radium Calculation	Total Radium	0.201 ± 0.454 (1.01)	pCi/L		03/10/21 10:49	
92521131008	MW-28D FILTERED					
EPA 9315	Radium-226	0.112 ± 0.0987 (0.179) C:88% T:NA	pCi/L		03/08/21 08:14	
EPA 9320	Radium-228	0.422 ± 0.335 (0.657) C:75% T:82%	pCi/L		03/02/21 11:25	
Total Radium Calculation	Total Radium	0.534 ± 0.434 (0.836)	pCi/L		03/10/21 10:49	

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 APP IV RADS
Pace Project No.: 92521131

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521131009	MW-20					
EPA 9315	Radium-226	0.228 ± 0.142 (0.230)	pCi/L		03/08/21 08:15	
EPA 9320	Radium-228	C:82% T:NA 0.106 ± 0.303 (0.682)	pCi/L		03/02/21 11:25	
Total Radium Calculation	Total Radium	C:74% T:83% 0.334 ± 0.445 (0.912)	pCi/L		03/10/21 10:49	
92521131010	HGWC-11					
EPA 9315	Radium-226	0.273 ± 0.138 (0.181)	pCi/L		03/08/21 08:15	
EPA 9320	Radium-228	C:92% T:NA 0.829 ± 0.401 (0.685)	pCi/L		03/02/21 11:24	
Total Radium Calculation	Total Radium	C:77% T:82% 1.10 ± 0.539 (0.866)	pCi/L		03/10/21 10:49	
92521131011	HGWC-12					
EPA 9315	Radium-226	0.199 ± 0.139 (0.240)	pCi/L		03/08/21 08:15	
EPA 9320	Radium-228	C:82% T:NA 0.0372 ± 0.240 (0.556)	pCi/L		03/02/21 11:24	
Total Radium Calculation	Total Radium	C:77% T:90% 0.236 ± 0.379 (0.796)	pCi/L		03/10/21 10:49	
92521131012	MW-19					
EPA 9315	Radium-226	0.0614 ± 0.107 (0.242)	pCi/L		03/11/21 08:12	
EPA 9320	Radium-228	C:88% T:NA 0.703 ± 0.479 (0.919)	pCi/L		03/03/21 18:16	
Total Radium Calculation	Total Radium	C:80% T:84% 0.764 ± 0.586 (1.16)	pCi/L		03/11/21 12:05	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521131013	DUP-1					
EPA 9315	Radium-226	0.142 ± 0.107 (0.176) C:89% T:NA	pCi/L		03/11/21 08:13	
EPA 9320	Radium-228	0.618 ± 0.335 (0.584) C:83% T:80%	pCi/L		03/03/21 16:04	
Total Radium Calculation	Total Radium	0.760 ± 0.442 (0.760)	pCi/L		03/11/21 12:05	
92521131014	MW-25D					
EPA 9315	Radium-226	0.601 ± 0.198 (0.164) C:95% T:NA	pCi/L		03/11/21 08:13	
EPA 9320	Radium-228	0.570 ± 0.351 (0.643) C:79% T:81%	pCi/L		03/03/21 16:04	
Total Radium Calculation	Total Radium	1.17 ± 0.549 (0.807)	pCi/L		03/11/21 12:05	
92521131015	FB-1					
EPA 9315	Radium-226	0.209 ± 0.122 (0.178) C:93% T:NA	pCi/L		03/11/21 08:13	
EPA 9320	Radium-228	0.661 ± 0.382 (0.694) C:81% T:82%	pCi/L		03/03/21 16:04	
Total Radium Calculation	Total Radium	0.870 ± 0.504 (0.872)	pCi/L		03/11/21 12:05	
92521131016	EB-1					
EPA 9315	Radium-226	0.0746 ± 0.100 (0.213) C:80% T:NA	pCi/L		03/11/21 08:15	
EPA 9320	Radium-228	2.12 ± 0.734 (1.06) C:81% T:90%	pCi/L		03/03/21 19:10	
Total Radium Calculation	Total Radium	2.19 ± 0.834 (1.27)	pCi/L		03/11/21 12:05	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 APP IV RADS
Pace Project No.: 92521131

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521131017	HGWC-10					
EPA 9315	Radium-226	0.0638 ± 0.0809 (0.162)	pCi/L		03/11/21 08:15	
EPA 9320	Radium-228	C:76% T:NA 1.85 ± 0.759 (1.24)	pCi/L		03/03/21 19:10	
Total Radium Calculation	Total Radium	C:81% T:80% 1.91 ± 0.840 (1.40)	pCi/L		03/11/21 12:05	
92521131018	MW-7					
EPA 9315	Radium-226	0.237 ± 0.143 (0.224)	pCi/L		03/11/21 08:16	
EPA 9320	Radium-228	C:80% T:NA 0.655 ± 0.526 (1.05)	pCi/L		03/03/21 19:10	
Total Radium Calculation	Total Radium	C:79% T:83% 0.892 ± 0.669 (1.27)	pCi/L		03/11/21 12:05	
92521131019	MW-29					
EPA 9315	Radium-226	0.280 ± 0.158 (0.252)	pCi/L		03/11/21 08:16	
EPA 9320	Radium-228	C:82% T:NA 0.886 ± 0.609 (1.17)	pCi/L		03/03/21 19:10	
Total Radium Calculation	Total Radium	C:77% T:75% 1.17 ± 0.767 (1.42)	pCi/L		03/11/21 13:04	
92521131020	HGWC-8					
EPA 9315	Radium-226	0.270 ± 0.150 (0.229)	pCi/L		03/11/21 08:18	
EPA 9320	Radium-228	C:79% T:NA 0.494 ± 0.367 (0.723)	pCi/L		03/04/21 11:53	
Total Radium Calculation	Total Radium	C:79% T:89% 0.764 ± 0.517 (0.952)	pCi/L		03/11/21 13:04	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521131021	HGWC-9					
EPA 9315	Radium-226	0.169 ± 0.115 (0.181) C:88% T:NA	pCi/L		03/11/21 08:20	
EPA 9320	Radium-228	1.00 ± 0.571 (1.08) C:80% T:81%	pCi/L		03/04/21 15:07	
Total Radium Calculation	Total Radium	1.17 ± 0.686 (1.26)	pCi/L		03/11/21 13:04	
92521131022	MW-5					
EPA 9315	Radium-226	0.0673 ± 0.0891 (0.187) C:83% T:NA	pCi/L		03/11/21 08:20	
EPA 9320	Radium-228	0.399 ± 0.491 (1.04) C:78% T:76%	pCi/L		03/04/21 15:07	
Total Radium Calculation	Total Radium	0.466 ± 0.580 (1.23)	pCi/L		03/11/21 13:04	
92521131023	MW-6					
EPA 9315	Radium-226	0.198 ± 0.148 (0.277) C:86% T:NA	pCi/L		03/11/21 08:20	
EPA 9320	Radium-228	-0.0243 ± 0.474 (1.09) C:79% T:78%	pCi/L		03/04/21 15:07	
Total Radium Calculation	Total Radium	0.198 ± 0.622 (1.37)	pCi/L		03/11/21 13:04	
92521131024	MW-24D					
EPA 9315	Radium-226	0.0409 ± 0.100 (0.238) C:87% T:NA	pCi/L		03/11/21 08:20	
EPA 9320	Radium-228	0.115 ± 0.504 (1.13) C:77% T:85%	pCi/L		03/04/21 15:07	
Total Radium Calculation	Total Radium	0.156 ± 0.604 (1.37)	pCi/L		03/11/21 13:04	

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92521131025	MW-26D					
EPA 9315	Radium-226	0.166 ± 0.122 (0.210)	pCi/L		03/11/21 08:20	
EPA 9320	Radium-228	C:84% T:NA 0.339 ± 0.317 (0.646)	pCi/L		03/04/21 15:09	
Total Radium Calculation	Total Radium	C:80% T:92% 0.505 ± 0.439 (0.856)	pCi/L		03/11/21 13:04	
92521131026	MW-27D					
EPA 9315	Radium-226	0.552 ± 0.189 (0.182)	pCi/L		03/11/21 08:21	
EPA 9320	Radium-228	C:93% T:NA 0.654 ± 0.420 (0.801)	pCi/L		03/04/21 15:09	
Total Radium Calculation	Total Radium	C:77% T:90% 1.21 ± 0.609 (0.983)	pCi/L		03/11/21 13:04	
92521131027	MW-27D FILTERED					
EPA 9315	Radium-226	0.512 ± 0.187 (0.212)	pCi/L		03/11/21 08:21	
EPA 9320	Radium-228	C:95% T:NA 0.877 ± 0.471 (0.844)	pCi/L		03/04/21 15:09	
Total Radium Calculation	Total Radium	C:76% T:80% 1.39 ± 0.658 (1.06)	pCi/L		03/11/21 13:04	
92521131028	HGWC-13					
EPA 9315	Radium-226	0.166 ± 0.127 (0.209)	pCi/L		03/15/21 09:18	
EPA 9320	Radium-228	C:92% T:NA 0.857 ± 0.447 (0.804)	pCi/L		03/15/21 16:07	
Total Radium Calculation	Total Radium	C:79% T:90% 1.02 ± 0.574 (1.01)	pCi/L		03/16/21 09:30	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Sample: HGWA-1 **Lab ID: 92521131001** Collected: 02/08/21 16:13 Received: 02/09/21 12:33 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0455 ± 0.0937 (0.218) C:84% T:NA	pCi/L	03/02/21 07:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.177 ± 0.371 (0.820) C:77% T:86%	pCi/L	02/24/21 15:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.223 ± 0.465 (1.04)	pCi/L	03/05/21 14:01	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Sample: HGWA-2 **Lab ID: 92521131002** Collected: 02/09/21 10:38 Received: 02/10/21 09:56 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.465 ± 0.189 (0.205) C:80% T:NA	pCi/L	03/08/21 08:33	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.256 ± 0.375 (0.807) C:77% T:89%	pCi/L	03/02/21 15:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.721 ± 0.564 (1.01)	pCi/L	03/10/21 10:49	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-3 Lab ID: 92521131003 Collected: 02/09/21 11:56 Received: 02/10/21 09:56 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.161 ± 0.133 (0.248) C:80% T:NA	pCi/L	03/08/21 08:34	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.286 ± 0.395 (0.847) C:75% T:86%	pCi/L	03/02/21 15:44	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.447 ± 0.528 (1.10)	pCi/L	03/10/21 10:49	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-43D Lab ID: 92521131004 Collected: 02/09/21 17:58 Received: 02/10/21 09:56 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.138 ± 0.105 (0.176) C:87% T:NA	pCi/L	03/08/21 08:14	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.0292 ± 0.272 (0.643) C:77% T:86%	pCi/L	03/02/21 11:24	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.138 ± 0.377 (0.819)	pCi/L	03/10/21 10:49	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-44D Lab ID: 92521131005 Collected: 02/09/21 13:09 Received: 02/10/21 09:56 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.171 ± 0.126 (0.217) C:84% T:NA	pCi/L	03/08/21 08:28	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.315 ± 0.398 (0.849) C:77% T:81%	pCi/L	03/02/21 11:24	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.486 ± 0.524 (1.07)	pCi/L	03/10/21 10:49	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Sample: HGWC-7 **Lab ID: 92521131006** Collected: 02/10/21 12:11 Received: 02/11/21 09:19 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.255 ± 0.156 (0.254) C:84% T:NA	pCi/L	03/08/21 08:08	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.0263 ± 0.311 (0.718) C:73% T:84%	pCi/L	03/02/21 11:25	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.281 ± 0.467 (0.972)	pCi/L	03/10/21 10:49	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-28D Lab ID: 92521131007 Collected: 02/10/21 17:31 Received: 02/11/21 09:19 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0715 ± 0.101 (0.219) C:87% T:NA	pCi/L	03/08/21 08:12	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.129 ± 0.353 (0.790) C:73% T:80%	pCi/L	03/02/21 11:25	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.201 ± 0.454 (1.01)	pCi/L	03/10/21 10:49	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-28D FILTERED						
Lab ID: 92521131008						
Collected: 02/10/21 17:31						
Received: 02/11/21 09:19						
Matrix: Water						
PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.112 ± 0.0987 (0.179) C:88% T:NA	pCi/L	03/08/21 08:14	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.422 ± 0.335 (0.657) C:75% T:82%	pCi/L	03/02/21 11:25	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.534 ± 0.434 (0.836)	pCi/L	03/10/21 10:49	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-20 Lab ID: 92521131009 Collected: 02/11/21 11:59 Received: 02/12/21 09:36 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.228 ± 0.142 (0.230) C:82% T:NA	pCi/L	03/08/21 08:15	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.106 ± 0.303 (0.682) C:74% T:83%	pCi/L	03/02/21 11:25	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.334 ± 0.445 (0.912)	pCi/L	03/10/21 10:49	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-11 Lab ID: 92521131010 Collected: 02/12/21 12:45 Received: 02/15/21 09:45 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.273 ± 0.138 (0.181) C:92% T:NA	pCi/L	03/08/21 08:15	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.829 ± 0.401 (0.685) C:77% T:82%	pCi/L	03/02/21 11:24	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.10 ± 0.539 (0.866)	pCi/L	03/10/21 10:49	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-12 Lab ID: 92521131011 Collected: 02/12/21 14:51 Received: 02/15/21 09:45 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.199 ± 0.139 (0.240) C:82% T:NA	pCi/L	03/08/21 08:15	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.0372 ± 0.240 (0.556) C:77% T:90%	pCi/L	03/02/21 11:24	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.236 ± 0.379 (0.796)	pCi/L	03/10/21 10:49	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-19 Lab ID: 92521131012 Collected: 02/12/21 13:40 Received: 02/15/21 09:45 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0614 ± 0.107 (0.242) C:88% T:NA	pCi/L	03/11/21 08:12	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.703 ± 0.479 (0.919) C:80% T:84%	pCi/L	03/03/21 18:16	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.764 ± 0.586 (1.16)	pCi/L	03/11/21 12:05	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Sample: DUP-1 **Lab ID: 92521131013** Collected: 02/12/21 00:00 Received: 02/15/21 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.142 ± 0.107 (0.176) C:89% T:NA	pCi/L	03/11/21 08:13	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.618 ± 0.335 (0.584) C:83% T:80%	pCi/L	03/03/21 16:04	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.760 ± 0.442 (0.760)	pCi/L	03/11/21 12:05	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Sample: MW-25D **Lab ID: 92521131014** Collected: 02/12/21 10:31 Received: 02/15/21 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.601 ± 0.198 (0.164) C:95% T:NA	pCi/L	03/11/21 08:13	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.570 ± 0.351 (0.643) C:79% T:81%	pCi/L	03/03/21 16:04	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.17 ± 0.549 (0.807)	pCi/L	03/11/21 12:05	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Sample: FB-1 **Lab ID: 92521131015** Collected: 02/12/21 15:30 Received: 02/15/21 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.209 ± 0.122 (0.178) C:93% T:NA	pCi/L	03/11/21 08:13	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.661 ± 0.382 (0.694) C:81% T:82%	pCi/L	03/03/21 16:04	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.870 ± 0.504 (0.872)	pCi/L	03/11/21 12:05	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Sample: EB-1 **Lab ID: 92521131016** Collected: 02/12/21 15:35 Received: 02/15/21 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0746 ± 0.100 (0.213) C:80% T:NA	pCi/L	03/11/21 08:15	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	2.12 ± 0.734 (1.06) C:81% T:90%	pCi/L	03/03/21 19:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.19 ± 0.834 (1.27)	pCi/L	03/11/21 12:05	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-10 Lab ID: 92521131017 Collected: 02/15/21 13:31 Received: 02/17/21 11:54 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0638 ± 0.0809 (0.162) C:76% T:NA	pCi/L	03/11/21 08:15	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.85 ± 0.759 (1.24) C:81% T:80%	pCi/L	03/03/21 19:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.91 ± 0.840 (1.40)	pCi/L	03/11/21 12:05	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Sample: MW-7 **Lab ID: 92521131018** Collected: 02/15/21 17:17 Received: 02/17/21 11:54 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.237 ± 0.143 (0.224) C:80% T:NA	pCi/L	03/11/21 08:16	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.655 ± 0.526 (1.05) C:79% T:83%	pCi/L	03/03/21 19:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.892 ± 0.669 (1.27)	pCi/L	03/11/21 12:05	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-29 Lab ID: 92521131019 Collected: 02/15/21 14:45 Received: 02/17/21 11:54 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.280 ± 0.158 (0.252) C:82% T:NA	pCi/L	03/11/21 08:16	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.886 ± 0.609 (1.17) C:77% T:75%	pCi/L	03/03/21 19:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.17 ± 0.767 (1.42)	pCi/L	03/11/21 13:04	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Sample: HGWC-8 **Lab ID: 92521131020** Collected: 02/16/21 15:05 Received: 02/17/21 11:54 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.270 ± 0.150 (0.229) C:79% T:NA	pCi/L	03/11/21 08:18	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.494 ± 0.367 (0.723) C:79% T:89%	pCi/L	03/04/21 11:53	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.764 ± 0.517 (0.952)	pCi/L	03/11/21 13:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Sample: HGWC-9 **Lab ID: 92521131021** Collected: 02/16/21 18:39 Received: 02/17/21 11:54 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.169 ± 0.115 (0.181) C:88% T:NA	pCi/L	03/11/21 08:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.00 ± 0.571 (1.08) C:80% T:81%	pCi/L	03/04/21 15:07	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.17 ± 0.686 (1.26)	pCi/L	03/11/21 13:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Sample: MW-5 **Lab ID: 92521131022** Collected: 02/16/21 16:27 Received: 02/17/21 11:54 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0673 ± 0.0891 (0.187) C:83% T:NA	pCi/L	03/11/21 08:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.399 ± 0.491 (1.04) C:78% T:76%	pCi/L	03/04/21 15:07	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.466 ± 0.580 (1.23)	pCi/L	03/11/21 13:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Sample: MW-6 **Lab ID: 92521131023** Collected: 02/16/21 15:12 Received: 02/17/21 11:54 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.198 ± 0.148 (0.277) C:86% T:NA	pCi/L	03/11/21 08:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.0243 ± 0.474 (1.09) C:79% T:78%	pCi/L	03/04/21 15:07	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.198 ± 0.622 (1.37)	pCi/L	03/11/21 13:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Sample: MW-24D **Lab ID: 92521131024** Collected: 02/16/21 12:44 Received: 02/17/21 11:54 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0409 ± 0.100 (0.238) C:87% T:NA	pCi/L	03/11/21 08:20	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.115 ± 0.504 (1.13) C:77% T:85%	pCi/L	03/04/21 15:07	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.156 ± 0.604 (1.37)	pCi/L	03/11/21 13:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Sample: MW-26D **Lab ID: 92521131025** Collected: 02/16/21 18:03 Received: 02/17/21 11:54 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.166 ± 0.122 (0.210) C:84% T:NA	pCi/L	03/11/21 08:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.339 ± 0.317 (0.646) C:80% T:92%	pCi/L	03/04/21 15:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.505 ± 0.439 (0.856)	pCi/L	03/11/21 13:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-27D Lab ID: 92521131026 Collected: 02/16/21 11:11 Received: 02/17/21 11:54 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.552 ± 0.189 (0.182) C:93% T:NA	pCi/L	03/11/21 08:21	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.654 ± 0.420 (0.801) C:77% T:90%	pCi/L	03/04/21 15:09	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.21 ± 0.609 (0.983)	pCi/L	03/11/21 13:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-27D FILTERED						
Lab ID: 92521131027						
Collected: 02/16/21 11:11						
Received: 02/17/21 11:54						
Matrix: Water						
PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.512 ± 0.187 (0.212) C:95% T:NA	pCi/L	03/11/21 08:21	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.877 ± 0.471 (0.844) C:76% T:80%	pCi/L	03/04/21 15:09	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.39 ± 0.658 (1.06)	pCi/L	03/11/21 13:04	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Sample: HGWC-13 **Lab ID: 92521131028** Collected: 02/22/21 13:54 Received: 02/23/21 09:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.166 ± 0.127 (0.209) C:92% T:NA	pCi/L	03/15/21 09:18	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.857 ± 0.447 (0.804) C:79% T:90%	pCi/L	03/15/21 16:07	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.02 ± 0.574 (1.01)	pCi/L	03/16/21 09:30	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

QC Batch: 435459

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92521131001

METHOD BLANK: 2102227

Matrix: Water

Associated Lab Samples: 92521131001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.276 ± 0.140 (0.180) C:89% T:NA	pCi/L	03/02/21 07:53	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS
Pace Project No.: 92521131

QC Batch:	435786	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92521131002, 92521131003, 92521131004, 92521131005, 92521131006, 92521131007, 92521131008, 92521131009, 92521131010, 92521131011

METHOD BLANK: 2103744 Matrix: Water

Associated Lab Samples: 92521131002, 92521131003, 92521131004, 92521131005, 92521131006, 92521131007, 92521131008, 92521131009, 92521131010, 92521131011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0425 ± 0.0687 (0.225) C:93% T:NA	pCi/L	03/08/21 08:35	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

QC Batch: 435116

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92521131001

METHOD BLANK: 2100680

Matrix: Water

Associated Lab Samples: 92521131001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.356 ± 0.369 (0.763) C:72% T:87%	pCi/L	02/24/21 15:29	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

QC Batch: 437599

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92521131028

METHOD BLANK: 2112389

Matrix: Water

Associated Lab Samples: 92521131028

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.00470 ± 0.0712 (0.214) C:85% T:NA	pCi/L	03/15/21 09:18	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

QC Batch: 435836

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92521131012, 92521131013, 92521131014, 92521131015, 92521131016, 92521131017, 92521131018, 92521131019

METHOD BLANK: 2103905

Matrix: Water

Associated Lab Samples: 92521131012, 92521131013, 92521131014, 92521131015, 92521131016, 92521131017, 92521131018, 92521131019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.253 ± 0.323 (0.687) C:83% T:83%	pCi/L	03/03/21 16:05	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS
Pace Project No.: 92521131

QC Batch: 435838 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92521131020, 92521131021, 92521131022, 92521131023, 92521131024, 92521131025, 92521131026, 92521131027

METHOD BLANK: 2103907 Matrix: Water
Associated Lab Samples: 92521131020, 92521131021, 92521131022, 92521131023, 92521131024, 92521131025, 92521131026, 92521131027

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.298 ± 0.350 (0.738) C:76% T:86%	pCi/L	03/04/21 11:53	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

QC Batch:	435837	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92521131020, 92521131021, 92521131022, 92521131023, 92521131024, 92521131025, 92521131026, 92521131027

METHOD BLANK:	2103906	Matrix:	Water
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Associated Lab Samples: 92521131020, 92521131021, 92521131022, 92521131023, 92521131024, 92521131025, 92521131026, 92521131027

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.144 ± 0.106 (0.177) C:91% T:NA	pCi/L	03/11/21 08:18	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

QC Batch: 437641

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92521131028

METHOD BLANK: 2112538

Matrix: Water

Associated Lab Samples: 92521131028

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.312 ± 0.330 (0.686) C:82% T:90%	pCi/L	03/15/21 16:07	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

QC Batch: 435835

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92521131012, 92521131013, 92521131014, 92521131015, 92521131016, 92521131017, 92521131018, 92521131019

METHOD BLANK: 2103903

Matrix: Water

Associated Lab Samples: 92521131012, 92521131013, 92521131014, 92521131015, 92521131016, 92521131017, 92521131018, 92521131019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0385 ± 0.0817 (0.191) C:95% T:NA	pCi/L	03/11/21 08:12	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

QC Batch:	435787	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92521131002, 92521131003, 92521131004, 92521131005, 92521131006, 92521131007, 92521131008, 92521131009, 92521131010, 92521131011

METHOD BLANK:	2103745	Matrix:	Water
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Associated Lab Samples: 92521131002, 92521131003, 92521131004, 92521131005, 92521131006, 92521131007, 92521131008, 92521131009, 92521131010, 92521131011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.345 ± 0.339 (0.700) C:84% T:79%	pCi/L	03/02/21 12:33	

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QUALIFIERS

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 APP IV RADS

Pace Project No.: 92521131

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92521131001	HGWA-1	EPA 9315	435459		
92521131002	HGWA-2	EPA 9315	435786		
92521131003	HGWA-3	EPA 9315	435786		
92521131004	HGWA-43D	EPA 9315	435786		
92521131005	HGWA-44D	EPA 9315	435786		
92521131006	HGWC-7	EPA 9315	435786		
92521131007	MW-28D	EPA 9315	435786		
92521131008	MW-28D FILTERED	EPA 9315	435786		
92521131009	MW-20	EPA 9315	435786		
92521131010	HGWC-11	EPA 9315	435786		
92521131011	HGWC-12	EPA 9315	435786		
92521131012	MW-19	EPA 9315	435835		
92521131013	DUP-1	EPA 9315	435835		
92521131014	MW-25D	EPA 9315	435835		
92521131015	FB-1	EPA 9315	435835		
92521131016	EB-1	EPA 9315	435835		
92521131017	HGWC-10	EPA 9315	435835		
92521131018	MW-7	EPA 9315	435835		
92521131019	MW-29	EPA 9315	435835		
92521131020	HGWC-8	EPA 9315	435837		
92521131021	HGWC-9	EPA 9315	435837		
92521131022	MW-5	EPA 9315	435837		
92521131023	MW-6	EPA 9315	435837		
92521131024	MW-24D	EPA 9315	435837		
92521131025	MW-26D	EPA 9315	435837		
92521131026	MW-27D	EPA 9315	435837		
92521131027	MW-27D FILTERED	EPA 9315	435837		
92521131028	HGWC-13	EPA 9315	437599		
92521131001	HGWA-1	EPA 9320	435116		
92521131002	HGWA-2	EPA 9320	435787		
92521131003	HGWA-3	EPA 9320	435787		
92521131004	HGWA-43D	EPA 9320	435787		
92521131005	HGWA-44D	EPA 9320	435787		
92521131006	HGWC-7	EPA 9320	435787		
92521131007	MW-28D	EPA 9320	435787		
92521131008	MW-28D FILTERED	EPA 9320	435787		
92521131009	MW-20	EPA 9320	435787		
92521131010	HGWC-11	EPA 9320	435787		
92521131011	HGWC-12	EPA 9320	435787		
92521131012	MW-19	EPA 9320	435836		
92521131013	DUP-1	EPA 9320	435836		
92521131014	MW-25D	EPA 9320	435836		
92521131015	FB-1	EPA 9320	435836		
92521131016	EB-1	EPA 9320	435836		
92521131017	HGWC-10	EPA 9320	435836		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

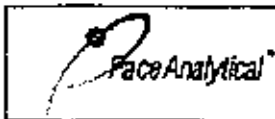
QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 APP IV RADS
Pace Project No.: 92521131

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92521131018	MW-7	EPA 9320	435836		
92521131019	MW-29	EPA 9320	435836		
92521131020	HGWC-8	EPA 9320	435838		
92521131021	HGWC-9	EPA 9320	435838		
92521131022	MW-5	EPA 9320	435838		
92521131023	MW-6	EPA 9320	435838		
92521131024	MW-24D	EPA 9320	435838		
92521131025	MW-26D	EPA 9320	435838		
92521131026	MW-27D	EPA 9320	435838		
92521131027	MW-27D FILTERED	EPA 9320	435838		
92521131028	HGWC-13	EPA 9320	437641		
92521131001	HGWA-1	Total Radium Calculation	437457		
92521131002	HGWA-2	Total Radium Calculation	438014		
92521131003	HGWA-3	Total Radium Calculation	438014		
92521131004	HGWA-43D	Total Radium Calculation	438014		
92521131005	HGWA-44D	Total Radium Calculation	438014		
92521131006	HGWC-7	Total Radium Calculation	438014		
92521131007	MW-28D	Total Radium Calculation	438014		
92521131008	MW-28D FILTERED	Total Radium Calculation	438014		
92521131009	MW-20	Total Radium Calculation	438014		
92521131010	HGWC-11	Total Radium Calculation	438014		
92521131011	HGWC-12	Total Radium Calculation	438014		
92521131012	MW-19	Total Radium Calculation	438252		
92521131013	DUP-1	Total Radium Calculation	438252		
92521131014	MW-25D	Total Radium Calculation	438252		
92521131015	FB-1	Total Radium Calculation	438252		
92521131016	EB-1	Total Radium Calculation	438252		
92521131017	HGWC-10	Total Radium Calculation	438252		
92521131018	MW-7	Total Radium Calculation	438252		
92521131019	MW-29	Total Radium Calculation	438275		
92521131020	HGWC-8	Total Radium Calculation	438275		
92521131021	HGWC-9	Total Radium Calculation	438275		
92521131022	MW-5	Total Radium Calculation	438275		
92521131023	MW-6	Total Radium Calculation	438275		
92521131024	MW-24D	Total Radium Calculation	438275		
92521131025	MW-26D	Total Radium Calculation	438275		
92521131026	MW-27D	Total Radium Calculation	438275		
92521131027	MW-27D FILTERED	Total Radium Calculation	438275		
92521131028	HGWC-13	Total Radium Calculation	438839		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Project #

WO#: 92521131

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



Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: MT 2/9/21

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 233 Type of Ice: Wet Blue None

Cooler Temp: 3.6 Correction Factor: Add/Subtract (°C) ± 0.4

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

Cooler Temp Corrected (°C): 4.0

USDA Regulated Soil (N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted:

Date/Time:

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



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

Section A Requestor Client Information Company: GA Power Address: Atlanta GA Email To: SCS Contacts Phone: [] Requested Date/Deliver: 10 Day	Section B Refined Project Information Report To: SCS Contacts Copy To: Geosynthetic Contacts Purchase Order No.: Project Name: Plant Hammond AP-1 App. IV Scan Project Number: GW6561B	Section C Vendor Information Company Name: Southern Co. Address: Region: South Personnel: Kevin Henning Price from \$:
REGULATORY AGENCY <input type="checkbox"/> AFD/EG <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER		State: GA

ITEM #	Section B Requestor Client Information	Valid Matrix Codes MATRIX CODE	EODL	DATE	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Requested Analytes Preserved (Y/N)	Residual Chlorine (Y/N)	pH = 7.11
					DATE	TIME					Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol			
1	HQWA-1	WT 0	WT 0	1613	1613	7	4	1	3		X	X	X	X	X	X	X	N		
2	HQWA-2	WT 0	WT 0				4	1	3		X	X	X	X	X	X	X	N		
3	HQWA-3	WT 0	WT 0				4	1	3		X	X	X	X	X	X	X	N		
4	HQWA-43D	WT 0	WT 0				4	1	3		X	X	X	X	X	X	X	N		
5	HQWA-44D	WT 0	WT 0				4	1	3		X	X	X	X	X	X	X	N		
6	HQWA-7	WT 0	WT 0				4	1	3		X	X	X	X	X	X	X	N		
7	HQWA-8	WT 0	WT 0				4	1	3		X	X	X	X	X	X	X	N		
8	HQWA-9	WT 0	WT 0				4	1	3		X	X	X	X	X	X	X	N		
9	HQWA-10	WT 0	WT 0				4	1	3		X	X	X	X	X	X	X	N		
10	HQWA-11	WT 0	WT 0				4	1	3		X	X	X	X	X	X	X	N		
11	HQWA-12	WT 0	WT 0				4	1	3		X	X	X	X	X	X	X	N		
12	HQWA-13	WT 0	WT 0				4	1	3		X	X	X	X	X	X	X	N		

ADDITIONAL COMMENTS:

Requisitioned by / Application: [Handwritten Signature] DATE: 2/13/12 TIME: 12:00

Accepted by / Application: [Handwritten Signature] DATE: 2/13/12 TIME: 12:00

Requester Analytes Preserved (Y/N): [Handwritten Markings]

Residual Chlorine (Y/N): [Handwritten Markings]

Temp in °C: 26.6

Recovery Ice (Y/N): []

Custody Sealed Cooler (Y/N): []

Sample Intact (Y/N): []

Signature: [Handwritten Signature] DATE: 2/8/2012



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



Section A
 Required Client Information

Company: GA Power
 Address: Atlanta, GA
 Email To: SCS Contacts
 Phone: []
 Requested Date: 02/17/11

Section B
 Required Project Information

Project Name: Flight Hammond AP-1 App. IV Scan
 Project Number: G165818
 Requested Date: 02/17/11

Section C
 Invoicing Information

Company Name: Southern Co.
 Address: []
 City: []
 State: []
 Zip: []

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER USE
 State Location: GA
 STATE: GA

Section D
 Required Client Information

SAMPLE ID
 14X 09 / 1
 Sample IDs MUST BE UNIQUE

VALID MATRIX CODES	DATE
DRINKING WATER	WT
WASTE WATER	WT
RESIDENTIAL	WT
INDUSTRIAL	WT
OTHER	WT
OTHER	WT
OTHER	WT
OTHER	WT
OTHER	WT
OTHER	WT

ITEM #	REMARKS	MATRIX CODE	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES							ANALYTES TEST				Residual Chlorine (Y/N)
				DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol	Other	Fluoride	
1		WT	G	2/17/11	11:30	15.5	1												
2		WT	G	2/17/11	11:30	15.5	1												
3		WT	G	2/17/11	11:30	15.5	1												
4		WT	G	2/17/11	11:30	15.5	1												
5		WT	G	2/17/11	11:30	15.5	1												
6		WT	G	2/17/11	11:30	15.5	1												
7		WT	G	2/17/11	11:30	15.5	1												
8		WT	G	2/17/11	11:30	15.5	1												
9		WT	G	2/17/11	11:30	15.5	1												
10		WT	G	2/17/11	11:30	15.5	1												
11		WT	G	2/17/11	11:30	15.5	1												
12		WT	G	2/17/11	11:30	15.5	1												

ADDITIONAL COMMENTS
 Please note any special instructions or other information that may be relevant to the analysis. This information should be included on the Chain of Custody form.

RELEASER'S SIGNATURE AND AFFILIATION
 [Signature] / [Affiliation]

ACCEPTED BY / INSTALLATION
 [Signature] / [Installation]

DATE
 2/17/11

TIME
 11:30

TEMPERATURE
 15.5

PH
 7.23

RESIDUAL CHLORINE
 Y/N

RECEIVED ON ICE (Y/N)
 []

OUTDOOR SEALED COOLER (Y/N)
 []

SAMPLE INTER (Y/N)
 []



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information Company: GA Power Address: Atlanta, GA		Section B Required Project Information Report to: SCS Contacts Copy to: GeoSyntec Contacts		Section C Analytical Information Location: Southern Co. Company Name:	
Email to: SCS Contacts Phone:		Purchase Order No: Project Name: Plant Hammond AP-1 App. IV Scan Project Number: GW6561B		Address: City/State: Zip Code: Project Manager: Kevin Fleming Other Project:	
Requested Due Date (A/T): To Day		Regulatory Agency: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER			
Site Location: GA State: GA		Residual Chlorine (Y/N):			

ITEM #	Section D Required Client Information	VALID Metals Codes MATRIX ANIONIC METALS CATIONIC METALS METALS OTHER OTHER	SCORE	MATRIX CODE (Use valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES	ANALYSIS TEST	REQUIRED ANALYTICAL FILTERS (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS
						DATE	TIME	DATE							
1	HQWMA-1			WT G											
2	HQWMA-2			WT G											
3	HQWMA-3			WT G											
4	HQWMA-43D			WT G	2/10/21	10:05			4						
5	HQWMA-44D			WT G	2/10/21	13:07			4						
6	HQWMA-7			WT G					4						
7	HQWMA-8			WT G					4						
8	HQWMA-9			WT G					4						
9	HQWMA-10			WT G					4						
10	HQWMA-11			WT G					4						
11	HQWMA-12			WT G					4						
12	HQWMA-13			WT G					4						

ADDITIONAL COMMENTS: [Blank]

RELEASED BY / AFFILIATION: [Signature] / PACB

ACCEPTED BY / AFFILIATION: [Signature] / Dr. Co.

DATE: 2/10/21 09:30

DATE: 2/16/21 09:30

SAMPLER NAME AND SIGNATURE: [Signature] / Chad Curtis

DATE SIGNED (MM/DD/YY): 2/16/2021

Temp in °C:

Received on Ice (Y/N):

Custody Sealed Cooler (Y/N):

Samples Intact (Y/N):



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: GA Power; Address: Atlanta, GA; Contact: SCS Contacts; Email To: SCS Contacts; Phone: 404-521-1300; Requested Data Date/Time: 10 Day

Section B Required Project Information: Project To: SCS Contracts; Copy To: Geographic Contacts; Project Name: Plant Hammond AP-1 App 1V Scan; Product Number: QWSB118

Section C Source Information: Location: Southern Co.; Company Name: Southern Co.; Address: 1000 Peachtree St NE; Atlanta, GA 30309; Contact: Kevin Harding

REGULATORY AGENCY: NDES GROUND WATER DRINKING WATER UST RCRA OTHER 08

ITEM #	Section D Required Client Information		Valid Matrix Codes	CODE	MATRIX CODE (See valid codes to the right)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES	ANALYSIS TEST	Required Analysis Preserved (Y/N)	Residual Chlorine (Y/N)	Pace Project No./Lab ID:
	Location	Required Date					CONCENTR	CHAMP											
1	HQWV-1	WT	LW	WT	G														
2	HQWV-2	WT	LW	WT	G														
3	HQWV-3	WT	LW	WT	G														
4	HQWV-4D	WT	LW	WT	G														
5	HQWV-24D	WT	LW	WT	G														
6	HQWV-2	WT	LW	WT	G														
7	HQWV-3	WT	LW	WT	G														
8	HQWV-3	WT	LW	WT	G														
9	HQWV-10	WT	LW	WT	G														
10	HQWV-11	WT	LW	WT	G														
11	HQWV-12	WT	LW	WT	G														
12	HQWV-13	WT	LW	WT	G														

ADDITIONAL COMMENTS: Please note dry weight, stibine boroph, any tests not completed, and this form is not valid for the following: 1. The Age: 1/1/2007 As Of: 10/1/07 Co. Po. U. H. No. Co. H

HELD INDETERMINED BY / APPROVAL: Kevin Harding / DATE: 11/1/11 TIME: 0930

ACCEPTED BY / APPROVAL: Kevin Harding / DATE: 11/1/11 TIME: 0856

SAMPLER NAME AND SIGNATURE: Kevin Harding / DATE SIGNED: 11/1/11 TIME: 0919

PRINT NAME OF SAMPLER: Kevin Harding

QUANTITY OF SAMPLER: 1 / DATE SIGNED (REVISIT): 11/10/11

Temp in °C: 13.24

Received on ice (Y/N): 085

Coolbox Sealed Cooler (Y/N): 085

Samples Intact (Y/N): 085



CHAIN-OF-CU... DY / Analytical Request Document

Section A Requested Client Information
 Company: GA Power
 Address: Atlanta, GA
 Email To: SCS Contacts
 Phone: [Blank] Fax: [Blank]
 Requested Date Analyzed: 11 Nov

Section B Requested Project Information
 Report To: SCS Contacts
 Copy To: Geographic Contacts
 Project Name: Park Hammond AP-1 AQP, IV Scan
 Project Number: GWB65818

Section C Project Information
 Location: Southern Co.
 County Name: [Blank]
 Address: [Blank]
 Point Of Contact: Kevin Fleming
 Business Phone: [Blank]
 Cell Phone #: [Blank]

REGULATORY AGENCY
 FIDES GROUND WATER DRINKING WATER
 UST RCRA OTHER
 State: GA

Page: 2 of 2

ITEM #	Section D Requested Client Information	Matrix Code	Sample Type (G=Grab C=Comp)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test			Residual Chlorine (Y/N)	Other				
										Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol	Other	Fluoride	Full App. IV Metals 60207 470*			PAO 229228			
1	SAMPLE ID (A-2 08 / 1) Sample IDs MUST BE UNIQUE		G	11/11/21	1326		1326		1																
2			G																						
3			G																						
4			G																						
5			G																						
6			G																						
7			G																						
8			G																						
9			G																						
10			G																						
11			G																						
12			G																						

Plate's new dry weight (gms) through any water not sampled, and
 date when the last sample for this client has been taken.
 *Full App. IV Metals - SO₄ AS Ba, PA, Cd, Cr, Cu, Pb, U, Ni, Hg, Hb
 Se, H

One sample set submitted for HCVIA-1020000040 and EBI-1
 but they will be reported for AD-12-5005

ADDITIONAL COMMENTS: *Quantities listed*

NEED INCURRED BY APPLICATOR

SAMPLER NAME AND SIGNATURE: *Morganas Hussler*

RIGHT NAME OF SAMPLER: *2111/21*

SIGNATURE OF SAMPLER: *[Signature]*

DATE SIGNED (MM/DD/YYYY): *09/10/21*

Temp in °C: [Blank]

Received on Ice (Y/N): [Blank]

Custody Sealed Cooler (Y/N): [Blank]

Samples Intact (Y/N): [Blank]

Project No./Lab ID: *02521031*

Important Note: By signing this form you are accepting PACS MET'S as the primary source and agreeing to the charges of 15% per month for any delay that will result in this form.

F-411-Q-0200rev 07.15-Feb-2007



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



Section A Requested Client Information Company: GA Power Address: Atlanta, GA		Section B Requested Project Information Reason for SCS Contacts Copy to Geographic Contacts		Section C Project Information A Number: SOUTHEM Co. Company Name Address City/State Project Name Project Number: QW65918 Requested Date/Time: 8:00 AM	
Email to: SCS Contacts Phone: Fax: Project Name: Plant Hammond AP-1 App. IV Scan Requested Date/Time: 8:00 AM		Purchase Order No.: Project Name: Plant Hammond AP-1 App. IV Scan Project Number: QW65918		Project Information A Number: SOUTHEM Co. Company Name Address City/State Project Name: Kevin Fleming Project Number: QW65918 Requested Date/Time: 8:00 AM	

ITEM #	Section D Requesting Client Information Valid Matrix Codes SCS CODE	MATRIX CODE	SAMPLE TYPE (Q-CRAB C-COMP)	COLLECTED			DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requester Analytical Filtered (Y/N)				Residual Chlorine (Y/N)	Sample Conditions											
				DATE	TIME	TIME					Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol		Other	Y	N	Y			N	Y	N								
1	MW-6									4																									
2	MW-6									4																									
3	MW-7									4																									
4	MW-19									4																									
5	MW-20									4																									
6	MW-26D									4																									
7	MW-26D									4																									
8	MW-26D									4																									
9	MW-27D									4																									
10	MW-28D									4																									
11	MW-29									4																									
12	MW-30									4																									

SAMPLE NAME AND SIGNATURE		DATE	TIME	DATE	TIME
PROJECT NAME OF SAMPLES: <i>Hydrois</i>	SIGNATURE OF OWNER: <i>[Signature]</i>	2/12/12	0845	2/12/12	0845
DATE SIGNED (MANDATORY): <i>2/12/12</i>	DATE SIGNED (MANDATORY): <i>2/12/12</i>	2/12/12	0845	2/12/12	0845



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section C
Company Information

Section A
Requested Client Information
Company: GA Power
Address: Atlanta, GA
Phone: SCS Contacts
Requested Date: 11/01/07

Section B
Requested Project Information
Report to: SCS Contacts
Copy to: Giesy/Scott/Conradis
Purchase Order No.:
Project Name: Plant Hammond AP-1 App IV Scan
Project Number: GW65818

Section C
Company Information
Client Name: Southern Co.
Address:
Contact Name: Kevin Herring
Phone:
Fax:
E-mail:
State: GA

Requested Analytical Field: **9746**

RESIDUAL CHLORINE (Y/N) YES NO
 WDES GROUND WATER ORDERING WATER
 US1 RCHA OTHER SPA

Site Location: **GA**

Section D
Requested Client Information

SAMPLE ID
(A-Z 123 /)
SAMPLE OR MUST BE UNIQUE

Visual Hazards - Check
 ALKALINITY: YES NO
 OIL: YES NO
 SOLIDS: YES NO
 OTHER: YES NO

MATRIX CODE: G (GRAB) C (COMB)

SAMPLE TYPE: G (GRAB) C (COMB)

DATE: 11/01/07

TIME: 1600

SAMPLE TEMP AT COLLECTION: 16

OF CONTAINERS: 1

Preservatives:
 H₂SO₄:
 HNO₃:
 HCl:
 NaOH:
 Na₂S₂O₅:
 Methanol:
 Other:

Analysis Test:
 PhosP: N N N
 Fed App IV Metals 6620747D: N N N
 RAD 226/228: N N N

Residual Chlorine (Y/N): YES

Place Project No./ Lab ID: 42521131

ITEM #	DESCRIPTION	MATRIX CODE	SAMPLE TYPE	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	UNPRESERVED	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol	Other	Analysis Test	RESIDUAL CHLORINE (Y/N)	PH	PH =	PH =	PH =	PH =
1	HQWAC-1	WT	G	11/01/07	1600	16	1															
2	HQWAC-2	WT	G	11/01/07	1600	16	1															
3	HQWAC-3	WT	G	11/01/07	1600	16	1															
4	HQWAC-10	WT	G	11/01/07	1600	16	1															
5	HQWAC-11	WT	G	11/01/07	1600	16	1															
6	HQWAC-7	WT	G	11/01/07	1600	16	1															
7	HQWAC-8	WT	G	11/01/07	1600	16	1															
8	HQWAC-9	WT	G	11/01/07	1600	16	1															
9	HQWAC-10	WT	G	11/01/07	1600	16	1															
10	HQWAC-11	WT	G	11/01/07	1600	16	1															
11	HQWAC-12	WT	G	11/01/07	1600	16	1															
12	HQWAC-13	WT	G	11/01/07	1600	16	1															

ADDITIONAL COMMENTS:
 Please note the water, stored through dry well not sampled, and
 note when the last sample for this well was taken.
 Full App IV Metals-SS, As, Ba, Be, Cd, Cr, Co, Cu, Fe, Ni, Pb, Hg, Mn,
 Se, Ti

One sample set submitted for HQWA-11/2/04/04/04 and EPA-1
 but they will be analyzed for ALL 12 SDES

RELINQUISHED BY / AFFILIATION: *Gregory H. Smith*
 DATE: 11/01/07

ACCEPTED BY / AFFILIATION: *Harriet W. Smith*
 DATE: 11/01/07

SAMPLER NAME AND SIGNATURE: *Harriet W. Smith*

PRINT NAME OF SAMPLER: *Harriet W. Smith*

SIGNATURE OF SAMPLER: *Harriet W. Smith*

DATE SIGNED (MM/DD/YY): 11/01/07

Temp in C:

Received on Ice (Y/N):

Cooling Coiled Cooler (Y/N):

Sample Photo (Y/N):



CHAIN-OF-CUSTODY Analytical Request Document

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

Page: 2 of 4

Section A
 Required Client Information
 Company: GA Power
 Address: Atlanta, GA
 Contact: Alyssa
 Project Name: SCS Controls
 Project Number: GW6581B
 Requested Due Date: 12/09/07

Section B
 Required Project Information
 Report to: SCS Controls
 City to: Conroyville Condaleis
 Project Name: Plant Hammond App 1 App 1V Scan
 Project Number: GW6581B

Section C
 Location Information
 Address: Southem Co.
 City: Conroyville
 State: GA
 Contact: Kevin Herring
 Project Name: Plant Hammond App 1 App 1V Scan
 Project Number: GW6581B

Residual Chlorine (Y/N)
 YES
 NO

Drinking Water
 HPOES
 GROUND WATER
 UST
 RONA
 OTHER

State: GA

Section B Required Client Information	Section B Required Project Information	Section C Location Information	Requester Name	Requester Title	Requester Address	Requester Phone	COLLECTED		PRESERVED		ANALYSIS TEST	Residual Chlorine (Y/N)	Other Notes		
							DATE	TIME	DATE	TIME					
SAMPLE ID (N2 047-3) Samples to MUST BE ANALYZED	Section B Required Client Information VALID Matrix Codes Matrix Code Matrix Type Matrix Material Matrix Color Matrix Volume Matrix Weight Matrix Date Matrix Lot #	Section B Required Project Information Matrix Code SAMPLE TYPE (G=GRAB C=COMP)	Section C Location Information Matrix Code SAMPLE TYPE (G=GRAB C=COMP)	Requester Name Requester Title Requester Address Requester Phone	Requester Name Requester Title Requester Address Requester Phone	Requester Name Requester Title Requester Address Requester Phone	Requester Name Requester Title Requester Address Requester Phone	DATE	TIME	DATE	TIME	Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₈ Methanol Other	Analysis Test Filtrate End Apply Status 60207470 RAD 228/228	Residual Chlorine (Y/N) Other Notes Plant Project No/ Lab ID: 42521131	
	1	MW-5	WT G												
	2	MW-5	WT G												
	3	MW-5	WT G												
	4	MW-19	WT G	3:45 PM											
	5	MW-20	WT G												
	6	MW-20	WT G												
	7	MW-25D	WT G												
	8	MW-26D	WT G												
	9	MW-27D	WT G												
	10	MW-28D	WT G												
	11	MW-28	WT G												
12	DUP-1	WT G													

ADDITIONAL COMMENTS
 Requested by: SCS Controls
 Date: 12/12/07
 Time: 1:00 PM

RELINQUISHED BY / AFFILIATION
 Name: Kevin Herring
 Title: Project Engineer
 Date: 12/12/07
 Time: 1:00 PM

ACCEPTED BY / AFFILIATION
 Name: Alyssa
 Title: Project Engineer
 Date: 12/12/07
 Time: 1:00 PM

SAMPLER NAME AND SIGNATURE
 Name: Kevin Herring
 Signature: [Signature]
 Date: 12/12/07
 Time: 1:00 PM

PRINT NAME OF SAMPLER: Kevin Herring
SIGNATURE OF SAMPLER: [Signature]
DATE SIGNED (MM/DD/YYYY): 12/12/07
TIME: 1:00 PM

Temp. °C
Residual Chlorine (Y/N)
Drinking Water
Other Notes



CHAIN-OF-CUSTODY
 A LEGAL DOCUMENT - All relevant fields must be completed accurately.

Page 3 of 4

Section A Requested Client Information Company: <u>GA Power</u> Address: <u>Atlanta, GA</u>		Section B Requested project information Report to: <u>SCS Contacts</u> Copy to: <u>Geosyntec Contacts</u>		Section C Invoicing Information Client Name: <u>Southern Co.</u> Address: _____ Job Order No.: _____ Job Order Date: _____ Job Order Project Name: <u>Korin Herring</u> Job Order State: _____	
Email To: <u>SCS Contacts</u> Phone: _____ Requested Date Delivered: <u>18 days</u>		Project Order No.: _____ Project Name: <u>Plant Horticulture AP-1 Appl. IV Scan</u> Project Number: <u>QW16918</u>		Requested Analysis Method (Y/N): <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RSPA <input type="checkbox"/> OTHER CBP-_____ Site Location: _____ STATE: <u>GA</u>	

ITEM #	Section D Requested Client Information Valid Label Code MATERIALS DATE RECEIVED DATE ANALYZED ANALYST LABORATORY PROJECT NAME PROJECT NUMBER OTHER	MATRIX CODE (see matrix code to M)	SAMPLE TYPE (IG=GRAB C=COMPL)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES										Residual Chlorine (Y/N)	pH Project And Lab ID.
										Unpreserved	H ₂ SO ₄	HNO ₃	KCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Analysis Test	Reference		
1	MMV-S	WT	G						1												
2	MMV-Q	WT	G						1												
3	MMV-Z	WT	G						1												
4	MMV-1B	WT	G						1												
5	MMV-2B	WT	G						1												
6	MMV-4D	WT	G						1												
7	MMV-25D	WT	G						1												
8	MMV-26D	WT	G						1												
9	MMV-27D	WT	G						1												
10	MMV-28D	WT	G						1												
11	MMV-29	WT	G						1												
12	DUP-1	WT	G						1												

Additional Comments: _____

Relinquished by: Yunhua Guo DATE: 2/21/11 TIME: 1:00

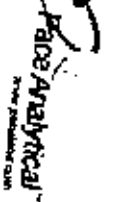
Accepted by: Kevin Herring DATE: 2/22/11 TIME: 1:00

Signature of Sampler: Yunhua Guo DATE Signed: 2/22/11 INITIALS: YG

Signature of Analytical Chemist: Kevin Herring DATE Signed: 2/22/11 INITIALS: KH

Signature of Custodian: _____ DATE Signed: _____ INITIALS: _____

Temp in °C _____ Received on Lab (Y/N) _____ Custody Sealed Code (Y/N) _____ Samples Intact (Y/N) _____



CHAIN-OF-CUSTODY / Analytical Request Document
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Page 4 of 4

Section A Requested Client Information: Company: GA Power Address: Albany, GA		Section B Requested Project Information: Request for: SCS Contracts Copy to: Geosyntec Contacts		Section C Vehicle Information: Make/Model: Southern CO	
Email to: SCS Contacts Phone: 770 Requested Date/Time: 1/20/07		Project Name: Flint Hammond AP-1 App. IV Scan Project Number: GWS681B		Company Name: Address: City/State: Zip/Phone:	
Regulatory Agency: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER:		Site Location: STATE: GA		Requested Analysis Filtered (Y/N): Fluoride: N N N Full App/IV Metals 502B74-7: N N N RAD 224-228: N N N	

ITEM #	Section D Requested Client Information Matrix Code	Section D Requested Project Information Sample ID AP-2, 04/1/07 Sample ID MUST BE UNIQUE	Matrix Code	Sample Type (G-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Residual Chlorine (Y/N)	Remarks	
					DATE	TIME							
1	NR-1	EB-1	WT	G	1-18-07	15:10	1	1	3	X	X	X	
2	NR-1	EB-1	WT	G	1-18-07	15:10	1	1	3	X	X	X	
3	NR-1	EB-1	WT	G	1-18-07	15:10	1	1	3	X	X	X	
4													
5													
6													
7													
8													
9													
10													
11													
12													

ADDITIONAL COMMENTS:
 Duplicate voids dry vials, single through dry using per manufacturer and data when the label language for the vial has been altered.
 Final App for Metals: SO, NO, NH, SS, CO, Cr, UO, Pb, Cu, Fe, Ni, Hg, Mn, Se, H₂S
 One sample set returned for METALS (VARIOUS) and APPENDIX A but they were not reported by AP-12 SDOCS

RELEASED BY / AFFILIATION: [Signature] DATE: 2/12/07 TIME: 1600

ACCEPTED BY / AFFILIATION: [Signature] DATE: 2/12/07 TIME: 0946

SAMPLE NAME AND SIGNATURE:
 PRINT NAME OF SAMPLER: BATES REARER
 SIGNATURE OF SAMPLER: [Signature] DATE SIGNED: 02/12/2007



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



Section A Required Client Information
 Company Name: **GA Power**
 Address: **Atlanta, GA**
 Contact: **SCS Contacts**

Section B Required Project Information
 Report To: **SCS Contacts**
 Group To: **Goodprint Contacts**
 Project Name: **Plant Hammond AP-1 App IV Scan**
 Project Number: **GWMS618**

Section C Analytical Information
 Method: **Southern Co**
 Address: **Konin Harting**
 Site Location: **GA**

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

ITEM #	Section B Required Client Information	Valid Matrix Codes	Matrix Code	Sample Type	DATE	TIME	DATE	TIME	Temp	Residual Chlorine (Y/N)
1	HQWA-1	WT G	WT G	IG-GRAB	2/15/21	13:31	4	1	6.85	
2	HQWA-2	WT G	WT G	IG-GRAB	2/15/21	13:31	4	1	6.85	
3	HQWA-3	WT G	WT G	IG-GRAB	2/15/21	13:31	4	1	6.85	
4	HQWA-4D	WT G	WT G	IG-GRAB	2/15/21	13:31	4	1	6.85	
5	HQWA-7	WT G	WT G	IG-GRAB	2/15/21	13:31	4	1	6.85	
6	HQWA-8	WT G	WT G	IG-GRAB	2/15/21	13:31	4	1	6.85	
7	HQWA-9	WT G	WT G	IG-GRAB	2/15/21	13:31	4	1	6.85	
8	HQWA-10	WT G	WT G	IG-GRAB	2/15/21	13:31	4	1	6.85	
9	HQWA-11	WT G	WT G	IG-GRAB	2/15/21	13:31	4	1	6.85	
10	HQWA-12	WT G	WT G	IG-GRAB	2/15/21	13:31	4	1	6.85	
11	HQWA-13	WT G	WT G	IG-GRAB	2/15/21	13:31	4	1	6.85	
12	HQWA-13	WT G	WT G	IG-GRAB	2/15/21	13:31	4	1	6.85	

ANALYSIS TEST	SI	N	N	N	N
Florida	X				
Fuel App. IV Metals 60207470*	X				
RAD 229/228	X				

Section D Additional Comments
 REMONSTRATED BY / APPLICATION: **152**
 DATE: **2/15/21**
 TIME: **13:31**
 RECEIVED BY: **[Signature]**
 DATE: **2/15/21**
 TIME: **16:08**

Section E Signatures
 SAMPLER NAME AND SIGNATURE: **[Signature]**
 FRONT VIEW OF SAMPLER: **[Signature]**
 SIGNATURE OF SAMPLER: **[Signature]**
 DATE SIGNED (MM/DD/YY): **2/15/2021**

Section F Additional Information
 Temp in °C: _____
 Received on ice (Y/N): **Y**
 Custody Sealed Cooler (Y/N): **N**
 Samples Intact (Y/N): **Y**



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information Company: <u>GA Power</u> Address: <u>Atlanta GA</u>	Section B Required Project Information Report To: <u>SOS Contacts</u> Copy To: <u>Geosynetic Contacts</u>	Section C Project Information Region: <u>Southern Ga</u> Agency Name: _____ Address: _____ Project Name: <u>Plant Hamilton AP-1 App. IV Scan</u> Request Number: <u>GW6501B</u>	Regulatory Agency <input checked="" type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input checked="" type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER use _____
Requested Due Date/TIME: <u>10 Day</u>	Project Name: <u>Plant Hamilton AP-1 App. IV Scan</u>	Price Quote: _____	Site Location: <u>GA</u>
Requested By: _____	Project Number: <u>GW6501B</u>	Address: _____	
		City: _____	
		State: _____	

ITEM	Section B Required Client Information	Matrix Code	Sample Type	DATE	TIME	DATE	TIME	Sample Temp at Collection	# of Containers	Preservatives						Analysis Test	Requester Analytical Method (Y/N)	Temp in °C	Received on (Y/N)	Custody Sealed Codes (Y/N)	Samples Initialed (Y/N)
										Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3						
1	MWTS	WT-9	IS-GRAB C-CDMP	2/14/17	17	2/14/17	11:54		1												
2	MWTS	WT-9																			
3	MW-7	WT-9																			
4	MW-19	WT-9																			
5	MW-20	WT-9																			
6	MW-21D	WT-9																			
7	MW-25D	WT-9																			
8	MW-28D	WT-9																			
9	MW-27D	WT-9																			
10	MW-28D	WT-9																			
11	MW-29	WT-9																			
12	Empty	WT-9																			

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

FALL-0-0207/01-15-Feb-2007



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

Section A Requester Client Information
 Company: GA Power
 Address: Atlanta, GA
 Email to: SCS Contacts
 Phone: Fax
 Requested Date/Time: 11 Day

Section B Requested Project Information
 Report to: SCS Contacts
 Copy to: Geographic Contacts
 Purchase Order No.:
 Project Name: Plant Hammond AP-1 App. IV Scan
 Project Number: GW659-18

Section C Analytical Information
 Address: Southern Co
 Company Name:
 Analytical: Kevin Herring
 Project Name:
 Date Analyzed:
 State: GA

REGULATORY AGENCY
 NPOES GROUND WATER DRINKING WATER
 UST RCRA OTHER: _____

ITEM #	Section D Requested Client Information	Matrix Code	SAMPLE TYPE (G-GRAB OR COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES		Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Temp in °C	Received on (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
										Unpreserved	H ₂ SO ₄						
1	Section D Requested Client Information	HQWA-1	G-GRAB						1								
2		HQWA-2	G-GRAB						1								
3		HQWA-3	G-GRAB						1								
4		HQWA-4A	G-GRAB						1								
5		HQWA-4B	G-GRAB						1								
6		HQWA-4C	G-GRAB						1								
7		HQWA-5	G-GRAB	4/21	15:05				1								
8		HQWA-6	G-GRAB	4/21	15:05				1								
9		HQWA-7	G-GRAB	4/21	15:05				1								
10		HQWA-8	G-GRAB	4/21	15:05				1								
11		HQWA-9	G-GRAB	4/21	15:05				1								
12		HQWA-10	G-GRAB	4/21	15:05				1								

ADDITIONAL COMMENTS:
 MAKE note of units, time through any units not sampled, and other notes on this form should be on every sample taken. Field App. IV Metals (A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z) and they will be reported for AP-101 SDC.

RELINQUISHED BY / APPRIATION: *Kevin Herring* DATE: 4/21/11 TIME: 15:05

ACCEPTED BY / APPRIATION: *Kevin Herring* DATE: 4/21/11 TIME: 15:05

SAMPLER NAME AND SIGNATURE: *Kevin Herring*

PRINT Name of SAMPLER: *Kevin Herring*

SIGNATURE of SAMPLER: *Kevin Herring*

DATE signed (month): 04/16/11

Temp in °C: 4.9

Received on (Y/N): Y

Custody Sealed Cooler (Y/N): N

Samples Intact (Y/N): Y

F-ALL-C-020rev.07, 15-F-00-007



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A: Required Client Information
 Section B: Required Project Information
 Section C: Project Information

Page: 2 of 3

Company: GA Power	Report To: SCS Contacts	Address: Atlanta, GA	Company Name: American Southern Co.
Address: Atlanta, GA	Copy To: Geospatial Contacts	Address:	Address:
Email To: SCS Contacts	Purchase Order No:	Project Name: Price Hammond AP-1 App IV Scan	Project Name: Kevin Herring
Phone:	Project Number: GW6681B	Requested Date/Time: 4/21/12	Requested Analytes: Fluoride, Full App IV Metals 60207470, RAD 228/226
Requested Date/Time:		REGULATORY AGENCY: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input checked="" type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>	STATE: GA

ID	Section D: Required Client Information	Valid Matrix Codes	MATRIX CODE	SAMPLE TYPE	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES		Analysis Test		Residual Chlorine (Y/N)	Other		
											S	M	S	M				
1	MW-5	WT G	WT G	IG-GRAB C-COMP	2/16/12	1627			17	4	1	3		X	X	X	N	pH = 5.45
2	MW-6	WT G	WT G		2/16/12	1512			17	4	1	3		X	X	X	N	pH = 7.00
3	MW-7	WT G	WT G											X	X	X	N	pH = 7.27
4	MW-24D	WT G	WT G											X	X	X	N	pH = 7.65
5	MW-28D	WT G	WT G											X	X	X	N	pH = 7.27
6	MW-29	WT G	WT G											X	X	X	N	pH = 7.27
7	MW-29	WT G	WT G											X	X	X	N	pH = 7.27
8	MW-29	WT G	WT G											X	X	X	N	pH = 7.27
9	MW-29	WT G	WT G											X	X	X	N	pH = 7.27
10	MW-29	WT G	WT G											X	X	X	N	pH = 7.27
11	MW-29	WT G	WT G											X	X	X	N	pH = 7.27
12	MW-29	WT G	WT G											X	X	X	N	pH = 7.27

ADDITIONAL COMMENTS: [Handwritten notes]

RECEIVED BY / AFFILIATION: [Handwritten signature]

DATE: [Handwritten date]

TIME: [Handwritten time]

ACCEPTED BY / AFFILIATION: [Handwritten signature]

DATE: [Handwritten date]

TIME: [Handwritten time]

SAMPLER NAME AND SIGNATURE: [Handwritten signature]

POINT NAME OF SAMPLER: [Handwritten name]

SIGNATURE OF SAMPLER: [Handwritten signature]

DATE SIGNED: [Handwritten date]

TEMP IN °C: [Handwritten value]

RECEIVED ON ICE (Y/N): [Handwritten value]

CUSTOMER SIGNED COOLER (Y/N): [Handwritten value]

SAMPLES INTACT (Y/N): [Handwritten value]

F-441-0-02-01 Rev 07, 15-F 08-2007

Temperature: [Handwritten value]

Requester Name: [Handwritten name]

Requester Title: [Handwritten title]

Requester Phone: [Handwritten phone]

Requester Email: [Handwritten email]



CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: **3** of **3**

Section A Requested Client Information Company: GA Power Address: Atlanta, GA Contact: SCS Contacts Email To: SCS Contacts Phone: Fax Requested Date/Deliverable: 10 Day		Section B Requested Project Information Report for: SCS Contacts Copy to: Geosyntec Contacts Purchase Order No. Project Name: Plant Hammond AP-1 App. IV Scan Field Number: GWS591B		Section C Requested Analytical Information Analytical Method: Southern Co. Analytical Name: Kevin Harding Address: 2117 City/State: CA	
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> ROQA <input type="checkbox"/> OTHER			Site Location: CA		

ITEM #	Section D Reservoir Chain of Custody Valid Matrix Codes MATRIX CODE DATE COLLECTED TIME COLLECTED DATE TIME SAMPLE TEMP AT COLLECTION # OF CONTAINERS Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₅ Methanol Other Analysis Test Fluoride Full App. IV Metals 60207470 RAD 226228	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	# OF CONTAINERS	PRESERVED		ANALYSIS TEST	Y/N	Requested Analytical Filtered (Y/N)	Residual Chlorine (Y/N)	pH =
				DATE	TIME						DATE	TIME					
1	MW-5																
2	MW-5																
3	MW-7																
4	MW-19																
5	MW-20																
6	MW-20																
7	MW-20																
8	MW-20																
9	MW-20																
10	MW-27D																
11	MW-20																
12	DUP-1																

ADDITIONAL COMMENTS: *Thomas Vasile*

RELINQUISHED BY / ANALYST: *Thomas Vasile* DATE: *2/17/12* TIME: *11:54*

ACCEPTED BY / ANALYST: *Kevin Harding* DATE: *2/17/12* TIME: *16:08*

SAMPLER NAME AND SIGNATURE: *Thomas Vasile*

PRINT NAME OF SAMPLER: *Thomas Vasile*

SIGNATURE OF SAMPLER: *Thomas Vasile*

DATE SIGNED (MONTH/DAY/YEAR): *02/16/12*

Temp in °C: *4.4*

Received on Ice (Y/N): *Y*

Cooling Sealed Cooler (Y/N): *N*

Samples Intact (Y/N): *Y*

Section A
Project Information
Section B
Required Project Information
Section C
Project Information

GA Power
Atlanta, GA
Copy To: Geosyntec Contacts
SOS Contacts
Project Name: Plant Hammond AP-1 App. IV Scan
Project Number: GW6581B
Requested Analysis Filtered (Y/N)

Attention: Southern Co.
Company Name
Address
Project Quick Reference
Project Manager: Kevin Herring
Project Engineer

REGULATORY AGENCY
 NPDES
 GROUND WATER
 DRINKING WATER
 UST
 RCRA
 OTHER CATH

Site Location: Ga
STATE: Ga

Section D
Required Chain of Custody

SAMPLE ID
LA-2-001-3
Sample ID MUST BE UNIQUE

Matrix Code	GLDE	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Analyte Test	Fluoride	F: App. IV Metals 6030/7470	RAD 226/228	Residual Chlorine (Y/N)	pH =
HGWA-1	WT	G	G						4	1								X	X	X	X	N	pH =
HGWA-2	WT	G	G						4	1								X	X	X	X	N	pH =
HGWA-3	WT	G	G						4	1								X	X	X	X	N	pH =
HGWA-4SD	WT	G	G						4	1								X	X	X	X	N	pH =
HGWA-4AD	WT	G	G						4	1								X	X	X	X	N	pH =
HGWA-7	WT	G	G						4	1								X	X	X	X	N	pH =
HGWA-8	WT	G	G						4	1								X	X	X	X	N	pH =
HGWA-9	WT	G	G						4	1								X	X	X	X	N	pH =
HGWA-10	WT	G	G						4	1								X	X	X	X	N	pH =
HGWA-11	WT	G	G						4	1								X	X	X	X	N	pH =
HGWA-12	WT	G	G						4	1								X	X	X	X	N	pH =
HGWA-13	WT	G	G						4	1								X	X	X	X	N	pH = 7.27

ADDITIONAL COMMENTS: ...

REQUISITIONED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Geo Williams / Pace	2/23/21	0910	Kevin W. Williams / Pace	2/23/21	0908	

SAMPLER NAME AND SIGNATURE: CHANDRUSSA
 DATE SIGNED: 2/22/21
 SIGNATURE OF SAMPLER: [Signature]

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

Quality Control Sample Performance Assessment



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

Test: Ra-226
 Analyst: LAL
 Date: 3/15/2021
 Worksheet: 59152
 Matrix: DW

Method Blank Assessment

MB Sample ID	2112989
MB Concentration:	-0.005
MB Counting Uncertainty:	0.071
MB MDC:	0.214
MB Numerical Performance Indicator:	-0.13
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

Count Date:	LCS#	Y or N?
3/15/2021	LCS059152	Y
19-035	19-033	
24-039	24-039	
0-10	0-10	
0.504	0.504	
4.778	4.787	
0.057	0.057	
5.339	5.320	
0.525	0.640	
1.77	2.28	
11.68%	11.78%	
N/A	N/A	
Pass	Pass	
125%	125%	
75%	75%	

Duplicate Sample Assessment

Sample I.D.:	LCS059152
Duplicate Sample I.D.	LCS059153
Sample Result (pCi/L, g, F):	5.339
Sample Result Counting Uncertainty (pCi/L, g, F):	0.628
Sample Duplicate Result (pCi/L, g, F):	5.520
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.640
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.396
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	3.43%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Sample Matrix Spike Control Assessment

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
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:	

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

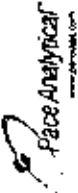
Comments:

Handwritten: Lam 3/15/21

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
 Analyst: LAL
 Date: 3/9/2021
 Worklist: 59152
 Matrix: DW



Method Blank Assessment

MB Sample ID	2112389
MB Concentration:	-0.005
MB Counting Uncertainty:	0.071
MB MDC:	0.214
MB Numerical Performance Indicator:	-0.13
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment

LCSD (Y or N)?	N
LCSD\$9152	LCSD\$9152
Count Date:	3/15/2021
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):	4.772
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	5.339
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.625
Numerical Performance Indicator:	1.77
Percent Recovery:	111.86%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment

Sample I.D.:	92524756004
Duplicate Sample I.D.:	92524756004DUP
Sample Result (pCi/L, g, F):	0.330
Sample Duplicate Result (pCi/L, g, F):	0.185
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.280
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.189
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	0.394
Duplicate RPD:	16.51%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Enter Duplicate sample ID's if other than LCSD/LCSD in the space below:
 92524756004
 92524756004DUP

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

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

Comments:

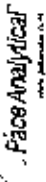
VAM 3/15/21

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

T&R,DW,OC
 Printed: 3/15/2021 3:34 PM

CARE 3/15/21

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
 Analyst: JYJ
 Date: 2/19/2021
 Worksheet: 58877
 Matrix: LW

Method Blank Assessment	
MB Sample ID	210227
MB Concentration	0.276
MB Counting Uncertainty	0.134
MB MDC	0.180
MB Numerical Performance Indicator	4.05
MB Status vs Numerical Indicator	N/A
MB Status vs MDC	See Comment

Laboratory Control Sample Assessment	LCS# (Y or N)?	
	Y	N
Count Date:	3/2/2021	LCS#58877
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL)	24.040	
Volume Used (mL)	0.10	0.10
Adjust Volume (L, g, F)	0.501	0.501
Target Conc. (pCi/L, g, F)	4.788	4.788
Uncertainty (Calculated)	0.057	0.058
Result (pCi/L, g, F)	5.303	4.826
LCS#LCS# Counting Uncertainty (pCi/L, g, F)	0.555	0.517
Numerical Performance Indicator	1.80	-9.85
Percent Recovery	110.87%	96.42%
Status vs Numerical Indicator	N/A	N/A
Status vs Recovery	Pass	Pass
Upper % Recovery Limits	125%	125%
Lower % Recovery Limits	75%	75%

Duplicate Sample Assessment	
Sample I.D.:	LCS#58877
Duplicate Sample I.D.:	LCS#58877
Sample Result (pCi/L, g, F):	5.300
Sample Result Counting Uncertainty (pCi/L, g, F):	0.555
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.517
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator	1.742
Duplicate Percent Recovery	10.77%
Duplicate Status vs Numerical Indicator	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

Comments:
 The method blank result is below the reporting limit for this analysis and is acceptable.

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

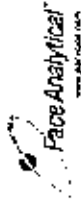
Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample MS I.D.:
Sample MS I.D.:	Sample MSD I.D.:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate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

Handwritten note: Noted by JYJ

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow

Test: Ra-228
 Analyst: JULY
 Date: 2/19/2021
 Worksheet: 58877
 Matrix: DW



Method Blank Assessment	
MB Sample ID	2102227
MB Concentration:	0.278
MB Counting Uncertainty:	0.134
MB NDC:	0.190
MB Numerical Performance Indicator	4.05
MB Status vs. Numerical Indicator	N/A
MB Status vs. MDC:	See Comment*

LCS ID	Y or N?	N
LCS-58877		LCS-58877
Count Date:	3/2/2021	
Spike I.D.:	15-033	
Decay Corrected Spike Concentration (pCi/mL)	24.040	
Volume Used (mL)	0.10	
Aliquot Volume (L, g, F):	0.502	
Target Conc. (pCi/L, g, F):	4.789	
Uncertainty (Calculated):	0.087	
Result (pCi/L, g, F):	5.300	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.555	
Numerical Performance Indicator:	1.83	
Percent Recovery	110.87%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limit:	125%	
Lower % Recovery Limit:	75%	

Duplicate Sample Assessment	
Sample I.D.:	92520873006
Duplicate Sample I.D.:	92520873006DUP
Duplicate Result (pCi/L, g, F):	0.162
Sample Result Counting Uncertainty (pCi/L, g, F):	0.140
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.008
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.075
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	1.924
Duplicate RPD:	185.80%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**
% RPD Limit:	25%

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

Comments:

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

** Duplicate must be re-analyzed due to unacceptable precision. (LCS-58877)

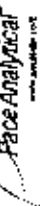
Sample Collection Date:	MS/MSD 1	MS/MSD 2
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc. (pCi/L, g, F):		
MSD Aliquot (L, g,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

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

Reference MW

02/19/2021

Quality Control Sample Performance Assessment



Test: Re-226
Analyst: LAL
Date: 2/26/2021
Worklist: 58914
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2103744
MB Concentration:	-0.049
MB Counting Uncertainty:	0.566
MB MDC:	0.225
MB Numerical Performance Indicator:	-1.22
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment	
LCS# (Y or N)†	Y
LCS58914	LCS58914
Count Date:	3/8/2021
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/L):	24.039
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.504
Target Conc. (pCi/L, g, F):	4.774
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.506
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.510
Numerical Performance Indicator:	1.59
Percent Recovery:	108.80%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	LCS58914
Duplicate Sample I.D.:	LCSD58914
Sample Result (pCi/L, g, F):	4.506
Sample Result Counting Uncertainty (pCi/L, g, F):	0.508
Sample Duplicate Result (pCi/L, g, F):	5.140
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.510
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.637
(Based on the LCS/LCSD Percent Recovery): Duplicate RPD:	5.61%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

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

Comments:

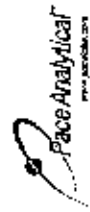
Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/L):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD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

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

UAM 3/8/21

Call 3/8/21

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
 Analyst: LAL
 Date: 2/26/2021
 Worksheet: 58914
 Matrix: DW

Method Blank Assessment	
MB Sample ID	2103744
MB Concentration	-0.043
MB Counting Uncertainty	0.068
MB MDC	0.225
MB Numerical Performance Indicator	-1.22
MB Status vs. Numerical Indicator	N/A
MB Status vs. MDC	Pass

Laboratory Control Sample Assessment	
LCS ID or N/A?	N
LCS58914	LCS058914
Count Data	382021
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)	4.770
Uncertainty (Calculated)	0.057
Result (pCi/L, g, F)	4.806
LCS/LCSD Counting Uncertainty (pCi/L, g, F)	0.508
Numerical Performance Indicator	0.52
Percent Recovery	102.86%
Status vs Numerical Indicator	N/A
Status vs Recovery	Pass
Upper % Recovery Limits	125%
Lower % Recovery Limits	75%

Duplicate Sample Assessment	
Sample I.D.	92521125906
Duplicate Sample I.D.	92521125906DUP
Sample Result (pCi/L, g, F)	0.161
Sample Result Counting Uncertainty (pCi/L, g, F)	0.137
Sample Duplicate Result (pCi/L, g, F)	0.027
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	0.145
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator	1.507
Duplicate RPD	147.89%
Duplicate Status vs Numerical Indicator	N/A
Duplicate Status vs RPD	Fail
% RPD Limit	25%

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

Comments:

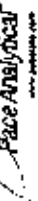
*** Data is correct because sample was too uncontaminated to measure, N/A Lam 3/15/21

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.	
Sample MS I.D.	
Sample MSD I.D.	
Sample Matrix Spike Result	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F)	
Sample Matrix Spike Duplicate Result	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F)	
Main: 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	

12/18/15
 LAM
 3/15/21

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
 Analyst: LAL
 Date: 2/25/2021
 Worksheet: 58923
 Matrix: DW

Method Blank Assessment

MB Sample ID	2103903
MB concentration	0.039
MB Counting Uncertainty	0.081
MB MDC	0.191
MB Numerical Performance Indicator	0.93
MB Status vs Numerical Indicator	N/A
MB Status vs. MDC	PASS

Laboratory Control Sample Assessment

LCSD ID or NY?	Y
LCSD58923	3/11/2021
LCSD58923	3/11/2021
Count Date:	3/11/2021
Spike ID:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.039
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.504
Target Conc. (pCi/L, g, F):	4.770
Uncertainty (Calculated):	0.067
Result (pCi/L, g, F):	5.115
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.500
Numerical Performance Indicator:	1.34
Status vs Numerical Indicator:	107.22%
Status vs Recovery:	N/A
Upper % Recovery Limits:	PASS
Lower % Recovery Limits:	125%
	75%

Duplicate Sample Assessment

Sample ID:	LCSD58923
Duplicate Sample ID:	LCSD58923
Sample Result (pCi/L, g, F):	5.115
Sample Result Counting Uncertainty (pCi/L, g, F):	0.500
Sample Duplicate Result (pCi/L, g, F):	4.710
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.487
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	1.161
Duplicate Percent Recovery:	7.70%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	PASS
% RPD Limit:	25%

Enter Duplicate sample IDs if other than LCSD/LCSD in the space below.
 80521131012
 80521131020UP

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):	
MSD Spike Uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	
MS/MSD Upper % Recovery Limits:	
MS/MSD Lower % Recovery Limits:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

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

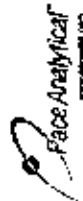
Comments:

RAMB11121

12/11/2021
 LAL

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-226
 Analyst: LAL
 Date: 2/25/2021
 Worksheet: 58923
 Matrix: DW

MB Sample ID MB Concentration MB Counting Uncertainty MB MDC MB Numerical Performance Indicator MB Spike vs Numerical Indicator MB Status vs MDC	2103903 0.039 0.081 0.191 0.93 N/A Pass
--	---

LCSD (Y or N)?	N
LCSD58923	LCSD58923
Count Date:	3/11/2021
Spike ID:	19-039
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):	4.770
Uncertainty (Calculated):	0.067
Result (pCi/L, g, F):	5.115
LCSD/LCSD Counting Uncertainty (pCi/L, g, F):	0.560
Numerical Performance Indicator:	1.34
Percent Recovery:	107.22%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limit:	125%
Lower % Recovery Limit:	75%

Sample I.D.	Duplicate Sample I.D.
82521131012	92521131012DUP
Duplicate Result (pCi/L, g, F):	0.061
Sample Result Counting Uncertainty (pCi/L, g, F):	0.107
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.227
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.128
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	-1.564
Duplicate RPD:	114.91%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

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

Comments:

@LCS.DJESL.gov in proposed state to unacceptable precision N/A 2/25/21

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

Sample I.D.	Sample MS I.D.	Sample MSD I.D.
82521131012	92521131012DUP	92521131012DUP
Duplicate Result (pCi/L, g, F):	0.061	0.061
Sample Result Counting Uncertainty (pCi/L, g, F):	0.107	0.107
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.227	0.227
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.128	0.128
Are sample and/or duplicate results below RL?	See Below ##	See Below ##
Duplicate Numerical Performance Indicator:	-1.564	-1.564
Duplicate RPD:	114.91%	114.91%
Duplicate Status vs Numerical Indicator:	N/A	N/A
Duplicate Status vs RPD:	Fail***	Fail***
% RPD Limit:	25%	25%

19/11/2021

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: R-228
Analyst: LAL
Date: 2/25/2021
Worklist: 58925
Matrix: DW

Method Blank Assessment

MB Sample ID	2109906
MB Concentration:	0.144
MB Counting Uncertainty:	0.104
MB MDC:	0.177
MB Numerical Performance Indicator:	2.72
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

Count Date	LCS#	Y or N?
3/11/2021	LCS58925	Y
19-033	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):	0.508	0.501
Target Conc. (pCi/L, g, F):	4.733	4.735
Uncertainty (Calculated):	0.057	0.058
Result (pCi/L, g, F):	4.694	4.741
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.477	0.485
Numerical Performance Indicator:	-0.20	-0.21
Percent Recovery:	98.89%	98.89%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment

Sample ID	Duplicate Sample ID	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
LCS58925	LCS58925	
4.694	4.694	
0.477	0.477	
4.741	4.741	
0.485	0.485	
NO	NO	
-0.163	-0.163	
0.10%	0.10%	
N/A	N/A	
Pass	Pass	
25%	25%	

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

Comments:

Sample Matrix Spike Control Assessment

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

PAVED
CML
LAM 3/11/21

Quality Control Sample Performance Assessment

Analysis Must Manually Enter All Factors Highlighted in Yellow.

Test: Ra-228
 Analyst: VAAL
 Date: 3/11/2021
 Worksheet: 59157
 Matrix: WIT



Method Blank Assessment

MB Sample ID	2112539
MB Concentration	0.332
MB 2 Sigma CSU	0.330
MB MDC	0.686
MB Numerical Performance Indicator	1.95
MB Status vs Numerical Indicator	Pass
MB Status vs MDC	Pass

Laboratory Control Sample Assessment

LCSD (Y or N)?	Y
LCSD59157	3/15/2021
LCSD59157	21-003
LCSD59157	38.455
Count Date:	3/15/2021
Spikes I.D.:	21-003
Decay Corrected Spike Concentration (pCi/mL):	38.455
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.910
Target Conc. (pCi/L, g, F):	4.747
Uncertainty (Counting):	0.233
Result (pCi/L, g, F):	3.492
LCSD 2 Sigma CSU (pCi/L, g, F):	0.863
Numerical Performance Indicator:	-2.75
Percent Recovery:	73.55%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limit:	135%
Lower % Recovery Limit:	60%

Duplicate Sample Assessment

Sample I.D.	LCSD59157
Duplicate Sample I.D.	LCSD59157
Sample Result (pCi/L, g, F):	3.492
Sample Duplicate Result (pCi/L, g, F):	0.863
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	2.971
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.784
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.975
(Based on the LCSD Percent Recoveries) Duplicate RPD:	16.54%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	96%

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

Comments:

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Sample Matrix Spike Control Assessment

Sample Collection Date:	Sample I.D.	MS/MSD 1	MS/MSD 2
Sample MS I.D.	Sample MS I.D.		
Sample MSD I.D.	Sample 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):	MSD Spike Uncertainty (calculated):		
Sample Result:	Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Result:	Sample Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:	MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:	MSD Numerical Performance Indicator:		
MS Percent Recovery:	MS Percent Recovery:		
MSD Percent Recovery:	MSD Percent Recovery:		
MS Status vs Numerical Indicator:	MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:	MSD Status vs Numerical Indicator:		
MS Status vs Recovery:	MS Status vs Recovery:		
MSD Status vs Recovery:	MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limit:	MS/MSD Upper % Recovery Limit:		
MS/MSD Lower % Recovery Limit:	MS/MSD Lower % Recovery Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.	Sample I.D.
Sample MS I.D.	Sample MS I.D.
Sample MSD I.D.	Sample MSD I.D.
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):
Duplicate Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:	MS/MSD Duplicate Status vs RPD:
% RPD Limit:	% RPD Limit:

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow

Test: RA-228
Analyst: VAL
Date: 2/22/2021
Worklist: 58851
Matrix: WT

Method Blank Assessment

MB Sample ID	210660
MB concentration	0.356
MB 2 Sigma CSU	0.368
MB MDC	0.763
MB Numerical Performance Indicator	1.89
MB Status vs Numerical Indicator	Pass
MB Status vs MDC	Pass

Laboratory Control Sample Assessment

Count Date	LCSD (Y or N)?	Y
22/4/2021	LCSD58851	LCSD58851
21-003	22/4/2021	22/4/2021
38.698	21-003	21-003
0.10	38.698	38.698
0.821	0.10	0.10
4.758	0.821	0.821
0.233	4.758	4.711
1.031	0.233	0.233
-0.74	1.031	1.179
91.58%	-0.74	1.09
N/A	91.58%	114.23%
Pass	N/A	N/A
135%	Pass	Pass
60%	135%	135%
	60%	60%

Duplicate Sample Assessment

Sample ID:	LCSD58851
Duplicate Sample ID:	LCSD58851
Sample Result (pCi/L, g, F):	4.358
Sample Duplicate Result (pCi/L, g, F):	1.031
Sample Duplicate Result 2 (pCi/L, g, F):	5.392
Sample Duplicate Result 3 (pCi/L, g, F):	1.179
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-1.281
(Based on the LCSD/LCSD Percent Recoveries) Duplicate RP:	22.01%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	35%

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

Comments:

Sample Matrix Spike Control Assessment

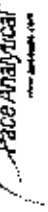
Sample Collection Date	MS/MSD 1	MS/MSD 2
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Spike I.D.:		
Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in VSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc (pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc (pCi/L,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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.	
Sample MS I.D.	
Sample MSD I.D.	
Sample Matrix Spike Result:	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	
% RPD Limit:	

10/15/21
MDC

Quality Control Sample Performance Assessment



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

Test: Ra-228
Analyst: VAL
Date: 2/24/2021
Worksheet: 58915
Matrix: WT

Method Blank Assessment	
MB Sample ID	21C3745
MB Concentration	0.345
MB 2 Sigma CSU	0.338
MB MDC	0.700
MB Numerical Performance Indicator	1.86
MB Status vs Numerical Indicator	Pass
MB Status vs MDC	Pass

Laboratory Control Sample Assessment	LCSO(Y or N)?	
	Y	N
Count Date:	3/2/2021	LCS058915
Spike I.D.:	21-003	3/2/2021
Decay Corrected Spike Concentration (pCi/mL):	38.623	21-003
Volume Used (mL):	0.10	38.623
Aliquot Volume (L, g, F):	0.808	0.10
Target Conc. (pCi/L, g, F):	4.781	0.819
Uncertainty (Calculated):	0.234	4.718
Result (pCi/L, g, F):	4.284	0.231
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.952	3.747
Numerical Performance Indicator:	-0.99	0.634
Percent Recovery:	89.60%	-2.20
Status vs Numerical Indicator:	N/A	79.42%
Status vs Recovery:	Pass	N/A
Upper % Recovery Limit:	135%	Pass
Lower % Recovery Limit:	60%	82%

Duplicate Sample Assessment	
Sample I.D.:	LCS058915
Duplicate Sample I.D.:	LCS058915
Sample Result (pCi/L, g, F):	4.284
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.952
Sample Duplicate Result (pCi/L, g, F):	3.747
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.634
Are sample and/or duplicate results below RL?	N/A
Duplicate Numerical Performance Indicator:	0.932
Duplicate (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	12.05%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	35%

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

Comments:

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): Duplicate Numerical Performance Indicator: Duplicate (Based on the Percent Recoveries) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:

ONE
3/2/21

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 3/1/2021
Worklist: 58924
Matrix: WTR

Method Blank Assessment	
MB Sample ID	2103905
MB Concentration	0.253
MB 2 Sigma CSU	0.323
MB MDC	0.687
MB Numerical Performance Indicator	1.54
MB Status vs Numerical Indicator	Pass
MB Status vs MDC	Pass

Laboratory Control Sample Assessment	
LCS#	Y or N?
LCS58924	Y
Count Date:	3/3/2021
Spike ID:	21-003
Decay Corrected Spikes Concentration (pCi/mL):	38.608
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.807
Target Conc. (pCi/L, g, F):	4.770
Uncertainty (Calculated):	0.254
Result (pCi/L, g, F):	4.434
LCS#LCS# 2 Sigma CSU (pCi/L, g, F):	0.560
Numerical Performance Indicator:	-0.96
Percent Recovery:	88.68%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	135%
Lower % Recovery Limits:	60%

Duplicate Sample Assessment	
Sample ID:	LCS58924
Duplicate Sample ID:	LCSD58924
Sample Result (pCi/L, g, F):	4.298
Sample Duplicate Result (pCi/L, g, F):	0.960
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	4.434
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.026
Are sample and/or duplicate results below RL?	ND
Duplicate Numerical Performance Indicator:	-0.100
(Based on the LCS#LCS# Percent Recoveries) Duplicate RPD:	3.37%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

Comments:

163/3/21

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample ID:	
Sample MS ID:	
Sample MSD ID:	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	
% RPD Limit:	

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 3/2/2021
Worklist: 58926
Matrix: WT



Method Blank Assessment

MB Sample ID	2103907
MB Concentration:	0.298
MB 2 Sigma CSU:	0.350
MB MDC:	0.738
MB Numerical Performance Indicator:	1.87
MB Status vs Numerical Indicator:	Pass
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment

Count Date	LCSD (Y or N)?	Y
3/4/2021	LCSD:58926	3/4/2021
21-003	21-003	38.588
38.588	0.10	0.809
Volume Used (mL):	0.302	4.772
Aliquot Volume (L, g, F):	4.812	0.234
Target Conc. (pCi/L, g, F):	0.236	4.092
Uncertainty (Calculated):	4.092	0.944
Result (pCi/L, g, F):	0.944	1.159
LCSD/CSU 2 Sigma CSU (pCi/L, g, F):	1.159	0.88
Numerical Performance Indicator:	1.45	111.08%
Percent Recovery:	85.03%	N/A
Status vs Numerical Indicator:	N/A	Pass
Status vs Recovery:	Pass	135%
Upper % Recovery Limits:	135%	60%
Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment

Sample I.D.	LCSD:58926
Duplicate Sample I.D.	LCSD:58926
Sample Result (pCi/L, g, F):	4.092
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.944
Sample Duplicate Result (pCi/L, g, F):	5.302
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.159
Ave sample and/or duplicate result below RL?	NO
Duplicate Numerical Performance Indicator:	-1.585
(Based on the LCSD/CSU Percent Recoveries) Duplicate RPD:	26.57%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

Comments:

10/25/2020

Sample Matrix Spike Control Assessment

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.	Sample MS I.D.	Sample MSD I.D.
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Duplicate Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:
% RPD Limit:		

March 2021

April 27, 2021

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

RE: Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 11, 2021 and March 18, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Pace Analytical Services Charlotte

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92527268001	HGWA-1	Water	03/10/21 16:10	03/11/21 15:55
92527268002	HGWA-44D	Water	03/10/21 14:30	03/11/21 15:55
92527268003	HGWA-2	Water	03/11/21 09:59	03/12/21 13:43
92527268004	HGWA-3	Water	03/11/21 11:25	03/12/21 13:43
92527268005	HGWA-43D	Water	03/11/21 09:57	03/12/21 13:43
92527268006	HGWC-10	Water	03/12/21 10:11	03/15/21 12:00
92527268007	MW-27D	Water	03/12/21 09:47	03/15/21 12:00
92527268008	HGWC-7 FILTERED	Water	03/15/21 16:25	03/16/21 13:42
92527268009	HGWC-7	Water	03/15/21 16:10	03/16/21 13:42
92527268010	HGWC-8	Water	03/15/21 11:00	03/16/21 13:42
92527268011	MW-7	Water	03/15/21 12:00	03/16/21 13:42
92527268012	MW-20	Water	03/15/21 14:22	03/16/21 13:42
92527268013	MW-28D	Water	03/15/21 18:25	03/16/21 13:42
92527268014	MW-29	Water	03/15/21 12:52	03/16/21 13:42
92527268015	HGWC-9	Water	03/16/21 14:48	03/17/21 13:10
92527268016	HGWC-11	Water	03/16/21 09:45	03/17/21 13:10
92527268017	HGWC-12	Water	03/16/21 11:12	03/17/21 13:10
92527268018	MW-5	Water	03/16/21 16:08	03/17/21 13:10
92527268019	MW-6	Water	03/16/21 15:43	03/17/21 13:10
92527268020	MW-25D	Water	03/16/21 12:32	03/17/21 13:10
92527268021	DUP-1	Water	03/16/21 00:00	03/17/21 13:10
92527268022	EB-1	Water	03/16/21 16:40	03/17/21 13:10
92527268023	FB-1	Water	03/16/21 16:25	03/17/21 13:10
92527268024	HGWC-13	Water	03/17/21 14:58	03/18/21 13:17
92527268025	MW-19	Water	03/17/21 10:20	03/18/21 13:17
92527268026	MW-24D	Water	03/17/21 16:00	03/18/21 13:17
92527268027	MW-26D	Water	03/17/21 08:50	03/18/21 13:17

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92527268001	HGWA-1	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527268002	HGWA-44D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527268003	HGWA-2	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527268004	HGWA-3	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527268005	HGWA-43D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527268006	HGWC-10	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527268007	MW-27D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92527268008	HGWC-7 FILTERED	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527268009	HGWC-7	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527268010	HGWC-8	EPA 6010D	DRB	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92527268011	MW-7	EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
92527268012	MW-20	SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
92527268013	MW-28D	EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527268014	MW-29	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	DRB	1
92527268015	HGWC-9	EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
92527268016	HGWC-11	SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
92527268017	HGWC-12	EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
92527268018	MW-5	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	DRB	1
92527268019	MW-6	EPA 6020B	CW1	13
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92527268020	MW-25D	SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
92527268021	DUP-1	SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
92527268022	EB-1	SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JLH	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
92527268023	FB-1	SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	KH	13
92527268024	HGWC-13	SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
92527268025	MW-19	SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	KH	13
92527268026	MW-24D	SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	KH	13
92527268027	MW-26D	SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	KH	13

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527268001	HGWA-1					
	Performed by	CUSTOME			03/22/21 11:58	
		R				
	pH	6.95	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	111	mg/L	1.0	03/19/21 04:13	
EPA 6020B	Barium	0.030	mg/L	0.0050	03/16/21 15:56	
EPA 6020B	Boron	0.015J	mg/L	0.040	03/16/21 15:56	
EPA 6020B	Lithium	0.00090J	mg/L	0.030	03/16/21 15:56	
EPA 6020B	Selenium	0.0047J	mg/L	0.0050	03/16/21 15:56	
SM 2540C-2011	Total Dissolved Solids	348	mg/L	10.0	03/15/21 13:15	
EPA 300.0 Rev 2.1 1993	Chloride	7.4	mg/L	1.0	03/17/21 20:51	
EPA 300.0 Rev 2.1 1993	Fluoride	0.079J	mg/L	0.10	03/17/21 20:51	
EPA 300.0 Rev 2.1 1993	Sulfate	49.6	mg/L	1.0	03/17/21 20:51	
92527268002	HGWA-44D					
	Performed by	CUSTOME			03/22/21 11:58	
		R				
	pH	7.92	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	5.9	mg/L	1.0	03/19/21 04:18	
EPA 6020B	Antimony	0.00037J	mg/L	0.0030	03/16/21 16:13	B
EPA 6020B	Barium	0.26	mg/L	0.0050	03/16/21 16:13	
EPA 6020B	Boron	0.39	mg/L	0.040	03/16/21 16:13	
EPA 6020B	Lithium	0.030	mg/L	0.030	03/16/21 16:13	
EPA 6020B	Molybdenum	0.0019J	mg/L	0.010	03/16/21 16:13	
SM 2540C-2011	Total Dissolved Solids	289	mg/L	10.0	03/15/21 13:15	
EPA 300.0 Rev 2.1 1993	Chloride	12.3	mg/L	1.0	03/17/21 22:28	
EPA 300.0 Rev 2.1 1993	Fluoride	0.65	mg/L	0.10	03/17/21 22:28	
92527268003	HGWA-2					
	Performed by	CUSTOME			03/22/21 11:58	
		R				
	pH	5.80	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	43.8	mg/L	1.0	03/22/21 20:09	
EPA 6020B	Barium	0.070	mg/L	0.0050	03/19/21 20:54	
EPA 6020B	Beryllium	0.000086J	mg/L	0.00050	03/19/21 20:54	
EPA 6020B	Boron	0.056	mg/L	0.040	03/19/21 20:54	
EPA 6020B	Cobalt	0.013	mg/L	0.0050	03/19/21 20:54	
EPA 6020B	Lead	0.000076J	mg/L	0.0010	03/19/21 20:54	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	03/19/21 20:54	
SM 2540C-2011	Total Dissolved Solids	169	mg/L	10.0	03/16/21 15:08	
EPA 300.0 Rev 2.1 1993	Chloride	5.1	mg/L	1.0	03/19/21 00:00	
EPA 300.0 Rev 2.1 1993	Fluoride	0.10	mg/L	0.10	03/19/21 00:00	
EPA 300.0 Rev 2.1 1993	Sulfate	52.9	mg/L	1.0	03/19/21 00:00	
92527268004	HGWA-3					
	Performed by	CUSTOME			03/22/21 11:58	
		R				
	pH	7.33	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	83.8	mg/L	1.0	03/22/21 20:29	
EPA 6020B	Barium	0.13	mg/L	0.0050	03/19/21 21:00	
EPA 6020B	Boron	0.015J	mg/L	0.040	03/19/21 21:00	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527268004	HGWA-3					
EPA 6020B	Lithium	0.0035J	mg/L	0.030	03/19/21 21:00	
SM 2540C-2011	Total Dissolved Solids	267	mg/L	10.0	03/16/21 15:08	
EPA 300.0 Rev 2.1 1993	Chloride	5.9	mg/L	1.0	03/19/21 00:00	
EPA 300.0 Rev 2.1 1993	Sulfate	50.4	mg/L	1.0	03/19/21 00:00	
92527268005	HGWA-43D					
	Performed by	CUSTOMER			03/22/21 11:58	
	pH	7.46	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	59.6	mg/L	1.0	03/22/21 20:33	
EPA 6020B	Antimony	0.00057J	mg/L	0.0030	03/19/21 21:06	
EPA 6020B	Arsenic	0.0013J	mg/L	0.0050	03/19/21 21:06	
EPA 6020B	Barium	0.32	mg/L	0.0050	03/19/21 21:06	
EPA 6020B	Boron	0.060	mg/L	0.040	03/19/21 21:06	
EPA 6020B	Lead	0.000094J	mg/L	0.0010	03/19/21 21:06	
EPA 6020B	Lithium	0.0022J	mg/L	0.030	03/19/21 21:06	
EPA 6020B	Molybdenum	0.0064J	mg/L	0.010	03/19/21 21:06	
SM 2540C-2011	Total Dissolved Solids	279	mg/L	10.0	03/17/21 17:40	
EPA 300.0 Rev 2.1 1993	Chloride	4.5	mg/L	1.0	03/19/21 00:00	
EPA 300.0 Rev 2.1 1993	Fluoride	0.20	mg/L	0.10	03/19/21 00:00	
EPA 300.0 Rev 2.1 1993	Sulfate	38.6	mg/L	1.0	03/19/21 00:00	
92527268006	HGWC-10					
	Performed by	CUSTOMER			03/22/21 11:58	
	pH	6.76	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	146	mg/L	1.0	03/26/21 19:19	M1
EPA 6020B	Barium	0.058	mg/L	0.0050	03/29/21 18:43	
EPA 6020B	Boron	0.64	mg/L	0.040	03/29/21 18:43	
EPA 6020B	Molybdenum	0.00070J	mg/L	0.010	03/29/21 18:43	
SM 2540C-2011	Total Dissolved Solids	490	mg/L	10.0	03/23/21 07:39	H1
EPA 300.0 Rev 2.1 1993	Chloride	35.0	mg/L	1.0	03/21/21 01:09	
EPA 300.0 Rev 2.1 1993	Fluoride	0.054J	mg/L	0.10	03/21/21 01:09	
EPA 300.0 Rev 2.1 1993	Sulfate	120	mg/L	3.0	03/23/21 19:12	
92527268007	MW-27D					
	Performed by	CUSTOMER			03/22/21 11:58	
	pH	7.88	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	28.0	mg/L	1.0	03/26/21 19:48	
EPA 6020B	Barium	1.1	mg/L	0.025	03/30/21 12:03	
EPA 6020B	Boron	0.13	mg/L	0.040	03/29/21 18:48	
EPA 6020B	Lithium	0.0090J	mg/L	0.030	03/29/21 18:48	
EPA 6020B	Molybdenum	0.00080J	mg/L	0.010	03/29/21 18:48	
SM 2540C-2011	Total Dissolved Solids	215	mg/L	10.0	03/23/21 07:39	H1
EPA 300.0 Rev 2.1 1993	Chloride	31.3	mg/L	1.0	03/21/21 01:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.24	mg/L	0.10	03/21/21 01:24	
EPA 300.0 Rev 2.1 1993	Sulfate	7.4	mg/L	1.0	03/21/21 01:24	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527268008	HGWC-7 FILTERED					
	Performed by	CUSTOME			03/22/21 11:58	
		R				
	pH	7.19	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	109	mg/L	1.0	03/26/21 19:53	
EPA 6020B	Barium	0.068	mg/L	0.0050	03/29/21 18:54	
EPA 6020B	Boron	1.1	mg/L	0.040	03/29/21 18:54	
EPA 6020B	Cadmium	0.00021J	mg/L	0.00050	03/29/21 18:54	
EPA 6020B	Cobalt	0.00053J	mg/L	0.0050	03/29/21 18:54	
EPA 6020B	Lithium	0.0020J	mg/L	0.030	03/29/21 18:54	
EPA 6020B	Molybdenum	0.050	mg/L	0.010	03/29/21 18:54	
SM 2540C-2011	Total Dissolved Solids	366	mg/L	10.0	03/22/21 15:10	
EPA 300.0 Rev 2.1 1993	Chloride	44.4	mg/L	1.0	03/20/21 16:46	
EPA 300.0 Rev 2.1 1993	Fluoride	0.088J	mg/L	0.10	03/20/21 16:46	
EPA 300.0 Rev 2.1 1993	Sulfate	80.6	mg/L	2.0	03/21/21 07:17	
92527268009	HGWC-7					
	Performed by	CUSTOME			03/22/21 11:58	
		R				
	pH	7.19	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	113	mg/L	1.0	03/26/21 17:13	M1
EPA 6020B	Barium	0.074	mg/L	0.0050	03/29/21 19:00	
EPA 6020B	Beryllium	0.00019J	mg/L	0.00050	03/29/21 19:00	
EPA 6020B	Boron	1.1	mg/L	0.040	03/29/21 19:00	
EPA 6020B	Chromium	0.0021J	mg/L	0.0050	03/29/21 19:00	
EPA 6020B	Cobalt	0.0014J	mg/L	0.0050	03/29/21 19:00	
EPA 6020B	Lead	0.0013	mg/L	0.0010	03/29/21 19:00	
EPA 6020B	Lithium	0.0038J	mg/L	0.030	03/29/21 19:00	
EPA 6020B	Molybdenum	0.047	mg/L	0.010	03/29/21 19:00	
SM 2540C-2011	Total Dissolved Solids	370	mg/L	10.0	03/22/21 15:10	
EPA 300.0 Rev 2.1 1993	Chloride	44.5	mg/L	1.0	03/20/21 17:00	
EPA 300.0 Rev 2.1 1993	Fluoride	0.086J	mg/L	0.10	03/20/21 17:00	
EPA 300.0 Rev 2.1 1993	Sulfate	107	mg/L	2.0	03/21/21 07:33	
92527268010	HGWC-8					
	Performed by	CUSTOME			03/22/21 11:58	
		R				
	pH	7.09	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	156	mg/L	1.0	03/26/21 19:58	
EPA 6020B	Barium	0.063	mg/L	0.0050	03/29/21 19:06	
EPA 6020B	Beryllium	0.000078J	mg/L	0.00050	03/29/21 19:06	
EPA 6020B	Boron	1.7	mg/L	0.040	03/29/21 19:06	
EPA 6020B	Cadmium	0.00017J	mg/L	0.00050	03/29/21 19:06	
EPA 6020B	Chromium	0.00082J	mg/L	0.0050	03/29/21 19:06	
EPA 6020B	Cobalt	0.0019J	mg/L	0.0050	03/29/21 19:06	
EPA 6020B	Lead	0.00011J	mg/L	0.0010	03/29/21 19:06	
EPA 6020B	Lithium	0.0029J	mg/L	0.030	03/29/21 19:06	
EPA 6020B	Molybdenum	0.41	mg/L	0.010	03/29/21 19:06	
SM 2540C-2011	Total Dissolved Solids	614	mg/L	20.0	03/22/21 15:10	
EPA 300.0 Rev 2.1 1993	Chloride	72.4	mg/L	1.0	03/20/21 17:14	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527268010	HGWC-8					
EPA 300.0 Rev 2.1 1993	Fluoride	0.51	mg/L	0.10	03/20/21 17:14	
EPA 300.0 Rev 2.1 1993	Sulfate	272	mg/L	6.0	03/21/21 07:47	
92527268011	MW-7					
	Performed by	CUSTOME			03/22/21 11:58	
		R				
	pH	6.66	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	76.9	mg/L	1.0	03/26/21 20:03	
EPA 6020B	Barium	0.053	mg/L	0.0050	03/29/21 19:11	
EPA 6020B	Boron	0.16	mg/L	0.040	03/29/21 19:11	
EPA 6020B	Chromium	0.0018J	mg/L	0.0050	03/29/21 19:11	
EPA 6020B	Molybdenum	0.0015J	mg/L	0.010	03/29/21 19:11	
EPA 6020B	Selenium	0.0021J	mg/L	0.0050	03/29/21 19:11	B
SM 2540C-2011	Total Dissolved Solids	293	mg/L	10.0	03/22/21 15:10	
EPA 300.0 Rev 2.1 1993	Chloride	6.8	mg/L	1.0	03/20/21 17:27	
EPA 300.0 Rev 2.1 1993	Sulfate	92.1	mg/L	2.0	03/21/21 08:03	
92527268012	MW-20					
	Performed by	CUSTOME			03/22/21 11:58	
		R				
	pH	6.97	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	121	mg/L	1.0	03/26/21 20:07	
EPA 6020B	Barium	0.096	mg/L	0.0050	03/29/21 19:17	
EPA 6020B	Boron	0.12	mg/L	0.040	03/29/21 19:17	
EPA 6020B	Chromium	0.00068J	mg/L	0.0050	03/29/21 19:17	
EPA 6020B	Lead	0.00010J	mg/L	0.0010	03/29/21 19:17	
EPA 6020B	Lithium	0.0011J	mg/L	0.030	03/29/21 19:17	
SM 2540C-2011	Total Dissolved Solids	406	mg/L	10.0	03/22/21 15:10	
EPA 300.0 Rev 2.1 1993	Chloride	31.1	mg/L	1.0	03/20/21 17:41	
EPA 300.0 Rev 2.1 1993	Sulfate	109	mg/L	2.0	03/21/21 08:19	
92527268013	MW-28D					
	Performed by	CUSTOME			03/22/21 11:58	
		R				
	pH	7.61	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	66.1	mg/L	1.0	03/26/21 20:12	
EPA 6020B	Barium	0.45	mg/L	0.0050	03/29/21 19:23	
EPA 6020B	Beryllium	0.000048J	mg/L	0.00050	03/29/21 19:23	
EPA 6020B	Boron	0.36	mg/L	0.040	03/29/21 19:23	
EPA 6020B	Chromium	0.00078J	mg/L	0.0050	03/29/21 19:23	
EPA 6020B	Lead	0.00034J	mg/L	0.0010	03/29/21 19:23	
EPA 6020B	Lithium	0.013J	mg/L	0.030	03/29/21 19:23	
EPA 6020B	Molybdenum	0.013	mg/L	0.010	03/29/21 19:23	
SM 2540C-2011	Total Dissolved Solids	293	mg/L	10.0	03/22/21 15:10	
EPA 300.0 Rev 2.1 1993	Chloride	35.8	mg/L	1.0	03/20/21 18:21	
EPA 300.0 Rev 2.1 1993	Fluoride	0.24	mg/L	0.10	03/20/21 18:21	
EPA 300.0 Rev 2.1 1993	Sulfate	50.1	mg/L	1.0	03/20/21 18:21	

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527268014	MW-29					
	Performed by	CUSTOMER			03/22/21 11:58	
	pH	7.05	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	145	mg/L	1.0	03/26/21 20:17	
EPA 6020B	Barium	0.078	mg/L	0.0050	03/29/21 19:40	
EPA 6020B	Boron	1.2	mg/L	0.040	03/29/21 19:40	
EPA 6020B	Cobalt	0.0011J	mg/L	0.0050	03/29/21 19:40	
EPA 6020B	Lithium	0.0022J	mg/L	0.030	03/29/21 19:40	
EPA 6020B	Molybdenum	0.0031J	mg/L	0.010	03/29/21 19:40	
SM 2540C-2011	Total Dissolved Solids	555	mg/L	10.0	03/22/21 15:10	
EPA 300.0 Rev 2.1 1993	Chloride	73.6	mg/L	1.0	03/20/21 18:35	
EPA 300.0 Rev 2.1 1993	Sulfate	148	mg/L	3.0	03/21/21 08:34	
92527268015	HGWC-9					
	Performed by	CUSTOMER			03/22/21 11:58	
	pH	7.10	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	182	mg/L	1.0	03/26/21 17:42	
EPA 6020B	Barium	0.11	mg/L	0.0050	03/29/21 19:46	
EPA 6020B	Boron	2.2	mg/L	0.040	03/29/21 19:46	
EPA 6020B	Cobalt	0.00069J	mg/L	0.0050	03/29/21 19:46	
EPA 6020B	Lead	0.00027J	mg/L	0.0010	03/29/21 19:46	
EPA 6020B	Lithium	0.0046J	mg/L	0.030	03/29/21 19:46	
EPA 6020B	Molybdenum	0.035	mg/L	0.010	03/29/21 19:46	
SM 2540C-2011	Total Dissolved Solids	672	mg/L	20.0	03/23/21 07:59	
EPA 300.0 Rev 2.1 1993	Chloride	94.7	mg/L	5.0	03/22/21 09:56	
EPA 300.0 Rev 2.1 1993	Fluoride	0.098J	mg/L	0.10	03/22/21 00:11	
EPA 300.0 Rev 2.1 1993	Sulfate	211	mg/L	5.0	03/22/21 09:56	
92527268016	HGWC-11					
	Performed by	CUSTOMER			03/22/21 11:58	
	pH	5.95	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	132	mg/L	1.0	03/26/21 17:47	
EPA 6020B	Arsenic	0.0017J	mg/L	0.0050	03/30/21 18:35	
EPA 6020B	Barium	0.035	mg/L	0.0050	03/30/21 18:35	
EPA 6020B	Beryllium	0.000081J	mg/L	0.00050	03/30/21 18:35	
EPA 6020B	Boron	0.53	mg/L	0.040	03/30/21 18:35	
EPA 6020B	Lead	0.000099J	mg/L	0.0010	03/30/21 18:35	
EPA 6020B	Molybdenum	0.015	mg/L	0.010	03/30/21 18:35	
EPA 6020B	Selenium	0.015	mg/L	0.0050	03/30/21 18:35	
SM 2540C-2011	Total Dissolved Solids	558	mg/L	10.0	03/23/21 07:59	
EPA 300.0 Rev 2.1 1993	Chloride	11.5	mg/L	1.0	03/22/21 00:51	
EPA 300.0 Rev 2.1 1993	Fluoride	0.21	mg/L	0.10	03/22/21 00:51	
EPA 300.0 Rev 2.1 1993	Sulfate	291	mg/L	6.0	03/22/21 10:11	
92527268017	HGWC-12					
	Performed by	CUSTOMER			03/22/21 11:58	
	pH	7.15	Std. Units		03/22/21 11:58	

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527268017	HGWC-12					
EPA 6010D	Calcium	166	mg/L	1.0	03/26/21 17:52	
EPA 6020B	Arsenic	0.0038J	mg/L	0.0050	03/30/21 18:41	
EPA 6020B	Barium	0.084	mg/L	0.0050	03/30/21 18:41	
EPA 6020B	Boron	1.9	mg/L	0.040	03/30/21 18:41	
EPA 6020B	Cobalt	0.0012J	mg/L	0.0050	03/30/21 18:41	
EPA 6020B	Lead	0.000089J	mg/L	0.0010	03/30/21 18:41	
EPA 6020B	Lithium	0.0081J	mg/L	0.030	03/30/21 18:41	
EPA 6020B	Molybdenum	0.044	mg/L	0.010	03/30/21 18:41	
SM 2540C-2011	Total Dissolved Solids	614	mg/L	20.0	03/23/21 07:59	
EPA 300.0 Rev 2.1 1993	Chloride	56.8	mg/L	1.0	03/22/21 01:05	
EPA 300.0 Rev 2.1 1993	Fluoride	0.20	mg/L	0.10	03/22/21 01:05	
EPA 300.0 Rev 2.1 1993	Sulfate	248	mg/L	5.0	03/22/21 10:25	
92527268018	MW-5					
	Performed by	CUSTOMER			03/22/21 11:58	
	pH	5.78	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	71.8	mg/L	1.0	03/26/21 17:57	
EPA 6020B	Barium	0.046	mg/L	0.0050	03/30/21 18:46	
EPA 6020B	Boron	0.037J	mg/L	0.040	03/30/21 18:46	
EPA 6020B	Chromium	0.0024J	mg/L	0.0050	03/30/21 18:46	B
EPA 6020B	Selenium	0.0026J	mg/L	0.0050	03/30/21 18:46	
SM 2540C-2011	Total Dissolved Solids	333	mg/L	10.0	03/23/21 08:00	
EPA 300.0 Rev 2.1 1993	Chloride	1.4	mg/L	1.0	03/22/21 01:18	
EPA 300.0 Rev 2.1 1993	Sulfate	162	mg/L	4.0	03/22/21 10:40	
92527268019	MW-6					
	Performed by	CUSTOMER			03/22/21 11:58	
	pH	6.96	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	184	mg/L	1.0	03/26/21 18:01	
EPA 6020B	Barium	0.081	mg/L	0.0050	03/30/21 18:52	
EPA 6020B	Boron	0.81	mg/L	0.040	03/30/21 18:52	
EPA 6020B	Cobalt	0.00042J	mg/L	0.0050	03/30/21 18:52	
EPA 6020B	Lead	0.000036J	mg/L	0.0010	03/30/21 18:52	
EPA 6020B	Molybdenum	0.0023J	mg/L	0.010	03/30/21 18:52	
SM 2540C-2011	Total Dissolved Solids	600	mg/L	20.0	03/23/21 08:00	
EPA 300.0 Rev 2.1 1993	Chloride	49.8	mg/L	1.0	03/22/21 01:32	
EPA 300.0 Rev 2.1 1993	Fluoride	0.060J	mg/L	0.10	03/22/21 01:32	
EPA 300.0 Rev 2.1 1993	Sulfate	189	mg/L	4.0	03/22/21 10:55	
92527268020	MW-25D					
	Performed by	CUSTOMER			03/22/21 11:58	
	pH	7.76	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	24.8	mg/L	1.0	03/26/21 18:06	
EPA 6020B	Barium	0.51	mg/L	0.0050	03/30/21 18:58	
EPA 6020B	Boron	0.40	mg/L	0.040	03/30/21 18:58	
EPA 6020B	Lithium	0.049	mg/L	0.030	03/30/21 18:58	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527268020	MW-25D					
SM 2540C-2011	Total Dissolved Solids	347	mg/L	10.0	03/23/21 08:00	
EPA 300.0 Rev 2.1 1993	Chloride	29.2	mg/L	1.0	03/22/21 01:46	
EPA 300.0 Rev 2.1 1993	Fluoride	1.7	mg/L	0.10	03/22/21 01:46	
EPA 300.0 Rev 2.1 1993	Sulfate	9.4	mg/L	1.0	03/22/21 01:46	
92527268021	DUP-1					
EPA 6010D	Calcium	24.8	mg/L	1.0	03/26/21 18:11	
EPA 6020B	Barium	0.51	mg/L	0.0050	03/30/21 19:04	
EPA 6020B	Boron	0.41	mg/L	0.040	03/30/21 19:04	
EPA 6020B	Lithium	0.050	mg/L	0.030	03/30/21 19:04	
SM 2540C-2011	Total Dissolved Solids	351	mg/L	10.0	03/23/21 08:00	
EPA 300.0 Rev 2.1 1993	Chloride	29.7	mg/L	1.0	03/22/21 01:59	
EPA 300.0 Rev 2.1 1993	Fluoride	1.7	mg/L	0.10	03/22/21 01:59	
EPA 300.0 Rev 2.1 1993	Sulfate	9.6	mg/L	1.0	03/22/21 01:59	
92527268022	EB-1					
SM 2540C-2011	Total Dissolved Solids	10.0	mg/L	10.0	03/23/21 08:00	
92527268023	FB-1					
EPA 6020B	Antimony	0.00029J	mg/L	0.0030	04/02/21 15:31	
92527268024	HGWC-13					
	Performed by	CUSTOME			03/22/21 11:58	
		R				
	pH	7.33	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	184	mg/L	1.0	03/26/21 18:26	
EPA 6020B	Antimony	0.00049J	mg/L	0.0030	03/29/21 11:47	
EPA 6020B	Arsenic	0.39	mg/L	0.0050	03/29/21 11:47	
EPA 6020B	Barium	0.056	mg/L	0.0050	03/29/21 11:47	
EPA 6020B	Beryllium	0.000090J	mg/L	0.00050	03/29/21 11:47	
EPA 6020B	Boron	0.89	mg/L	0.040	03/29/21 11:47	
EPA 6020B	Cobalt	0.0029J	mg/L	0.0050	03/29/21 11:47	
EPA 6020B	Lead	0.00015J	mg/L	0.0010	03/29/21 11:47	
EPA 6020B	Lithium	0.031	mg/L	0.030	03/29/21 11:47	
EPA 6020B	Molybdenum	0.035	mg/L	0.010	03/29/21 11:47	
EPA 6020B	Thallium	0.00037J	mg/L	0.0010	03/29/21 11:47	
SM 2540C-2011	Total Dissolved Solids	716	mg/L	20.0	03/23/21 08:41	
EPA 300.0 Rev 2.1 1993	Chloride	31.4	mg/L	1.0	03/23/21 09:00	
EPA 300.0 Rev 2.1 1993	Fluoride	0.65	mg/L	0.10	03/23/21 09:00	
EPA 300.0 Rev 2.1 1993	Sulfate	384	mg/L	8.0	03/23/21 16:15	
92527268025	MW-19					
	Performed by	CUSTOME			03/22/21 11:58	
		R				
	pH	6.34	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	130	mg/L	1.0	03/26/21 18:40	
EPA 6020B	Barium	0.049	mg/L	0.0050	04/02/21 15:37	
EPA 6020B	Boron	0.69	mg/L	0.040	04/02/21 15:37	
EPA 6020B	Cadmium	0.00016J	mg/L	0.00050	04/02/21 15:37	
EPA 6020B	Chromium	0.0022J	mg/L	0.0050	04/02/21 15:37	

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 SEMIANNUAL

Lab Project No.: 92527268

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92527268025	MW-19					
EPA 6020B	Cobalt	0.037	mg/L	0.0050	04/02/21 15:37	
EPA 6020B	Lead	0.000038J	mg/L	0.0010	04/02/21 15:37	
EPA 6020B	Lithium	0.012J	mg/L	0.030	04/02/21 15:37	
EPA 6020B	Molybdenum	0.043	mg/L	0.010	04/02/21 15:37	
EPA 6020B	Thallium	0.00026J	mg/L	0.0010	04/02/21 15:37	
SM 2540C-2011	Total Dissolved Solids	543	mg/L	10.0	03/23/21 08:41	
EPA 300.0 Rev 2.1 1993	Chloride	19.8	mg/L	1.0	03/23/21 09:13	
EPA 300.0 Rev 2.1 1993	Fluoride	0.18	mg/L	0.10	03/23/21 09:13	
EPA 300.0 Rev 2.1 1993	Sulfate	260	mg/L	5.0	03/23/21 16:30	
92527268026	MW-24D					
	Performed by	CUSTOMER			03/22/21 11:58	
	pH	7.66	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	102	mg/L	1.0	03/26/21 18:45	
EPA 6020B	Barium	0.055	mg/L	0.0050	04/02/21 15:42	
EPA 6020B	Boron	0.49	mg/L	0.040	04/02/21 15:42	
EPA 6020B	Chromium	0.0017J	mg/L	0.0050	04/02/21 15:42	
EPA 6020B	Lead	0.000040J	mg/L	0.0010	04/02/21 15:42	
EPA 6020B	Lithium	0.0027J	mg/L	0.030	04/02/21 15:42	
EPA 6020B	Molybdenum	0.0010J	mg/L	0.010	04/02/21 15:42	
SM 2540C-2011	Total Dissolved Solids	420	mg/L	10.0	03/23/21 08:41	
EPA 300.0 Rev 2.1 1993	Chloride	42.9	mg/L	1.0	03/23/21 09:27	
EPA 300.0 Rev 2.1 1993	Sulfate	137	mg/L	3.0	03/23/21 16:45	
92527268027	MW-26D					
	Performed by	CUSTOMER			03/22/21 11:58	
	pH	7.14	Std. Units		03/22/21 11:58	
EPA 6010D	Calcium	175	mg/L	1.0	03/26/21 18:50	
EPA 6020B	Barium	0.094	mg/L	0.0050	04/02/21 15:48	
EPA 6020B	Boron	2.1	mg/L	0.040	04/02/21 15:48	
EPA 6020B	Chromium	0.0015J	mg/L	0.0050	04/02/21 15:48	
EPA 6020B	Cobalt	0.00044J	mg/L	0.0050	04/02/21 15:48	
EPA 6020B	Lithium	0.0040J	mg/L	0.030	04/02/21 15:48	
EPA 6020B	Molybdenum	0.023	mg/L	0.010	04/02/21 15:48	
SM 2540C-2011	Total Dissolved Solids	738	mg/L	20.0	03/23/21 08:41	
EPA 300.0 Rev 2.1 1993	Chloride	95.3	mg/L	4.0	03/23/21 17:29	
EPA 300.0 Rev 2.1 1993	Fluoride	0.072J	mg/L	0.10	03/23/21 09:40	
EPA 300.0 Rev 2.1 1993	Sulfate	212	mg/L	4.0	03/23/21 17:29	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: HGWA-1 Lab ID: 92527268001 Collected: 03/10/21 16:10 Received: 03/11/21 15:55 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	6.95	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	111	mg/L	1.0	0.070	1	03/15/21 14:10	03/19/21 04:13	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/15/21 14:35	03/16/21 15:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/15/21 14:35	03/16/21 15:56	7440-38-2	
Barium	0.030	mg/L	0.0050	0.00071	1	03/15/21 14:35	03/16/21 15:56	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/15/21 14:35	03/16/21 15:56	7440-41-7	
Boron	0.015J	mg/L	0.040	0.0052	1	03/15/21 14:35	03/16/21 15:56	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/15/21 14:35	03/16/21 15:56	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/15/21 14:35	03/16/21 15:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/15/21 14:35	03/16/21 15:56	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/15/21 14:35	03/16/21 15:56	7439-92-1	
Lithium	0.00090J	mg/L	0.030	0.00081	1	03/15/21 14:35	03/16/21 15:56	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/15/21 14:35	03/16/21 15:56	7439-98-7	
Selenium	0.0047J	mg/L	0.0050	0.0016	1	03/15/21 14:35	03/16/21 15:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/15/21 14:35	03/16/21 15:56	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	348	mg/L	10.0	10.0	1		03/15/21 13:15		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	7.4	mg/L	1.0	0.60	1		03/17/21 20:51	16887-00-6	
Fluoride	0.079J	mg/L	0.10	0.050	1		03/17/21 20:51	16984-48-8	
Sulfate	49.6	mg/L	1.0	0.50	1		03/17/21 20:51	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: HGWA-44D Lab ID: 92527268002 Collected: 03/10/21 14:30 Received: 03/11/21 15:55 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	7.92	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	5.9	mg/L	1.0	0.070	1	03/15/21 14:10	03/19/21 04:18	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00037J	mg/L	0.0030	0.00028	1	03/15/21 14:35	03/16/21 16:13	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.00078	1	03/15/21 14:35	03/16/21 16:13	7440-38-2	
Barium	0.26	mg/L	0.0050	0.00071	1	03/15/21 14:35	03/16/21 16:13	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/15/21 14:35	03/16/21 16:13	7440-41-7	
Boron	0.39	mg/L	0.040	0.0052	1	03/15/21 14:35	03/16/21 16:13	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/15/21 14:35	03/16/21 16:13	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/15/21 14:35	03/16/21 16:13	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/15/21 14:35	03/16/21 16:13	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/15/21 14:35	03/16/21 16:13	7439-92-1	
Lithium	0.030	mg/L	0.030	0.00081	1	03/15/21 14:35	03/16/21 16:13	7439-93-2	
Molybdenum	0.0019J	mg/L	0.010	0.00069	1	03/15/21 14:35	03/16/21 16:13	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/15/21 14:35	03/16/21 16:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/15/21 14:35	03/16/21 16:13	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	289	mg/L	10.0	10.0	1		03/15/21 13:15		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	12.3	mg/L	1.0	0.60	1		03/17/21 22:28	16887-00-6	
Fluoride	0.65	mg/L	0.10	0.050	1		03/17/21 22:28	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		03/17/21 22:28	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: HGWA-2		Lab ID: 92527268003		Collected: 03/11/21 09:59		Received: 03/12/21 13:43		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	5.80	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	43.8	mg/L	1.0	0.070	1	03/22/21 11:22	03/22/21 20:09	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/19/21 12:10	03/19/21 20:54	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/19/21 12:10	03/19/21 20:54	7440-38-2	
Barium	0.070	mg/L	0.0050	0.00071	1	03/19/21 12:10	03/19/21 20:54	7440-39-3	
Beryllium	0.000086J	mg/L	0.00050	0.000046	1	03/19/21 12:10	03/19/21 20:54	7440-41-7	
Boron	0.056	mg/L	0.040	0.0052	1	03/19/21 12:10	03/19/21 20:54	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/19/21 12:10	03/19/21 20:54	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/19/21 12:10	03/19/21 20:54	7440-47-3	
Cobalt	0.013	mg/L	0.0050	0.00038	1	03/19/21 12:10	03/19/21 20:54	7440-48-4	
Lead	0.000076J	mg/L	0.0010	0.000036	1	03/19/21 12:10	03/19/21 20:54	7439-92-1	
Lithium	0.0011J	mg/L	0.030	0.00081	1	03/19/21 12:10	03/19/21 20:54	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/19/21 12:10	03/19/21 20:54	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/19/21 12:10	03/19/21 20:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/19/21 12:10	03/19/21 20:54	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	169	mg/L	10.0	10.0	1		03/16/21 15:08		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.1	mg/L	1.0	0.60	1		03/19/21 00:00	16887-00-6	
Fluoride	0.10	mg/L	0.10	0.050	1		03/19/21 00:00	16984-48-8	
Sulfate	52.9	mg/L	1.0	0.50	1		03/19/21 00:00	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Sample: HGWA-3		Lab ID: 92527268004		Collected: 03/11/21 11:25		Received: 03/12/21 13:43		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	7.33	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	83.8	mg/L	1.0	0.070	1	03/22/21 11:22	03/22/21 20:29	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/19/21 12:10	03/19/21 21:00	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/19/21 12:10	03/19/21 21:00	7440-38-2	
Barium	0.13	mg/L	0.0050	0.00071	1	03/19/21 12:10	03/19/21 21:00	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/19/21 12:10	03/19/21 21:00	7440-41-7	
Boron	0.015J	mg/L	0.040	0.0052	1	03/19/21 12:10	03/19/21 21:00	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/19/21 12:10	03/19/21 21:00	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/19/21 12:10	03/19/21 21:00	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/19/21 12:10	03/19/21 21:00	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/19/21 12:10	03/19/21 21:00	7439-92-1	
Lithium	0.0035J	mg/L	0.030	0.00081	1	03/19/21 12:10	03/19/21 21:00	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/19/21 12:10	03/19/21 21:00	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/19/21 12:10	03/19/21 21:00	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/19/21 12:10	03/19/21 21:00	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	267	mg/L	10.0	10.0	1		03/16/21 15:08		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.9	mg/L	1.0	0.60	1		03/19/21 00:00	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/19/21 00:00	16984-48-8	
Sulfate	50.4	mg/L	1.0	0.50	1		03/19/21 00:00	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Sample: HGWA-43D		Lab ID: 92527268005		Collected: 03/11/21 09:57		Received: 03/12/21 13:43		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	7.46	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	59.6	mg/L	1.0	0.070	1	03/22/21 11:22	03/22/21 20:33	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00057J	mg/L	0.0030	0.00028	1	03/19/21 12:10	03/19/21 21:06	7440-36-0	
Arsenic	0.0013J	mg/L	0.0050	0.00078	1	03/19/21 12:10	03/19/21 21:06	7440-38-2	
Barium	0.32	mg/L	0.0050	0.00071	1	03/19/21 12:10	03/19/21 21:06	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/19/21 12:10	03/19/21 21:06	7440-41-7	
Boron	0.060	mg/L	0.040	0.0052	1	03/19/21 12:10	03/19/21 21:06	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/19/21 12:10	03/19/21 21:06	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/19/21 12:10	03/19/21 21:06	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/19/21 12:10	03/19/21 21:06	7440-48-4	
Lead	0.000094J	mg/L	0.0010	0.000036	1	03/19/21 12:10	03/19/21 21:06	7439-92-1	
Lithium	0.0022J	mg/L	0.030	0.00081	1	03/19/21 12:10	03/19/21 21:06	7439-93-2	
Molybdenum	0.0064J	mg/L	0.010	0.00069	1	03/19/21 12:10	03/19/21 21:06	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/19/21 12:10	03/19/21 21:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/19/21 12:10	03/19/21 21:06	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	279	mg/L	10.0	10.0	1		03/17/21 17:40		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	4.5	mg/L	1.0	0.60	1		03/19/21 00:00	16887-00-6	
Fluoride	0.20	mg/L	0.10	0.050	1		03/19/21 00:00	16984-48-8	
Sulfate	38.6	mg/L	1.0	0.50	1		03/19/21 00:00	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: HGWC-10		Lab ID: 92527268006		Collected: 03/12/21 10:11		Received: 03/15/21 12:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	6.76	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	146	mg/L	1.0	0.070	1	03/26/21 10:56	03/26/21 19:19	7440-70-2	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:30	03/29/21 18:43	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:30	03/29/21 18:43	7440-38-2	
Barium	0.058	mg/L	0.0050	0.00071	1	03/27/21 11:30	03/29/21 18:43	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:30	03/29/21 18:43	7440-41-7	
Boron	0.64	mg/L	0.040	0.0052	1	03/27/21 11:30	03/29/21 18:43	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:30	03/29/21 18:43	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/27/21 11:30	03/29/21 18:43	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/27/21 11:30	03/29/21 18:43	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/27/21 11:30	03/29/21 18:43	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/27/21 11:30	03/29/21 18:43	7439-93-2	
Molybdenum	0.00070J	mg/L	0.010	0.00069	1	03/27/21 11:30	03/29/21 18:43	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:30	03/29/21 18:43	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:30	03/29/21 18:43	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	490	mg/L	10.0	10.0	1		03/23/21 07:39		H1
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	35.0	mg/L	1.0	0.60	1		03/21/21 01:09	16887-00-6	
Fluoride	0.054J	mg/L	0.10	0.050	1		03/21/21 01:09	16984-48-8	
Sulfate	120	mg/L	3.0	1.5	3		03/23/21 19:12	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Sample: MW-27D		Lab ID: 92527268007		Collected: 03/12/21 09:47		Received: 03/15/21 12:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	7.88	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	28.0	mg/L	1.0	0.070	1	03/26/21 10:56	03/26/21 19:48	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:30	03/29/21 18:48	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:30	03/29/21 18:48	7440-38-2	
Barium	1.1	mg/L	0.025	0.0036	5	03/27/21 11:30	03/30/21 12:03	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:30	03/29/21 18:48	7440-41-7	
Boron	0.13	mg/L	0.040	0.0052	1	03/27/21 11:30	03/29/21 18:48	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:30	03/29/21 18:48	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/27/21 11:30	03/29/21 18:48	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/27/21 11:30	03/29/21 18:48	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/27/21 11:30	03/29/21 18:48	7439-92-1	
Lithium	0.0090J	mg/L	0.030	0.00081	1	03/27/21 11:30	03/29/21 18:48	7439-93-2	
Molybdenum	0.00080J	mg/L	0.010	0.00069	1	03/27/21 11:30	03/29/21 18:48	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:30	03/29/21 18:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:30	03/29/21 18:48	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	215	mg/L	10.0	10.0	1		03/23/21 07:39		H1
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	31.3	mg/L	1.0	0.60	1		03/21/21 01:24	16887-00-6	
Fluoride	0.24	mg/L	0.10	0.050	1		03/21/21 01:24	16984-48-8	
Sulfate	7.4	mg/L	1.0	0.50	1		03/21/21 01:24	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: HGWC-7 FILTERED Lab ID: 92527268008 Collected: 03/15/21 16:25 Received: 03/16/21 13:42 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	7.19	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	109	mg/L	1.0	0.070	1	03/26/21 10:56	03/26/21 19:53	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:30	03/29/21 18:54	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:30	03/29/21 18:54	7440-38-2	
Barium	0.068	mg/L	0.0050	0.00071	1	03/27/21 11:30	03/29/21 18:54	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:30	03/29/21 18:54	7440-41-7	
Boron	1.1	mg/L	0.040	0.0052	1	03/27/21 11:30	03/29/21 18:54	7440-42-8	
Cadmium	0.00021J	mg/L	0.00050	0.00012	1	03/27/21 11:30	03/29/21 18:54	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/27/21 11:30	03/29/21 18:54	7440-47-3	
Cobalt	0.00053J	mg/L	0.0050	0.00038	1	03/27/21 11:30	03/29/21 18:54	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/27/21 11:30	03/29/21 18:54	7439-92-1	
Lithium	0.0020J	mg/L	0.030	0.00081	1	03/27/21 11:30	03/29/21 18:54	7439-93-2	
Molybdenum	0.050	mg/L	0.010	0.00069	1	03/27/21 11:30	03/29/21 18:54	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:30	03/29/21 18:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:30	03/29/21 18:54	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	366	mg/L	10.0	10.0	1		03/22/21 15:10		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	44.4	mg/L	1.0	0.60	1		03/20/21 16:46	16887-00-6	
Fluoride	0.088J	mg/L	0.10	0.050	1		03/20/21 16:46	16984-48-8	
Sulfate	80.6	mg/L	2.0	1.0	2		03/21/21 07:17	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: HGWC-7		Lab ID: 92527268009		Collected: 03/15/21 16:10		Received: 03/16/21 13:42		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	7.19	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	113	mg/L	1.0	0.070	1	03/26/21 10:28	03/26/21 17:13	7440-70-2	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:30	03/29/21 19:00	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:30	03/29/21 19:00	7440-38-2	
Barium	0.074	mg/L	0.0050	0.00071	1	03/27/21 11:30	03/29/21 19:00	7440-39-3	
Beryllium	0.00019J	mg/L	0.00050	0.000046	1	03/27/21 11:30	03/29/21 19:00	7440-41-7	
Boron	1.1	mg/L	0.040	0.0052	1	03/27/21 11:30	03/29/21 19:00	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:30	03/29/21 19:00	7440-43-9	
Chromium	0.0021J	mg/L	0.0050	0.00055	1	03/27/21 11:30	03/29/21 19:00	7440-47-3	
Cobalt	0.0014J	mg/L	0.0050	0.00038	1	03/27/21 11:30	03/29/21 19:00	7440-48-4	
Lead	0.0013	mg/L	0.0010	0.000036	1	03/27/21 11:30	03/29/21 19:00	7439-92-1	
Lithium	0.0038J	mg/L	0.030	0.00081	1	03/27/21 11:30	03/29/21 19:00	7439-93-2	
Molybdenum	0.047	mg/L	0.010	0.00069	1	03/27/21 11:30	03/29/21 19:00	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:30	03/29/21 19:00	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:30	03/29/21 19:00	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	370	mg/L	10.0	10.0	1		03/22/21 15:10		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	44.5	mg/L	1.0	0.60	1		03/20/21 17:00	16887-00-6	
Fluoride	0.086J	mg/L	0.10	0.050	1		03/20/21 17:00	16984-48-8	
Sulfate	107	mg/L	2.0	1.0	2		03/21/21 07:33	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: HGWC-8		Lab ID: 92527268010		Collected: 03/15/21 11:00		Received: 03/16/21 13:42		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	7.09	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	156	mg/L	1.0	0.070	1	03/26/21 10:56	03/26/21 19:58	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:30	03/29/21 19:06	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:30	03/29/21 19:06	7440-38-2	
Barium	0.063	mg/L	0.0050	0.00071	1	03/27/21 11:30	03/29/21 19:06	7440-39-3	
Beryllium	0.000078J	mg/L	0.00050	0.000046	1	03/27/21 11:30	03/29/21 19:06	7440-41-7	
Boron	1.7	mg/L	0.040	0.0052	1	03/27/21 11:30	03/29/21 19:06	7440-42-8	
Cadmium	0.00017J	mg/L	0.00050	0.00012	1	03/27/21 11:30	03/29/21 19:06	7440-43-9	
Chromium	0.00082J	mg/L	0.0050	0.00055	1	03/27/21 11:30	03/29/21 19:06	7440-47-3	
Cobalt	0.0019J	mg/L	0.0050	0.00038	1	03/27/21 11:30	03/29/21 19:06	7440-48-4	
Lead	0.00011J	mg/L	0.0010	0.000036	1	03/27/21 11:30	03/29/21 19:06	7439-92-1	
Lithium	0.0029J	mg/L	0.030	0.00081	1	03/27/21 11:30	03/29/21 19:06	7439-93-2	
Molybdenum	0.41	mg/L	0.010	0.00069	1	03/27/21 11:30	03/29/21 19:06	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:30	03/29/21 19:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:30	03/29/21 19:06	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	614	mg/L	20.0	20.0	1		03/22/21 15:10		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	72.4	mg/L	1.0	0.60	1		03/20/21 17:14	16887-00-6	
Fluoride	0.51	mg/L	0.10	0.050	1		03/20/21 17:14	16984-48-8	
Sulfate	272	mg/L	6.0	3.0	6		03/21/21 07:47	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: MW-7		Lab ID: 92527268011		Collected: 03/15/21 12:00		Received: 03/16/21 13:42		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	6.66	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	76.9	mg/L	1.0	0.070	1	03/26/21 10:56	03/26/21 20:03	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:30	03/29/21 19:11	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:30	03/29/21 19:11	7440-38-2	
Barium	0.053	mg/L	0.0050	0.00071	1	03/27/21 11:30	03/29/21 19:11	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:30	03/29/21 19:11	7440-41-7	
Boron	0.16	mg/L	0.040	0.0052	1	03/27/21 11:30	03/29/21 19:11	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:30	03/29/21 19:11	7440-43-9	
Chromium	0.0018J	mg/L	0.0050	0.00055	1	03/27/21 11:30	03/29/21 19:11	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/27/21 11:30	03/29/21 19:11	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/27/21 11:30	03/29/21 19:11	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/27/21 11:30	03/29/21 19:11	7439-93-2	
Molybdenum	0.0015J	mg/L	0.010	0.00069	1	03/27/21 11:30	03/29/21 19:11	7439-98-7	
Selenium	0.0021J	mg/L	0.0050	0.0016	1	03/27/21 11:30	03/29/21 19:11	7782-49-2	B
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:30	03/29/21 19:11	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	293	mg/L	10.0	10.0	1		03/22/21 15:10		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	6.8	mg/L	1.0	0.60	1		03/20/21 17:27	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/20/21 17:27	16984-48-8	
Sulfate	92.1	mg/L	2.0	1.0	2		03/21/21 08:03	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: MW-20		Lab ID: 92527268012		Collected: 03/15/21 14:22		Received: 03/16/21 13:42		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	6.97	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	121	mg/L	1.0	0.070	1	03/26/21 10:56	03/26/21 20:07	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:30	03/29/21 19:17	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:30	03/29/21 19:17	7440-38-2	
Barium	0.096	mg/L	0.0050	0.00071	1	03/27/21 11:30	03/29/21 19:17	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:30	03/29/21 19:17	7440-41-7	
Boron	0.12	mg/L	0.040	0.0052	1	03/27/21 11:30	03/29/21 19:17	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:30	03/29/21 19:17	7440-43-9	
Chromium	0.00068J	mg/L	0.0050	0.00055	1	03/27/21 11:30	03/29/21 19:17	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/27/21 11:30	03/29/21 19:17	7440-48-4	
Lead	0.00010J	mg/L	0.0010	0.000036	1	03/27/21 11:30	03/29/21 19:17	7439-92-1	
Lithium	0.0011J	mg/L	0.030	0.00081	1	03/27/21 11:30	03/29/21 19:17	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/27/21 11:30	03/29/21 19:17	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:30	03/29/21 19:17	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:30	03/29/21 19:17	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	406	mg/L	10.0	10.0	1		03/22/21 15:10		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	31.1	mg/L	1.0	0.60	1		03/20/21 17:41	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/20/21 17:41	16984-48-8	
Sulfate	109	mg/L	2.0	1.0	2		03/21/21 08:19	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Sample: MW-28D		Lab ID: 92527268013		Collected: 03/15/21 18:25		Received: 03/16/21 13:42		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	7.61	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	66.1	mg/L	1.0	0.070	1	03/26/21 10:56	03/26/21 20:12	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:30	03/29/21 19:23	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:30	03/29/21 19:23	7440-38-2	
Barium	0.45	mg/L	0.0050	0.00071	1	03/27/21 11:30	03/29/21 19:23	7440-39-3	
Beryllium	0.000048J	mg/L	0.00050	0.000046	1	03/27/21 11:30	03/29/21 19:23	7440-41-7	
Boron	0.36	mg/L	0.040	0.0052	1	03/27/21 11:30	03/29/21 19:23	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:30	03/29/21 19:23	7440-43-9	
Chromium	0.00078J	mg/L	0.0050	0.00055	1	03/27/21 11:30	03/29/21 19:23	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/27/21 11:30	03/29/21 19:23	7440-48-4	
Lead	0.00034J	mg/L	0.0010	0.000036	1	03/27/21 11:30	03/29/21 19:23	7439-92-1	
Lithium	0.013J	mg/L	0.030	0.00081	1	03/27/21 11:30	03/29/21 19:23	7439-93-2	
Molybdenum	0.013	mg/L	0.010	0.00069	1	03/27/21 11:30	03/29/21 19:23	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:30	03/29/21 19:23	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:30	03/29/21 19:23	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	293	mg/L	10.0	10.0	1		03/22/21 15:10		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	35.8	mg/L	1.0	0.60	1		03/20/21 18:21	16887-00-6	
Fluoride	0.24	mg/L	0.10	0.050	1		03/20/21 18:21	16984-48-8	
Sulfate	50.1	mg/L	1.0	0.50	1		03/20/21 18:21	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: MW-29 Lab ID: 92527268014 Collected: 03/15/21 12:52 Received: 03/16/21 13:42 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	7.05	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	145	mg/L	1.0	0.070	1	03/26/21 10:56	03/26/21 20:17	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:30	03/29/21 19:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:30	03/29/21 19:40	7440-38-2	
Barium	0.078	mg/L	0.0050	0.00071	1	03/27/21 11:30	03/29/21 19:40	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:30	03/29/21 19:40	7440-41-7	
Boron	1.2	mg/L	0.040	0.0052	1	03/27/21 11:30	03/29/21 19:40	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:30	03/29/21 19:40	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/27/21 11:30	03/29/21 19:40	7440-47-3	
Cobalt	0.0011J	mg/L	0.0050	0.00038	1	03/27/21 11:30	03/29/21 19:40	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/27/21 11:30	03/29/21 19:40	7439-92-1	
Lithium	0.0022J	mg/L	0.030	0.00081	1	03/27/21 11:30	03/29/21 19:40	7439-93-2	
Molybdenum	0.0031J	mg/L	0.010	0.00069	1	03/27/21 11:30	03/29/21 19:40	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:30	03/29/21 19:40	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:30	03/29/21 19:40	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	555	mg/L	10.0	10.0	1		03/22/21 15:10		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	73.6	mg/L	1.0	0.60	1		03/20/21 18:35	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/20/21 18:35	16984-48-8	
Sulfate	148	mg/L	3.0	1.5	3		03/21/21 08:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: HGWC-9 Lab ID: 92527268015 Collected: 03/16/21 14:48 Received: 03/17/21 13:10 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	7.10	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	182	mg/L	1.0	0.070	1	03/26/21 10:28	03/26/21 17:42	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:30	03/29/21 19:46	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:30	03/29/21 19:46	7440-38-2	
Barium	0.11	mg/L	0.0050	0.00071	1	03/27/21 11:30	03/29/21 19:46	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:30	03/29/21 19:46	7440-41-7	
Boron	2.2	mg/L	0.040	0.0052	1	03/27/21 11:30	03/29/21 19:46	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:30	03/29/21 19:46	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/27/21 11:30	03/29/21 19:46	7440-47-3	
Cobalt	0.00069J	mg/L	0.0050	0.00038	1	03/27/21 11:30	03/29/21 19:46	7440-48-4	
Lead	0.00027J	mg/L	0.0010	0.000036	1	03/27/21 11:30	03/29/21 19:46	7439-92-1	
Lithium	0.0046J	mg/L	0.030	0.00081	1	03/27/21 11:30	03/29/21 19:46	7439-93-2	
Molybdenum	0.035	mg/L	0.010	0.00069	1	03/27/21 11:30	03/29/21 19:46	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:30	03/29/21 19:46	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:30	03/29/21 19:46	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	672	mg/L	20.0	20.0	1		03/23/21 07:59		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	94.7	mg/L	5.0	3.0	5		03/22/21 09:56	16887-00-6	
Fluoride	0.098J	mg/L	0.10	0.050	1		03/22/21 00:11	16984-48-8	
Sulfate	211	mg/L	5.0	2.5	5		03/22/21 09:56	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: HGWC-11		Lab ID: 92527268016		Collected: 03/16/21 09:45		Received: 03/17/21 13:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	5.95	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	132	mg/L	1.0	0.070	1	03/26/21 10:28	03/26/21 17:47	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:54	03/30/21 18:35	7440-36-0	
Arsenic	0.0017J	mg/L	0.0050	0.00078	1	03/27/21 11:54	03/30/21 18:35	7440-38-2	
Barium	0.035	mg/L	0.0050	0.00071	1	03/27/21 11:54	03/30/21 18:35	7440-39-3	
Beryllium	0.000081J	mg/L	0.00050	0.000046	1	03/27/21 11:54	03/30/21 18:35	7440-41-7	
Boron	0.53	mg/L	0.040	0.0052	1	03/27/21 11:54	03/30/21 18:35	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:54	03/30/21 18:35	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/27/21 11:54	03/30/21 18:35	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/27/21 11:54	03/30/21 18:35	7440-48-4	
Lead	0.000099J	mg/L	0.0010	0.000036	1	03/27/21 11:54	03/30/21 18:35	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/27/21 11:54	03/30/21 18:35	7439-93-2	
Molybdenum	0.015	mg/L	0.010	0.00069	1	03/27/21 11:54	03/30/21 18:35	7439-98-7	
Selenium	0.015	mg/L	0.0050	0.0016	1	03/27/21 11:54	03/30/21 18:35	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:54	03/30/21 18:35	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	558	mg/L	10.0	10.0	1		03/23/21 07:59		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	11.5	mg/L	1.0	0.60	1		03/22/21 00:51	16887-00-6	
Fluoride	0.21	mg/L	0.10	0.050	1		03/22/21 00:51	16984-48-8	
Sulfate	291	mg/L	6.0	3.0	6		03/22/21 10:11	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Sample: HGWC-12		Lab ID: 92527268017		Collected: 03/16/21 11:12		Received: 03/17/21 13:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	7.15	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	166	mg/L	1.0	0.070	1	03/26/21 10:28	03/26/21 17:52	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:54	03/30/21 18:41	7440-36-0	
Arsenic	0.0038J	mg/L	0.0050	0.00078	1	03/27/21 11:54	03/30/21 18:41	7440-38-2	
Barium	0.084	mg/L	0.0050	0.00071	1	03/27/21 11:54	03/30/21 18:41	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:54	03/30/21 18:41	7440-41-7	
Boron	1.9	mg/L	0.040	0.0052	1	03/27/21 11:54	03/30/21 18:41	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:54	03/30/21 18:41	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/27/21 11:54	03/30/21 18:41	7440-47-3	
Cobalt	0.0012J	mg/L	0.0050	0.00038	1	03/27/21 11:54	03/30/21 18:41	7440-48-4	
Lead	0.000089J	mg/L	0.0010	0.000036	1	03/27/21 11:54	03/30/21 18:41	7439-92-1	
Lithium	0.0081J	mg/L	0.030	0.00081	1	03/27/21 11:54	03/30/21 18:41	7439-93-2	
Molybdenum	0.044	mg/L	0.010	0.00069	1	03/27/21 11:54	03/30/21 18:41	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:54	03/30/21 18:41	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:54	03/30/21 18:41	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	614	mg/L	20.0	20.0	1		03/23/21 07:59		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	56.8	mg/L	1.0	0.60	1		03/22/21 01:05	16887-00-6	
Fluoride	0.20	mg/L	0.10	0.050	1		03/22/21 01:05	16984-48-8	
Sulfate	248	mg/L	5.0	2.5	5		03/22/21 10:25	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: MW-5 Lab ID: 92527268018 Collected: 03/16/21 16:08 Received: 03/17/21 13:10 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	5.78	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	71.8	mg/L	1.0	0.070	1	03/26/21 10:28	03/26/21 17:57	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:54	03/30/21 18:46	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:54	03/30/21 18:46	7440-38-2	
Barium	0.046	mg/L	0.0050	0.00071	1	03/27/21 11:54	03/30/21 18:46	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:54	03/30/21 18:46	7440-41-7	
Boron	0.037J	mg/L	0.040	0.0052	1	03/27/21 11:54	03/30/21 18:46	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:54	03/30/21 18:46	7440-43-9	
Chromium	0.0024J	mg/L	0.0050	0.00055	1	03/27/21 11:54	03/30/21 18:46	7440-47-3	B
Cobalt	ND	mg/L	0.0050	0.00038	1	03/27/21 11:54	03/30/21 18:46	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/27/21 11:54	03/30/21 18:46	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/27/21 11:54	03/30/21 18:46	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/27/21 11:54	03/30/21 18:46	7439-98-7	
Selenium	0.0026J	mg/L	0.0050	0.0016	1	03/27/21 11:54	03/30/21 18:46	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:54	03/30/21 18:46	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	333	mg/L	10.0	10.0	1		03/23/21 08:00		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	1.4	mg/L	1.0	0.60	1		03/22/21 01:18	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/22/21 01:18	16984-48-8	
Sulfate	162	mg/L	4.0	2.0	4		03/22/21 10:40	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: MW-6 Lab ID: 92527268019 Collected: 03/16/21 15:43 Received: 03/17/21 13:10 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	6.96	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	184	mg/L	1.0	0.070	1	03/26/21 10:28	03/26/21 18:01	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:54	03/30/21 18:52	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:54	03/30/21 18:52	7440-38-2	
Barium	0.081	mg/L	0.0050	0.00071	1	03/27/21 11:54	03/30/21 18:52	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:54	03/30/21 18:52	7440-41-7	
Boron	0.81	mg/L	0.040	0.0052	1	03/27/21 11:54	03/30/21 18:52	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:54	03/30/21 18:52	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/27/21 11:54	03/30/21 18:52	7440-47-3	
Cobalt	0.00042J	mg/L	0.0050	0.00038	1	03/27/21 11:54	03/30/21 18:52	7440-48-4	
Lead	0.000036J	mg/L	0.0010	0.000036	1	03/27/21 11:54	03/30/21 18:52	7439-92-1	
Lithium	ND	mg/L	0.030	0.00081	1	03/27/21 11:54	03/30/21 18:52	7439-93-2	
Molybdenum	0.0023J	mg/L	0.010	0.00069	1	03/27/21 11:54	03/30/21 18:52	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:54	03/30/21 18:52	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:54	03/30/21 18:52	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	600	mg/L	20.0	20.0	1		03/23/21 08:00		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	49.8	mg/L	1.0	0.60	1		03/22/21 01:32	16887-00-6	
Fluoride	0.060J	mg/L	0.10	0.050	1		03/22/21 01:32	16984-48-8	
Sulfate	189	mg/L	4.0	2.0	4		03/22/21 10:55	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: MW-25D Lab ID: 92527268020 Collected: 03/16/21 12:32 Received: 03/17/21 13:10 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	7.76	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	24.8	mg/L	1.0	0.070	1	03/26/21 10:28	03/26/21 18:06	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:54	03/30/21 18:58	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:54	03/30/21 18:58	7440-38-2	
Barium	0.51	mg/L	0.0050	0.00071	1	03/27/21 11:54	03/30/21 18:58	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:54	03/30/21 18:58	7440-41-7	
Boron	0.40	mg/L	0.040	0.0052	1	03/27/21 11:54	03/30/21 18:58	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:54	03/30/21 18:58	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/27/21 11:54	03/30/21 18:58	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/27/21 11:54	03/30/21 18:58	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/27/21 11:54	03/30/21 18:58	7439-92-1	
Lithium	0.049	mg/L	0.030	0.00081	1	03/27/21 11:54	03/30/21 18:58	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00069	1	03/27/21 11:54	03/30/21 18:58	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:54	03/30/21 18:58	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:54	03/30/21 18:58	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	347	mg/L	10.0	10.0	1		03/23/21 08:00		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	29.2	mg/L	1.0	0.60	1		03/22/21 01:46	16887-00-6	
Fluoride	1.7	mg/L	0.10	0.050	1		03/22/21 01:46	16984-48-8	
Sulfate	9.4	mg/L	1.0	0.50	1		03/22/21 01:46	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: DUP-1		Lab ID: 92527268021		Collected: 03/16/21 00:00		Received: 03/17/21 13:10		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	24.8	mg/L	1.0	0.070	1	03/26/21 10:28	03/26/21 18:11	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:54	03/30/21 19:04	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:54	03/30/21 19:04	7440-38-2		
Barium	0.51	mg/L	0.0050	0.00071	1	03/27/21 11:54	03/30/21 19:04	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:54	03/30/21 19:04	7440-41-7		
Boron	0.41	mg/L	0.040	0.0052	1	03/27/21 11:54	03/30/21 19:04	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:54	03/30/21 19:04	7440-43-9		
Chromium	ND	mg/L	0.0050	0.00055	1	03/27/21 11:54	03/30/21 19:04	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	03/27/21 11:54	03/30/21 19:04	7440-48-4		
Lead	ND	mg/L	0.0010	0.000036	1	03/27/21 11:54	03/30/21 19:04	7439-92-1		
Lithium	0.050	mg/L	0.030	0.00081	1	03/27/21 11:54	03/30/21 19:04	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	03/27/21 11:54	03/30/21 19:04	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:54	03/30/21 19:04	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:54	03/30/21 19:04	7440-28-0		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	351	mg/L	10.0	10.0	1		03/23/21 08:00			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	29.7	mg/L	1.0	0.60	1		03/22/21 01:59	16887-00-6		
Fluoride	1.7	mg/L	0.10	0.050	1		03/22/21 01:59	16984-48-8		
Sulfate	9.6	mg/L	1.0	0.50	1		03/22/21 01:59	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Sample: EB-1		Lab ID: 92527268022		Collected: 03/16/21 16:40	Received: 03/17/21 13:10	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	03/26/21 10:28	03/26/21 18:16	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:54	03/30/21 19:09	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:54	03/30/21 19:09	7440-38-2		
Barium	ND	mg/L	0.0050	0.00071	1	03/27/21 11:54	03/30/21 19:09	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:54	03/30/21 19:09	7440-41-7		
Boron	ND	mg/L	0.040	0.0052	1	03/27/21 11:54	03/30/21 19:09	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:54	03/30/21 19:09	7440-43-9		
Chromium	ND	mg/L	0.0050	0.00055	1	03/27/21 11:54	03/30/21 19:09	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	03/27/21 11:54	03/30/21 19:09	7440-48-4		
Lead	ND	mg/L	0.0010	0.000036	1	03/27/21 11:54	03/30/21 19:09	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	03/27/21 11:54	03/30/21 19:09	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	03/27/21 11:54	03/30/21 19:09	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:54	03/30/21 19:09	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:54	03/30/21 19:09	7440-28-0		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	10.0	mg/L	10.0	10.0	1		03/23/21 08:00			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		03/23/21 02:54	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		03/23/21 02:54	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		03/23/21 02:54	14808-79-8		

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: FB-1		Lab ID: 92527268023		Collected: 03/16/21 16:25		Received: 03/17/21 13:10		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Calcium	ND	mg/L	1.0	0.070	1	03/26/21 10:28	03/26/21 18:21	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	0.00029J	mg/L	0.0030	0.00028	1	03/27/21 11:00	04/02/21 15:31	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:00	04/02/21 15:31	7440-38-2		
Barium	ND	mg/L	0.0050	0.00071	1	03/27/21 11:00	04/02/21 15:31	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:00	04/02/21 15:31	7440-41-7		
Boron	ND	mg/L	0.040	0.0052	1	03/27/21 11:00	04/02/21 15:31	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:00	04/02/21 15:31	7440-43-9		
Chromium	ND	mg/L	0.0050	0.00055	1	03/27/21 11:00	04/02/21 15:31	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00038	1	03/27/21 11:00	04/02/21 15:31	7440-48-4		
Lead	ND	mg/L	0.0010	0.000036	1	03/27/21 11:00	04/02/21 15:31	7439-92-1		
Lithium	ND	mg/L	0.030	0.00081	1	03/27/21 11:00	04/02/21 15:31	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00069	1	03/27/21 11:00	04/02/21 15:31	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:00	04/02/21 15:31	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:00	04/02/21 15:31	7440-28-0		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		03/23/21 08:00			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		03/23/21 03:35	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		03/23/21 03:35	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		03/23/21 03:35	14808-79-8		

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Sample: HGWC-13		Lab ID: 92527268024		Collected: 03/17/21 14:58		Received: 03/18/21 13:17		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	7.33	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	184	mg/L	1.0	0.070	1	03/26/21 10:28	03/26/21 18:26	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00049J	mg/L	0.0030	0.00028	1	03/27/21 11:00	03/29/21 11:47	7440-36-0	
Arsenic	0.39	mg/L	0.0050	0.00078	1	03/27/21 11:00	03/29/21 11:47	7440-38-2	
Barium	0.056	mg/L	0.0050	0.00071	1	03/27/21 11:00	03/29/21 11:47	7440-39-3	
Beryllium	0.000090J	mg/L	0.00050	0.000046	1	03/27/21 11:00	03/29/21 11:47	7440-41-7	
Boron	0.89	mg/L	0.040	0.0052	1	03/27/21 11:00	03/29/21 11:47	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:00	03/29/21 11:47	7440-43-9	
Chromium	ND	mg/L	0.0050	0.00055	1	03/27/21 11:00	03/29/21 11:47	7440-47-3	
Cobalt	0.0029J	mg/L	0.0050	0.00038	1	03/27/21 11:00	03/29/21 11:47	7440-48-4	
Lead	0.00015J	mg/L	0.0010	0.000036	1	03/27/21 11:00	03/29/21 11:47	7439-92-1	
Lithium	0.031	mg/L	0.030	0.00081	1	03/27/21 11:00	03/29/21 11:47	7439-93-2	
Molybdenum	0.035	mg/L	0.010	0.00069	1	03/27/21 11:00	03/29/21 11:47	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:00	03/29/21 11:47	7782-49-2	
Thallium	0.00037J	mg/L	0.0010	0.00014	1	03/27/21 11:00	03/29/21 11:47	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	716	mg/L	20.0	20.0	1		03/23/21 08:41		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	31.4	mg/L	1.0	0.60	1		03/23/21 09:00	16887-00-6	
Fluoride	0.65	mg/L	0.10	0.050	1		03/23/21 09:00	16984-48-8	
Sulfate	384	mg/L	8.0	4.0	8		03/23/21 16:15	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Sample: MW-19		Lab ID: 92527268025		Collected: 03/17/21 10:20		Received: 03/18/21 13:17		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	6.34	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	130	mg/L	1.0	0.070	1	03/26/21 10:28	03/26/21 18:40	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:00	04/02/21 15:37	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:00	04/02/21 15:37	7440-38-2	
Barium	0.049	mg/L	0.0050	0.00071	1	03/27/21 11:00	04/02/21 15:37	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:00	04/02/21 15:37	7440-41-7	
Boron	0.69	mg/L	0.040	0.0052	1	03/27/21 11:00	04/02/21 15:37	7440-42-8	
Cadmium	0.00016J	mg/L	0.00050	0.00012	1	03/27/21 11:00	04/02/21 15:37	7440-43-9	
Chromium	0.0022J	mg/L	0.0050	0.00055	1	03/27/21 11:00	04/02/21 15:37	7440-47-3	
Cobalt	0.037	mg/L	0.0050	0.00038	1	03/27/21 11:00	04/02/21 15:37	7440-48-4	
Lead	0.000038J	mg/L	0.0010	0.000036	1	03/27/21 11:00	04/02/21 15:37	7439-92-1	
Lithium	0.012J	mg/L	0.030	0.00081	1	03/27/21 11:00	04/02/21 15:37	7439-93-2	
Molybdenum	0.043	mg/L	0.010	0.00069	1	03/27/21 11:00	04/02/21 15:37	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:00	04/02/21 15:37	7782-49-2	
Thallium	0.00026J	mg/L	0.0010	0.00014	1	03/27/21 11:00	04/02/21 15:37	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	543	mg/L	10.0	10.0	1		03/23/21 08:41		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	19.8	mg/L	1.0	0.60	1		03/23/21 09:13	16887-00-6	
Fluoride	0.18	mg/L	0.10	0.050	1		03/23/21 09:13	16984-48-8	
Sulfate	260	mg/L	5.0	2.5	5		03/23/21 16:30	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: MW-24D		Lab ID: 92527268026		Collected: 03/17/21 16:00		Received: 03/18/21 13:17		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	7.66	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	102	mg/L	1.0	0.070	1	03/26/21 10:28	03/26/21 18:45	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:00	04/02/21 15:42	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:00	04/02/21 15:42	7440-38-2	
Barium	0.055	mg/L	0.0050	0.00071	1	03/27/21 11:00	04/02/21 15:42	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:00	04/02/21 15:42	7440-41-7	
Boron	0.49	mg/L	0.040	0.0052	1	03/27/21 11:00	04/02/21 15:42	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:00	04/02/21 15:42	7440-43-9	
Chromium	0.0017J	mg/L	0.0050	0.00055	1	03/27/21 11:00	04/02/21 15:42	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00038	1	03/27/21 11:00	04/02/21 15:42	7440-48-4	
Lead	0.000040J	mg/L	0.0010	0.000036	1	03/27/21 11:00	04/02/21 15:42	7439-92-1	
Lithium	0.0027J	mg/L	0.030	0.00081	1	03/27/21 11:00	04/02/21 15:42	7439-93-2	
Molybdenum	0.0010J	mg/L	0.010	0.00069	1	03/27/21 11:00	04/02/21 15:42	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:00	04/02/21 15:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:00	04/02/21 15:42	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	420	mg/L	10.0	10.0	1		03/23/21 08:41		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	42.9	mg/L	1.0	0.60	1		03/23/21 09:27	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		03/23/21 09:27	16984-48-8	
Sulfate	137	mg/L	3.0	1.5	3		03/23/21 16:45	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Sample: MW-26D		Lab ID: 92527268027		Collected: 03/17/21 08:50		Received: 03/18/21 13:17		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		03/22/21 11:58		
pH	7.14	Std. Units			1		03/22/21 11:58		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	175	mg/L	1.0	0.070	1	03/26/21 10:28	03/26/21 18:50	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00028	1	03/27/21 11:00	04/02/21 15:48	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.00078	1	03/27/21 11:00	04/02/21 15:48	7440-38-2	
Barium	0.094	mg/L	0.0050	0.00071	1	03/27/21 11:00	04/02/21 15:48	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000046	1	03/27/21 11:00	04/02/21 15:48	7440-41-7	
Boron	2.1	mg/L	0.040	0.0052	1	03/27/21 11:00	04/02/21 15:48	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00012	1	03/27/21 11:00	04/02/21 15:48	7440-43-9	
Chromium	0.0015J	mg/L	0.0050	0.00055	1	03/27/21 11:00	04/02/21 15:48	7440-47-3	
Cobalt	0.00044J	mg/L	0.0050	0.00038	1	03/27/21 11:00	04/02/21 15:48	7440-48-4	
Lead	ND	mg/L	0.0010	0.000036	1	03/27/21 11:00	04/02/21 15:48	7439-92-1	
Lithium	0.0040J	mg/L	0.030	0.00081	1	03/27/21 11:00	04/02/21 15:48	7439-93-2	
Molybdenum	0.023	mg/L	0.010	0.00069	1	03/27/21 11:00	04/02/21 15:48	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0016	1	03/27/21 11:00	04/02/21 15:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00014	1	03/27/21 11:00	04/02/21 15:48	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	738	mg/L	20.0	20.0	1		03/23/21 08:41		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	95.3	mg/L	4.0	2.4	4		03/23/21 17:29	16887-00-6	
Fluoride	0.072J	mg/L	0.10	0.050	1		03/23/21 09:40	16984-48-8	
Sulfate	212	mg/L	4.0	2.0	4		03/23/21 17:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

QC Batch: 606634 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527268001, 92527268002

METHOD BLANK: 3196175 Matrix: Water
Associated Lab Samples: 92527268001, 92527268002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/19/21 03:10	

LABORATORY CONTROL SAMPLE: 3196176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196177 3196178

Parameter	Units	3196177		3196178		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	207	1	1	209	202	181	-447	75-125	3	20 M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

QC Batch: 608195 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527268003, 92527268004, 92527268005

METHOD BLANK: 3204024 Matrix: Water
Associated Lab Samples: 92527268003, 92527268004, 92527268005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/22/21 19:59	

LABORATORY CONTROL SAMPLE: 3204025

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.95J	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204026 3204027

Parameter	Units	3204026		3204027		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	43.8	1	44.4	43.0	63	-72	75-125	3	20	M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

QC Batch:	609342	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527268006, 92527268007, 92527268008, 92527268010, 92527268011, 92527268012, 92527268013, 92527268014

METHOD BLANK: 3209682 Matrix: Water
Associated Lab Samples: 92527268006, 92527268007, 92527268008, 92527268010, 92527268011, 92527268012, 92527268013, 92527268014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/26/21 19:09	

LABORATORY CONTROL SAMPLE: 3209683

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3209684 3209685

Parameter	Units	92527268006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	146	1	1	147	153	8	641	75-125	4	20	M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

QC Batch:	609345	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527268009, 92527268015, 92527268016, 92527268017, 92527268018, 92527268019, 92527268020, 92527268021, 92527268022, 92527268023, 92527268024, 92527268025, 92527268026, 92527268027

METHOD BLANK: 3209690 Matrix: Water
Associated Lab Samples: 92527268009, 92527268015, 92527268016, 92527268017, 92527268018, 92527268019, 92527268020, 92527268021, 92527268022, 92527268023, 92527268024, 92527268025, 92527268026, 92527268027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.070	03/26/21 17:03	

LABORATORY CONTROL SAMPLE: 3209691

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3209692 3209693

Parameter	Units	92527268009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	113	1	1	108	110	-542	-380	75-125	1	20	M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

QC Batch: 606644 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527268001, 92527268002

METHOD BLANK: 3196234 Matrix: Water

Associated Lab Samples: 92527268001, 92527268002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00035J	0.0030	0.00028	03/16/21 14:38	
Arsenic	mg/L	ND	0.0050	0.00078	03/16/21 14:38	
Barium	mg/L	ND	0.0050	0.00071	03/16/21 14:38	
Beryllium	mg/L	ND	0.00050	0.000046	03/16/21 14:38	
Boron	mg/L	ND	0.040	0.0052	03/16/21 14:38	
Cadmium	mg/L	ND	0.00050	0.00012	03/16/21 14:38	
Chromium	mg/L	ND	0.0050	0.00055	03/16/21 14:38	
Cobalt	mg/L	ND	0.0050	0.00038	03/16/21 14:38	
Lead	mg/L	ND	0.0010	0.000036	03/16/21 14:38	
Lithium	mg/L	ND	0.030	0.00081	03/16/21 14:38	
Molybdenum	mg/L	ND	0.010	0.00069	03/16/21 14:38	
Selenium	mg/L	ND	0.0050	0.0016	03/16/21 14:38	
Thallium	mg/L	ND	0.0010	0.00014	03/16/21 14:38	

LABORATORY CONTROL SAMPLE: 3196235

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.096	96	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.095	95	80-120	
Beryllium	mg/L	0.1	0.098	98	80-120	
Boron	mg/L	1	1.0	103	80-120	
Cadmium	mg/L	0.1	0.097	97	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.094	94	80-120	
Lithium	mg/L	0.1	0.096	96	80-120	
Molybdenum	mg/L	0.1	0.094	94	80-120	
Selenium	mg/L	0.1	0.090	90	80-120	
Thallium	mg/L	0.1	0.093	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3196236 3196237

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526031002	Result	Spike Conc.	Spike Conc.								
Antimony	mg/L	0.00079J	0.1	0.1	0.098	0.099	98	98	75-125	0	20		
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Parameter	Units	3196236		3196237		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526031002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.016	0.1	0.1	0.11	0.11	96	95	75-125	1	20		
Beryllium	mg/L	0.000097J	0.1	0.1	0.083	0.080	82	80	75-125	3	20		
Boron	mg/L	0.36	1	1	1.2	1.2	84	83	75-125	1	20		
Cadmium	mg/L	0.017	0.1	0.1	0.11	0.11	96	95	75-125	1	20		
Chromium	mg/L	0.00080J	0.1	0.1	0.092	0.092	92	91	75-125	0	20		
Cobalt	mg/L	0.019	0.1	0.1	0.11	0.11	93	92	75-125	1	20		
Lead	mg/L	0.00017J	0.1	0.1	0.088	0.087	88	86	75-125	2	20		
Lithium	mg/L	0.026J	0.1	0.1	0.11	0.11	82	81	75-125	1	20		
Molybdenum	mg/L	ND	0.1	0.1	0.093	0.092	93	91	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.10	0.097	100	96	75-125	4	20		
Thallium	mg/L	ND	0.1	0.1	0.089	0.087	89	86	75-125	3	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

QC Batch: 607964 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527268003, 92527268004, 92527268005

METHOD BLANK: 3202640 Matrix: Water
Associated Lab Samples: 92527268003, 92527268004, 92527268005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	03/19/21 19:29	
Arsenic	mg/L	ND	0.0050	0.00078	03/19/21 19:29	
Barium	mg/L	ND	0.0050	0.00071	03/19/21 19:29	
Beryllium	mg/L	ND	0.00050	0.000046	03/19/21 19:29	
Boron	mg/L	ND	0.040	0.0052	03/19/21 19:29	
Cadmium	mg/L	ND	0.00050	0.00012	03/19/21 19:29	
Chromium	mg/L	ND	0.0050	0.00055	03/19/21 19:29	
Cobalt	mg/L	ND	0.0050	0.00038	03/19/21 19:29	
Lead	mg/L	ND	0.0010	0.000036	03/19/21 19:29	
Lithium	mg/L	ND	0.030	0.00081	03/19/21 19:29	
Molybdenum	mg/L	ND	0.010	0.00069	03/19/21 19:29	
Selenium	mg/L	ND	0.0050	0.0016	03/19/21 19:29	
Thallium	mg/L	ND	0.0010	0.00014	03/19/21 19:29	

LABORATORY CONTROL SAMPLE: 3202641

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.12	120	80-120	
Arsenic	mg/L	0.1	0.11	106	80-120	
Barium	mg/L	0.1	0.11	106	80-120	
Beryllium	mg/L	0.1	0.11	109	80-120	
Boron	mg/L	1	1.0	105	80-120	
Cadmium	mg/L	0.1	0.11	107	80-120	
Chromium	mg/L	0.1	0.10	104	80-120	
Cobalt	mg/L	0.1	0.10	102	80-120	
Lead	mg/L	0.1	0.11	108	80-120	
Lithium	mg/L	0.1	0.11	107	80-120	
Molybdenum	mg/L	0.1	0.11	105	80-120	
Selenium	mg/L	0.1	0.10	103	80-120	
Thallium	mg/L	0.1	0.10	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202642 3202643

Parameter	Units	92526941001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.12	0.12	118	118	75-125	0	20	
Arsenic	mg/L	ND	0.1	0.1	0.11	0.10	107	104	75-125	2	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Parameter	Units	3202642		3202643		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526941001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	ND	0.1	0.1	0.11	0.11	107	106	75-125	1	20		
Beryllium	mg/L	ND	0.1	0.1	0.11	0.10	107	104	75-125	2	20		
Boron	mg/L	0.0052J	1	1	1.1	1.0	106	102	75-125	4	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	105	104	75-125	1	20		
Chromium	mg/L	0.00062J	0.1	0.1	0.11	0.10	108	103	75-125	4	20		
Cobalt	mg/L	ND	0.1	0.1	0.11	0.10	106	101	75-125	5	20		
Lead	mg/L	ND	0.1	0.1	0.11	0.11	107	106	75-125	1	20		
Lithium	mg/L	ND	0.1	0.1	0.11	0.10	106	104	75-125	3	20		
Molybdenum	mg/L	ND	0.1	0.1	0.11	0.11	107	106	75-125	1	20		
Selenium	mg/L	ND	0.1	0.1	0.11	0.10	105	101	75-125	4	20		
Thallium	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

QC Batch: 609688 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527268006, 92527268007, 92527268008, 92527268009, 92527268010, 92527268011, 92527268012, 92527268013, 92527268014, 92527268015

METHOD BLANK: 3211367 Matrix: Water
Associated Lab Samples: 92527268006, 92527268007, 92527268008, 92527268009, 92527268010, 92527268011, 92527268012, 92527268013, 92527268014, 92527268015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	03/29/21 18:31	
Arsenic	mg/L	ND	0.0050	0.00078	03/29/21 18:31	
Barium	mg/L	ND	0.0050	0.00071	03/29/21 18:31	
Beryllium	mg/L	ND	0.00050	0.000046	03/29/21 18:31	
Boron	mg/L	ND	0.040	0.0052	03/29/21 18:31	
Cadmium	mg/L	ND	0.00050	0.00012	03/29/21 18:31	
Chromium	mg/L	ND	0.0050	0.00055	03/29/21 18:31	
Cobalt	mg/L	ND	0.0050	0.00038	03/29/21 18:31	
Lead	mg/L	ND	0.0010	0.000036	03/29/21 18:31	
Lithium	mg/L	ND	0.030	0.00081	03/29/21 18:31	
Molybdenum	mg/L	ND	0.010	0.00069	03/29/21 18:31	
Selenium	mg/L	ND	0.0050	0.0016	03/29/21 18:31	
Thallium	mg/L	ND	0.0010	0.00014	03/29/21 18:31	

LABORATORY CONTROL SAMPLE: 3211368

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.091	91	80-120	
Beryllium	mg/L	0.1	0.096	96	80-120	
Boron	mg/L	1	0.96	96	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.094	94	80-120	
Cobalt	mg/L	0.1	0.090	90	80-120	
Lead	mg/L	0.1	0.096	96	80-120	
Lithium	mg/L	0.1	0.097	97	80-120	
Molybdenum	mg/L	0.1	0.094	94	80-120	
Selenium	mg/L	0.1	0.10	102	80-120	
Thallium	mg/L	0.1	0.095	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3211369 3211370

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result						
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	107	112	75-125	5	20

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Parameter	Units	3211369		3211370		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92528826005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	mg/L	ND	0.1	0.1	0.093	0.094	92	93	75-125	1	20		
Barium	mg/L	61.8 ug/L	0.1	0.1	0.16	0.17	98	108	75-125	6	20		
Beryllium	mg/L	ND	0.1	0.1	0.092	0.094	92	94	75-125	2	20		
Boron	mg/L	ND	1	1	0.91	0.92	90	90	75-125	0	20		
Cadmium	mg/L	13.6 ug/L	0.1	0.1	0.11	0.11	100	100	75-125	0	20		
Chromium	mg/L	ND	0.1	0.1	0.095	0.097	94	96	75-125	2	20		
Cobalt	mg/L	3.2 ug/L	0.1	0.1	0.095	0.095	92	92	75-125	0	20		
Lead	mg/L	ND	0.1	0.1	0.091	0.096	91	95	75-125	5	20		
Lithium	mg/L	ND	0.1	0.1	0.10	0.11	90	97	75-125	7	20		
Molybdenum	mg/L	ND	0.1	0.1	0.097	0.11	97	105	75-125	8	20		
Selenium	mg/L	ND	0.1	0.1	0.093	0.091	90	88	75-125	2	20		
Thallium	mg/L	ND	0.1	0.1	0.090	0.094	90	94	75-125	4	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

QC Batch: 609689 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527268016, 92527268017, 92527268018, 92527268019, 92527268020, 92527268021, 92527268022

METHOD BLANK: 3211380 Matrix: Water
Associated Lab Samples: 92527268016, 92527268017, 92527268018, 92527268019, 92527268020, 92527268021, 92527268022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	03/30/21 18:18	
Arsenic	mg/L	ND	0.0050	0.00078	03/30/21 18:18	
Barium	mg/L	ND	0.0050	0.00071	03/30/21 18:18	
Beryllium	mg/L	ND	0.00050	0.000046	03/30/21 18:18	
Boron	mg/L	ND	0.040	0.0052	03/30/21 18:18	
Cadmium	mg/L	ND	0.00050	0.00012	03/30/21 18:18	
Chromium	mg/L	0.0011J	0.0050	0.00055	03/30/21 18:18	
Cobalt	mg/L	ND	0.0050	0.00038	03/30/21 18:18	
Lead	mg/L	ND	0.0010	0.000036	03/30/21 18:18	
Lithium	mg/L	ND	0.030	0.00081	03/30/21 18:18	
Molybdenum	mg/L	ND	0.010	0.00069	03/30/21 18:18	
Selenium	mg/L	ND	0.0050	0.0016	03/30/21 18:18	
Thallium	mg/L	ND	0.0010	0.00014	03/30/21 18:18	

LABORATORY CONTROL SAMPLE: 3211381

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	101	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.097	97	80-120	
Beryllium	mg/L	0.1	0.095	95	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.097	97	80-120	
Cobalt	mg/L	0.1	0.096	96	80-120	
Lead	mg/L	0.1	0.096	96	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.097	97	80-120	
Selenium	mg/L	0.1	0.095	95	80-120	
Thallium	mg/L	0.1	0.094	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3211382 3211383

Parameter	Units	92528827004 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.11	0.10	108	102	75-125	6	20	
Arsenic	mg/L	ND	0.1	0.1	0.098	0.094	97	93	75-125	4	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Parameter	Units	3211382		3211383		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92528827004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	65.7 ug/L	0.1	0.1	0.17	0.16	105	94	75-125	7	20		
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	102	101	75-125	1	20		
Boron	mg/L	47.7 ug/L	1	1	1.1	1.0	103	100	75-125	3	20		
Cadmium	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	2	20		
Chromium	mg/L	ND	0.1	0.1	0.097	0.096	95	94	75-125	1	20		
Cobalt	mg/L	ND	0.1	0.1	0.096	0.092	95	91	75-125	4	20		
Lead	mg/L	ND	0.1	0.1	0.097	0.094	97	94	75-125	3	20		
Lithium	mg/L	ND	0.1	0.1	0.11	0.10	106	103	75-125	3	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.097	99	96	75-125	3	20		
Selenium	mg/L	ND	0.1	0.1	0.095	0.093	94	92	75-125	2	20		
Thallium	mg/L	ND	0.1	0.1	0.094	0.091	94	91	75-125	4	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

QC Batch: 609693 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527268023, 92527268024, 92527268025, 92527268026, 92527268027

METHOD BLANK: 3211404 Matrix: Water
Associated Lab Samples: 92527268023, 92527268024, 92527268025, 92527268026, 92527268027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00028	03/29/21 11:36	
Arsenic	mg/L	ND	0.0050	0.00078	03/29/21 11:36	
Barium	mg/L	ND	0.0050	0.00071	03/29/21 11:36	
Beryllium	mg/L	ND	0.00050	0.000046	03/29/21 11:36	
Boron	mg/L	0.0061J	0.040	0.0052	03/29/21 11:36	
Cadmium	mg/L	ND	0.00050	0.00012	03/29/21 11:36	
Chromium	mg/L	ND	0.0050	0.00055	03/29/21 11:36	
Cobalt	mg/L	ND	0.0050	0.00038	03/29/21 11:36	
Lead	mg/L	ND	0.0010	0.000036	03/29/21 11:36	
Lithium	mg/L	ND	0.030	0.00081	03/29/21 11:36	
Molybdenum	mg/L	ND	0.010	0.00069	03/29/21 11:36	
Selenium	mg/L	ND	0.0050	0.0016	03/29/21 11:36	
Thallium	mg/L	ND	0.0010	0.00014	03/29/21 11:36	

LABORATORY CONTROL SAMPLE: 3211405

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.097	97	80-120	
Arsenic	mg/L	0.1	0.091	91	80-120	
Barium	mg/L	0.1	0.092	92	80-120	
Beryllium	mg/L	0.1	0.093	93	80-120	
Boron	mg/L	1	0.95	95	80-120	
Cadmium	mg/L	0.1	0.092	92	80-120	
Chromium	mg/L	0.1	0.096	96	80-120	
Cobalt	mg/L	0.1	0.094	94	80-120	
Lead	mg/L	0.1	0.094	94	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.096	96	80-120	
Selenium	mg/L	0.1	0.089	89	80-120	
Thallium	mg/L	0.1	0.095	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3211748 3211749

Parameter	Units	92527268024 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	0.00049J	0.1	0.1	0.10	0.098	103	98	75-125	5	20	
Arsenic	mg/L	0.39	0.1	0.1	0.49	0.49	104	100	75-125	1	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

Parameter	Units	3211748		3211749		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92527268024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.056	0.1	0.1	0.16	0.15	100	96	75-125	2	20		
Beryllium	mg/L	0.000090J	0.1	0.1	0.095	0.092	95	92	75-125	3	20		
Boron	mg/L	0.89	1	1	1.8	1.8	96	91	75-125	2	20		
Cadmium	mg/L	ND	0.1	0.1	0.095	0.092	95	92	75-125	3	20		
Chromium	mg/L	ND	0.1	0.1	0.099	0.098	99	98	75-125	1	20		
Cobalt	mg/L	0.0029J	0.1	0.1	0.10	0.099	98	96	75-125	2	20		
Lead	mg/L	0.00015J	0.1	0.1	0.098	0.092	98	92	75-125	6	20		
Lithium	mg/L	0.031	0.1	0.1	0.13	0.13	99	98	75-125	1	20		
Molybdenum	mg/L	0.035	0.1	0.1	0.14	0.14	106	103	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.092	0.091	91	91	75-125	1	20		
Thallium	mg/L	0.00037J	0.1	0.1	0.099	0.094	99	94	75-125	5	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

QC Batch: 606587	Analysis Method: SM 2540C-2011
QC Batch Method: SM 2540C-2011	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527268001, 92527268002

METHOD BLANK: 3195825 Matrix: Water

Associated Lab Samples: 92527268001, 92527268002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/15/21 13:13	

LABORATORY CONTROL SAMPLE: 3195826

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	362	90	90-111	

SAMPLE DUPLICATE: 3195827

Parameter	Units	92527234005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2120	2390	12	10	D6

SAMPLE DUPLICATE: 3195998

Parameter	Units	92527273001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	223	190	16	10	D6

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

QC Batch:	607345	Analysis Method:	SM 2540C-2011
QC Batch Method:	SM 2540C-2011	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527268003, 92527268004, 92527268005

METHOD BLANK: 3199736 Matrix: Water

Associated Lab Samples: 92527268003, 92527268004, 92527268005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/16/21 15:05	

LABORATORY CONTROL SAMPLE: 3199737

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	386	96	90-111	

SAMPLE DUPLICATE: 3213092

Parameter	Units	92527261005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	279	278	0	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

QC Batch: 608133

Analysis Method: SM 2540C-2011

QC Batch Method: SM 2540C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527268008, 92527268009, 92527268010, 92527268011, 92527268012, 92527268013, 92527268014

METHOD BLANK: 3203640

Matrix: Water

Associated Lab Samples: 92527268008, 92527268009, 92527268010, 92527268011, 92527268012, 92527268013, 92527268014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/22/21 15:08	

LABORATORY CONTROL SAMPLE: 3203641

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	370	92	90-111	

SAMPLE DUPLICATE: 3203642

Parameter	Units	92527261013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	614	640	4	10	

SAMPLE DUPLICATE: 3203644

Parameter	Units	92527234025 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	11.0	18.0	48	10 D6	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

QC Batch: 608136

Analysis Method: SM 2540C-2011

QC Batch Method: SM 2540C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92527268015, 92527268016, 92527268017, 92527268018, 92527268019, 92527268020, 92527268021, 92527268022, 92527268023

METHOD BLANK: 3203650

Matrix: Water

Associated Lab Samples: 92527268015, 92527268016, 92527268017, 92527268018, 92527268019, 92527268020, 92527268021, 92527268022, 92527268023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/23/21 07:58	

LABORATORY CONTROL SAMPLE: 3203651

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	414	104	90-111	

SAMPLE DUPLICATE: 3203652

Parameter	Units	92527612006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	99.0	97.0	2	10	

SAMPLE DUPLICATE: 3203653

Parameter	Units	92528339001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	952	1020	7	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

QC Batch: 608146 Analysis Method: SM 2540C-2011
QC Batch Method: SM 2540C-2011 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527268006, 92527268007

METHOD BLANK: 3203677 Matrix: Water
Associated Lab Samples: 92527268006, 92527268007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/23/21 07:38	

LABORATORY CONTROL SAMPLE: 3203678

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	401	100	90-111	

SAMPLE DUPLICATE: 3203679

Parameter	Units	92527268006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	490	502	2	10	H1

SAMPLE DUPLICATE: 3203680

Parameter	Units	92528629001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	158	72.0	75	10	D6

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

QC Batch: 608443 Analysis Method: SM 2540C-2011
QC Batch Method: SM 2540C-2011 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92527268024, 92527268025, 92527268026, 92527268027

METHOD BLANK: 3204949 Matrix: Water
Associated Lab Samples: 92527268024, 92527268025, 92527268026, 92527268027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	03/23/21 08:29	

LABORATORY CONTROL SAMPLE: 3204950

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	398	100	90-111	

SAMPLE DUPLICATE: 3204951

Parameter	Units	92527612008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	213	225	5	10	

SAMPLE DUPLICATE: 3204952

Parameter	Units	92528787024 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	47.0	72.0	42	10	D6

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

QC Batch: 607170 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527268001, 92527268002

METHOD BLANK: 3198670 Matrix: Water

Associated Lab Samples: 92527268001, 92527268002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/17/21 17:51	
Fluoride	mg/L	ND	0.10	0.050	03/17/21 17:51	
Sulfate	mg/L	ND	1.0	0.50	03/17/21 17:51	

LABORATORY CONTROL SAMPLE: 3198671

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.3	101	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	50	52.7	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3198672 3198673

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527256001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	7.4	50	50	59.6	59.8	104	105	90-110	0	10		
Fluoride	mg/L	0.079J	2.5	2.5	2.7	2.7	106	107	90-110	0	10		
Sulfate	mg/L	49.6	50	50	94.1	95.1	89	91	90-110	1	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3198674 3198675

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527256002 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	2.9	50	50	54.4	53.4	103	101	90-110	2	10		
Fluoride	mg/L	ND	2.5	2.5	3.0	2.8	118	112	90-110	6	10	M1	
Sulfate	mg/L	1.2	50	50	54.5	53.7	107	105	90-110	1	10		

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

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: 92527268003, 92527268004, 92527268005

METHOD BLANK: 3201757 Matrix: Water
Associated Lab Samples: 92527268003, 92527268004, 92527268005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/19/21 17:15	
Fluoride	mg/L	ND	0.10	0.050	03/19/21 17:15	
Sulfate	mg/L	ND	1.0	0.50	03/19/21 17:15	

LABORATORY CONTROL SAMPLE: 3201758

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.2	100	90-110	
Fluoride	mg/L	2.5	2.3	91	90-110	
Sulfate	mg/L	50	50.2	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201759 3201760

Parameter	Units	92528475003		3201759		3201760		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
Chloride	mg/L	2510	50	50	2520	2520	27	27	90-110	0	10	M6	
Fluoride	mg/L	4.6	2.5	2.5	12.1	11.9	302	294	90-110	2	10	M6	
Sulfate	mg/L	1530	50	50	1510	1480	-49	-112	90-110	2	10	M6	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201761 3201762

Parameter	Units	92527256007		3201761		3201762		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
Chloride	mg/L	5.9	50	50	58.9	57.5	106	103	90-110	2	10		
Fluoride	mg/L	ND	2.5	2.5	2.3	2.3	91	90	90-110	1	10		
Sulfate	mg/L	50.4	50	50	102	101	103	101	90-110	1	10		

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

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: 92527268006, 92527268007

METHOD BLANK: 3201801 Matrix: Water
Associated Lab Samples: 92527268006, 92527268007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/20/21 19:43	
Fluoride	mg/L	ND	0.10	0.050	03/20/21 19:43	
Sulfate	mg/L	ND	1.0	0.50	03/20/21 19:43	

LABORATORY CONTROL SAMPLE: 3201802

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.0	100	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	50	53.0	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201803 3201804

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92526996007	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	8.0	50	50	57.8	58.5	99	101	90-110	1	10		
Fluoride	mg/L	0.058J	2.5	2.5	2.5	2.6	98	100	90-110	2	10		
Sulfate	mg/L	154	50	50	255	259	201	210	90-110	2	10	M6	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3201805 3201806

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527261012	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	3.2	50	50	53.9	53.4	101	100	90-110	1	10		
Fluoride	mg/L	0.83	2.5	2.5	3.5	3.5	107	106	90-110	1	10		
Sulfate	mg/L	166	50	50	183	208	33	84	90-110	13	10	M1,R1	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

QC Batch: 607981 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92527268008, 92527268009, 92527268010, 92527268011, 92527268012

METHOD BLANK: 3202723 Matrix: Water
Associated Lab Samples: 92527268008, 92527268009, 92527268010, 92527268011, 92527268012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/20/21 10:55	
Fluoride	mg/L	ND	0.10	0.050	03/20/21 10:55	
Sulfate	mg/L	ND	1.0	0.50	03/20/21 10:55	

LABORATORY CONTROL SAMPLE: 3202724

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.1	102	90-110	
Fluoride	mg/L	2.5	2.5	102	90-110	
Sulfate	mg/L	50	51.5	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202725 3202726

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92528548005 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	363	50	50	402	403	79	81	90-110	0	10	M6	
Fluoride	mg/L	0.13	2.5	2.5	2.6	2.7	100	101	90-110	1	10		
Sulfate	mg/L	27.1	50	50	76.5	77.1	99	100	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202727 3202728

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527261015 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	2.5	50	50	54.6	54.8	104	105	90-110	0	10		
Fluoride	mg/L	0.30	2.5	2.5	2.9	2.9	102	103	90-110	1	10		
Sulfate	mg/L	236	50	50	281	282	90	93	90-110	0	10		

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

QC Batch: 607982 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: 92527268013, 92527268014

METHOD BLANK: 3202733 Matrix: Water

Associated Lab Samples: 92527268013, 92527268014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/20/21 17:54	
Fluoride	mg/L	ND	0.10	0.050	03/20/21 17:54	
Sulfate	mg/L	ND	1.0	0.50	03/20/21 17:54	

LABORATORY CONTROL SAMPLE: 3202734

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.7	103	90-110	
Fluoride	mg/L	2.5	2.6	102	90-110	
Sulfate	mg/L	50	52.5	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202737 3202738

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92528140001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	57.9	50	50	50	105	105	94	94	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	1.9	2.0	73	74	90-110	2	10	M6
Sulfate	mg/L	17.2	50	50	50	66.0	66.0	98	98	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3203204 3203205

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92528440001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	319	50	50	50	332	332	26	27	90-110	0	10	M6
Fluoride	mg/L	0.34	2.5	2.5	2.5	2.6	2.7	90	94	90-110	3	10	
Sulfate	mg/L	132	50	50	50	178	179	94	94	90-110	0	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

QC Batch:	607984	Analysis Method:	EPA 300.0 Rev 2.1 1993
QC Batch Method:	EPA 300.0 Rev 2.1 1993	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 92527268015, 92527268016, 92527268017, 92527268018, 92527268019, 92527268020, 92527268021

METHOD BLANK: 3202745 Matrix: Water
Associated Lab Samples: 92527268015, 92527268016, 92527268017, 92527268018, 92527268019, 92527268020, 92527268021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/21/21 19:26	
Fluoride	mg/L	ND	0.10	0.050	03/21/21 19:26	
Sulfate	mg/L	ND	1.0	0.50	03/21/21 19:26	

LABORATORY CONTROL SAMPLE: 3202746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.2	104	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	50	52.8	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202747 3202748

Parameter	Units	92527234030		MS		MSD		% Rec	% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result								
Chloride	mg/L	ND	50	50	51.8	50.4	104	101	101	101	101	90-110	3	10	
Fluoride	mg/L	ND	2.5	2.5	2.6	2.5	104	101	101	101	101	90-110	3	10	
Sulfate	mg/L	ND	50	50	52.2	50.8	104	102	102	102	102	90-110	3	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3202749 3202750

Parameter	Units	92527612006		MS		MSD		% Rec	% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result								
Chloride	mg/L	1.6	50	50	52.6	51.8	102	100	100	100	100	90-110	1	10	
Fluoride	mg/L	0.18	2.5	2.5	2.7	2.7	99	102	102	102	102	90-110	2	10	
Sulfate	mg/L	7.7	50	50	57.9	57.5	100	100	100	100	100	90-110	1	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

QC Batch: 608283 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: 92527268022, 92527268023

METHOD BLANK: 3204500 Matrix: Water
Associated Lab Samples: 92527268022, 92527268023

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

LABORATORY CONTROL SAMPLE: 3204501

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204502 3204503

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204504 3204505

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

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QUALITY CONTROL DATA

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

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: 92527268024, 92527268025, 92527268026, 92527268027

METHOD BLANK: 3204508 Matrix: Water
Associated Lab Samples: 92527268024, 92527268025, 92527268026, 92527268027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	03/23/21 04:02	
Fluoride	mg/L	ND	0.10	0.050	03/23/21 04:02	
Sulfate	mg/L	ND	1.0	0.50	03/23/21 04:02	

LABORATORY CONTROL SAMPLE: 3204509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.7	101	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	51.8	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204510 3204511

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92528339002	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	53.4	50	50	50	91.2	90.1	75	73	90-110	1	10	M6
Fluoride	mg/L	0.74	2.5	2.5	2.5	3.3	3.2	102	100	90-110	2	10	
Sulfate	mg/L	457	50	50	50	503	503	93	93	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3204512 3204513

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92527612010	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	4.7	50	50	50	58.1	56.8	107	104	90-110	2	10	
Fluoride	mg/L	0.089J	2.5	2.5	2.5	2.8	2.7	107	104	90-110	2	10	
Sulfate	mg/L	28.3	50	50	50	80.9	79.7	105	103	90-110	2	10	

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QUALIFIERS

Project: HAMMOND AP-1 SEMIANNUAL

Pace Project No.: 92527268

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

H1 Analysis conducted outside the EPA method holding time.

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

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

R1 RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527268001	HGWA-1				
92527268002	HGWA-44D				
92527268003	HGWA-2				
92527268004	HGWA-3				
92527268005	HGWA-43D				
92527268006	HGWC-10				
92527268007	MW-27D				
92527268008	HGWC-7 FILTERED				
92527268009	HGWC-7				
92527268010	HGWC-8				
92527268011	MW-7				
92527268012	MW-20				
92527268013	MW-28D				
92527268014	MW-29				
92527268015	HGWC-9				
92527268016	HGWC-11				
92527268017	HGWC-12				
92527268018	MW-5				
92527268019	MW-6				
92527268020	MW-25D				
92527268024	HGWC-13				
92527268025	MW-19				
92527268026	MW-24D				
92527268027	MW-26D				
92527268001	HGWA-1	EPA 3010A	606634	EPA 6010D	606723
92527268002	HGWA-44D	EPA 3010A	606634	EPA 6010D	606723
92527268003	HGWA-2	EPA 3010A	608195	EPA 6010D	608261
92527268004	HGWA-3	EPA 3010A	608195	EPA 6010D	608261
92527268005	HGWA-43D	EPA 3010A	608195	EPA 6010D	608261
92527268006	HGWC-10	EPA 3010A	609342	EPA 6010D	609604
92527268007	MW-27D	EPA 3010A	609342	EPA 6010D	609604
92527268008	HGWC-7 FILTERED	EPA 3010A	609342	EPA 6010D	609604
92527268009	HGWC-7	EPA 3010A	609345	EPA 6010D	609584
92527268010	HGWC-8	EPA 3010A	609342	EPA 6010D	609604
92527268011	MW-7	EPA 3010A	609342	EPA 6010D	609604
92527268012	MW-20	EPA 3010A	609342	EPA 6010D	609604
92527268013	MW-28D	EPA 3010A	609342	EPA 6010D	609604
92527268014	MW-29	EPA 3010A	609342	EPA 6010D	609604
92527268015	HGWC-9	EPA 3010A	609345	EPA 6010D	609584
92527268016	HGWC-11	EPA 3010A	609345	EPA 6010D	609584
92527268017	HGWC-12	EPA 3010A	609345	EPA 6010D	609584
92527268018	MW-5	EPA 3010A	609345	EPA 6010D	609584
92527268019	MW-6	EPA 3010A	609345	EPA 6010D	609584
92527268020	MW-25D	EPA 3010A	609345	EPA 6010D	609584
92527268021	DUP-1	EPA 3010A	609345	EPA 6010D	609584
92527268022	EB-1	EPA 3010A	609345	EPA 6010D	609584

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527268023	FB-1	EPA 3010A	609345	EPA 6010D	609584
92527268024	HGWC-13	EPA 3010A	609345	EPA 6010D	609584
92527268025	MW-19	EPA 3010A	609345	EPA 6010D	609584
92527268026	MW-24D	EPA 3010A	609345	EPA 6010D	609584
92527268027	MW-26D	EPA 3010A	609345	EPA 6010D	609584
92527268001	HGWA-1	EPA 3005A	606644	EPA 6020B	606712
92527268002	HGWA-44D	EPA 3005A	606644	EPA 6020B	606712
92527268003	HGWA-2	EPA 3005A	607964	EPA 6020B	608044
92527268004	HGWA-3	EPA 3005A	607964	EPA 6020B	608044
92527268005	HGWA-43D	EPA 3005A	607964	EPA 6020B	608044
92527268006	HGWC-10	EPA 3005A	609688	EPA 6020B	609797
92527268007	MW-27D	EPA 3005A	609688	EPA 6020B	609797
92527268008	HGWC-7 FILTERED	EPA 3005A	609688	EPA 6020B	609797
92527268009	HGWC-7	EPA 3005A	609688	EPA 6020B	609797
92527268010	HGWC-8	EPA 3005A	609688	EPA 6020B	609797
92527268011	MW-7	EPA 3005A	609688	EPA 6020B	609797
92527268012	MW-20	EPA 3005A	609688	EPA 6020B	609797
92527268013	MW-28D	EPA 3005A	609688	EPA 6020B	609797
92527268014	MW-29	EPA 3005A	609688	EPA 6020B	609797
92527268015	HGWC-9	EPA 3005A	609688	EPA 6020B	609797
92527268016	HGWC-11	EPA 3005A	609689	EPA 6020B	609798
92527268017	HGWC-12	EPA 3005A	609689	EPA 6020B	609798
92527268018	MW-5	EPA 3005A	609689	EPA 6020B	609798
92527268019	MW-6	EPA 3005A	609689	EPA 6020B	609798
92527268020	MW-25D	EPA 3005A	609689	EPA 6020B	609798
92527268021	DUP-1	EPA 3005A	609689	EPA 6020B	609798
92527268022	EB-1	EPA 3005A	609689	EPA 6020B	609798
92527268023	FB-1	EPA 3005A	609693	EPA 6020B	609800
92527268024	HGWC-13	EPA 3005A	609693	EPA 6020B	609800
92527268025	MW-19	EPA 3005A	609693	EPA 6020B	609800
92527268026	MW-24D	EPA 3005A	609693	EPA 6020B	609800
92527268027	MW-26D	EPA 3005A	609693	EPA 6020B	609800
92527268001	HGWA-1	SM 2540C-2011	606587		
92527268002	HGWA-44D	SM 2540C-2011	606587		
92527268003	HGWA-2	SM 2540C-2011	607345		
92527268004	HGWA-3	SM 2540C-2011	607345		
92527268005	HGWA-43D	SM 2540C-2011	607345		
92527268006	HGWC-10	SM 2540C-2011	608146		
92527268007	MW-27D	SM 2540C-2011	608146		
92527268008	HGWC-7 FILTERED	SM 2540C-2011	608133		
92527268009	HGWC-7	SM 2540C-2011	608133		
92527268010	HGWC-8	SM 2540C-2011	608133		
92527268011	MW-7	SM 2540C-2011	608133		
92527268012	MW-20	SM 2540C-2011	608133		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 SEMIANNUAL
Pace Project No.: 92527268

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527268013	MW-28D	SM 2540C-2011	608133		
92527268014	MW-29	SM 2540C-2011	608133		
92527268015	HGWC-9	SM 2540C-2011	608136		
92527268016	HGWC-11	SM 2540C-2011	608136		
92527268017	HGWC-12	SM 2540C-2011	608136		
92527268018	MW-5	SM 2540C-2011	608136		
92527268019	MW-6	SM 2540C-2011	608136		
92527268020	MW-25D	SM 2540C-2011	608136		
92527268021	DUP-1	SM 2540C-2011	608136		
92527268022	EB-1	SM 2540C-2011	608136		
92527268023	FB-1	SM 2540C-2011	608136		
92527268024	HGWC-13	SM 2540C-2011	608443		
92527268025	MW-19	SM 2540C-2011	608443		
92527268026	MW-24D	SM 2540C-2011	608443		
92527268027	MW-26D	SM 2540C-2011	608443		
92527268001	HGWA-1	EPA 300.0 Rev 2.1 1993	607170		
92527268002	HGWA-44D	EPA 300.0 Rev 2.1 1993	607170		
92527268003	HGWA-2	EPA 300.0 Rev 2.1 1993	607751		
92527268004	HGWA-3	EPA 300.0 Rev 2.1 1993	607751		
92527268005	HGWA-43D	EPA 300.0 Rev 2.1 1993	607751		
92527268006	HGWC-10	EPA 300.0 Rev 2.1 1993	607758		
92527268007	MW-27D	EPA 300.0 Rev 2.1 1993	607758		
92527268008	HGWC-7 FILTERED	EPA 300.0 Rev 2.1 1993	607981		
92527268009	HGWC-7	EPA 300.0 Rev 2.1 1993	607981		
92527268010	HGWC-8	EPA 300.0 Rev 2.1 1993	607981		
92527268011	MW-7	EPA 300.0 Rev 2.1 1993	607981		
92527268012	MW-20	EPA 300.0 Rev 2.1 1993	607981		
92527268013	MW-28D	EPA 300.0 Rev 2.1 1993	607982		
92527268014	MW-29	EPA 300.0 Rev 2.1 1993	607982		
92527268015	HGWC-9	EPA 300.0 Rev 2.1 1993	607984		
92527268016	HGWC-11	EPA 300.0 Rev 2.1 1993	607984		
92527268017	HGWC-12	EPA 300.0 Rev 2.1 1993	607984		
92527268018	MW-5	EPA 300.0 Rev 2.1 1993	607984		
92527268019	MW-6	EPA 300.0 Rev 2.1 1993	607984		
92527268020	MW-25D	EPA 300.0 Rev 2.1 1993	607984		
92527268021	DUP-1	EPA 300.0 Rev 2.1 1993	607984		
92527268022	EB-1	EPA 300.0 Rev 2.1 1993	608283		
92527268023	FB-1	EPA 300.0 Rev 2.1 1993	608283		
92527268024	HGWC-13	EPA 300.0 Rev 2.1 1993	608285		
92527268025	MW-19	EPA 300.0 Rev 2.1 1993	608285		
92527268026	MW-24D	EPA 300.0 Rev 2.1 1993	608285		
92527268027	MW-26D	EPA 300.0 Rev 2.1 1993	608285		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Document Name:
 Sample Condition Upon Receipt (SCUR)
 Document No.:
 F-CAR-CS-033-Rev.07

Document Revised: October 26, 2020
 Page 1 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
 Upon Receipt

Client Name:

GA power

Project #:

WO#: 92527268



Date/Initials Person Examining Contents: *10/26/20*

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

Custody Seal Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer: IR Gun ID: 233 Type of Ice: Wet Blue None

Biological Issue Frozen? Yes No N/A

Cooler Temp: 2.0 Correction Factor: ± 0.4
 Add/Subtract (°C)

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 2.4

USDA Regulated Soil (N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____

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

Page: 1 of 1

Section A Required Client Information Company: GA Power Address: Atlanta, GA		Section B Required Project Information Report To: SCS Contacts Copy To: Geosynetic Contacts		Section C Invoice Information Attention: Southern Co. Company Name: Address: City/State/Zip: Project Name: Pima Hammond AP-1 Semiannual Project Number: GWS5911B	
Email To: SCS Contacts Phone: For Requested Date/Time: to Day		Purchase Order No.: Project Name: Pima Hammond AP-1 Semiannual Project Number: GWS5911B		Address: City/State/Zip: 10839-10 Project Name: Kevin Herring Project Number: 10839-10	
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER (specify)			SITE LOCATION STATE: GA		

ITEM #	Section D Required Client Information	VALID Matrix Codes Matrix: <input type="checkbox"/> On <input type="checkbox"/> Wt <input type="checkbox"/> Vol Matrix Method: <input type="checkbox"/> P <input type="checkbox"/> AL <input type="checkbox"/> WP Product: <input type="checkbox"/> AL <input type="checkbox"/> WP Substrate: <input type="checkbox"/> AL <input type="checkbox"/> WP Date: <input type="checkbox"/> 04 <input type="checkbox"/> 07 <input type="checkbox"/> 15	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test				Residual Chlorine (Y/N)	pH = 6.95 Pace Product No. Lab ID.			
					DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Chloride, Fluoride, Sulfate			Asp. III & IV Metals*	RAD 226/228	YDS
					WT	WT			WT	WT	WT	WT	WT	WT	WT	WT	WT	WT	WT			WT	WT	WT
1	HQWA-1		WT G	3/10/11	17:30		5										X	X	X	X				
2	HQWA-2		WT G				5										X	X	X	X				
3	HQWA-3		WT G				5										X	X	X	X				
4	HQWA-3D		WT G				5										X	X	X	X				
5	HQWA-4A0		WT G	3/10/11	17:30		5										X	X	X	X				
6	HQWA-7		WT G				5										X	X	X	X				
7	HQWC-8		WT G				5										X	X	X	X				
8	HQWC-9		WT G				5										X	X	X	X				
9	HQWC-10		WT G				5										X	X	X	X				
10	HQWC-11		WT G				5										X	X	X	X				
11	HQWC-12		WT G				5										X	X	X	X				
12	HQWC-13		WT G				5										X	X	X	X				

ADDITIONAL COMMENTS Please note dry weight, status through any wet and sampled, and dates when the last sample for the event has been taken. App. III & IV Metals: SO, AI, BA, BE, B, CD, CE, CR, CO, PO, U, MO, SA, SI		RELINQUISHED BY / AFFILIATION Name: <i>Udeshi Shankar</i> Signature: <i>[Signature]</i> Date: 3/10/11 Time: 17:30		ACCEPTED BY / AFFILIATION Name: <i>Kevin Herring</i> Signature: <i>[Signature]</i> Date: 3/10/11 Time: 10:40	
SAMPLER NAME AND SIGNATURE Name of SAMPLER: <i>Udeshi Shankar</i> Signature of SAMPLER: <i>[Signature]</i>		DATE SIGNED: 3/10/11		DATE: 3/10/11	
Temp: 20 Y Received on Ice (Y/N): Y Custody Sealed Cooler (Y/N): N Samples Intact (Y/N): Y					

*Impacted Note: By signing this document an accepting Party's NET 30 day payment term and applying to the charge of 1.2% per month for any amounts not paid within 30 days.

Section A Requested Client Information Company: GA Power Address: Atlanta, GA	Section B Requested Project Information Report To: SCS Contacts Copy To: Gooseyric Contacts	Section C Invoice Information Attention: Southern Co. Company Name
Project: SCS Contacts Requested Date Delivered: 10 Day	Purchase Order No.: Project Name: Plant Hammond AP-1 Semirural Project Number: GW65819	Address: Plant Name: 10839-10

REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER COM-	Site Location STATE: GA
--	----------------------------

ITEM #	Section D Requested Client Information Sample ID JA-2 041-1 Sample ID MUST BE UNIQUE	VARIABLE CODES ESTID DESCRIBED WATER WASTE WATER PRODUCT EVALUATION OIL WAX AM OTHER ISSUE	COOL	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMB)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)	pH =					
												Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol					Other	Chloride, Fluoride, Sulfate	App. II & IV Metals*	RAD 226/228	TDS
1	HQWAC-1										5	2															
2	HQWMA-2					3/12/12	09:59				5	2															
3	HQWMA-3					3/12/12	11:55				5	2															
4	HQWMA-43D					3/12/12	09:59				5	2															
5	HQWMA-44D										5	2															
6	HQWMC-7										5	2															
7	HQWMC-8										5	2															
8	HQWMC-9										5	2															
9	HQWMC-10										5	2															
10	HQWMC-11										5	2															
11	HQWMC-12										5	2															
12	HQWMC-13										5	2															

ADDITIONAL COMMENTS Please note dry wells, check through any wells not sampled, and note when the last sample for the event has been taken. AGS III (V) Matrix = SO, AA, BA, BR, C, CO, CA, CC, CO, PO, LI, AO, SA, TI One sample was submitted for HQWMA-4230420440 but they will be reported by AP-1023 SCS	BEING QUARANTINED BY / AFFILIATION Tennessee Keokuk Genco WISCONSIN THORNDYKE WISCONSIN THORNDYKE 3/12/12 16:39 3/12/12 16:39	DATE	TIME	ACCEPTED BY / AFFILIATION WISCONSIN THORNDYKE WISCONSIN THORNDYKE 3/12/12 13:43 3/12/12 16:39	DATE	TIME	SAMPLE CONDITIONS Temp in °C Received on ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N)
--	--	------	------	---	------	------	---

SAMPLER NAME AND SIGNATURE PRINT NAME OF SAMPLER: Thomas Hester, Vishishk Bhekar SIGNATURE OF SAMPLER: [Signature] DATE SIGNED: 03/14/12 INITIALS: [Initials]

Section A Acquired Client Information Company: GA Power Address: Atlanta, GA		Section B Required Project Information Report for: SCS Contacts Copy To: Geosynetic Contacts		Section C Project Information Address: Southern Co. Company Name: Southern Co. Address: [Blank]	
Site No.: SCS Contacts Date: [Blank]		Purchase Order No.: [Blank]		Project Name: Plant Hammond AP-1 Semiannual Project Number: GW6581B	
Requested Due Date/TIME: 18 Day		Project Name: [Blank]		Project Number: 10839-10	
Requested Analysis: [Blank]		Requested Analysis: Filtered (Y/N)		Regulatory Agency: <input type="checkbox"/> NPODES <input type="checkbox"/> GROUND WATER <input checked="" type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA OTHER (specify):	
State Location: GA STATE: GA		Residual Chlorine (Y/N)		Face Project No./ Lab ID.	

ITEM #	Section D Requested Client Information	Valid Matrix Codes CODE	MATRIX CODE (see valid codes to RA)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test					Residual Chlorine (Y/N)	pH =		
											Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Chloride, Fluoride, Sulfate	App III & V Metals*	RAD 228/228	TDS				
1	HQMA-1	WT G								5	2	3														
2	HQMA-2	WT G								5	2	3														
3	HQMA-3	WT G								5	2	3														
4	HQMA-43D	WT G								5	2	3														
5	HQMA-44D	WT G								5	2	3														
6	HQMC-7	WT G								5	2	3														
7	HQMC-8	WT G								5	2	3														
8	HQMC-9	WT G								5	2	3														
9	HQMC-10	WT G								5	2	3														
10	HQMC-11	WT G								5	2	3														
11	HQMC-12	WT G								5	2	3														
12	HQMC-13	WT G								5	2	3														

Notes: Make dry well, strike through any wells not sampled, and use within the listed sampler for the event has been listed.
 App III & V Metals = Sr, As, Ba, Bi, B, Cd, Ca, Cr, Cu, Fe, Pb, U, Mo, Se, Ti

THIS SAMPLE WAS SUBMITTED FOR HQMA-1729-433D AND DRY WET REPORTED FOR AP-1723 STUDY

ADDITIONAL COMMENTS REQUISITIONED BY / AFFILIATION Date: 3/15/14 Time: 11:45 Signature: [Handwritten]	ACCEPTED BY / AFFILIATION Date: 3/15/14 Time: 12:00 Signature: [Handwritten]
---	---

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Chad Russo SIGNATURE OF SAMPLER: [Handwritten Signature]	DATE SIGNED: 03/12/14 INITIALS: CR
--	---------------------------------------

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

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

Section A Required Client Information Company: GA Power Address: Atlanta, GA		Section B Required Project Information Report To: SCS Contacts Copy To: Geosynthetic Contacts		Section C Invoice Information Attention: Southern Co.	
Project To: SCS Contacts	Purchased Order No.:	Project Name: Plant Hammond AP-1 Serranoval	Company Name:	Address:	REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> OTHER
Requested Date/Quantity: 50 Dry	Project Number: GW65818	Plant Hammond AP-1 Serranoval	Company Name:	Address:	<input type="checkbox"/> NDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> OTHER

ITEM #	Section D Required Client Information Matrix Code	Section E Valid Matrix Codes MATRIX CODE (See valid codes to list)	SAMPLE TYPE (G=GRAB C=COMPI)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Requested Analyte Filtered (Y/N)				Residual Chlorine (Y/N)	pH =	
											Chloride, Fluoride, Sulfate	App III & IV Metals*	RAD 226/228	TOC			
1	MMW-5	WT G							5	2	3	X	X	X	X		
2	MMW-6	WT G							5	2	3	X	X	X	X		
3	MMW-7	WT G							5	2	3	X	X	X	X		
4	MMW-18	WT G							5	2	3	X	X	X	X		
5	MMW-20	WT G							5	2	3	X	X	X	X		
6	MMW-20	WT G							5	2	3	X	X	X	X		
7	MMW-240	WT G							5	2	3	X	X	X	X		
8	MMW-250	WT G							5	2	3	X	X	X	X		
9	MMW-260	WT G							5	2	3	X	X	X	X		
10	MMW-270	WT G							5	2	3	X	X	X	X		
11	MMW-280	WT G							5	2	3	X	X	X	X		
12	MMW-29	WT G							5	2	3	X	X	X	X		

ADDITIONAL COMMENTS Please note dry wells, strike through dry wells not sampled, and date when the last sample for this well has been taken. App. III & IV Metals = Sp. Ar. For Br. B. Cd. Ca. Cr. Co. Pb. Li. As. Se. Hg.		RELEASER BY / AFFILIATION [Signature] / SCS		ACCEPTED BY / AFFILIATION [Signature] / PWS	
The sample set submitted for HQWA-17234303440 but they will be reported for AP-1723 SDCS		DATE: 3/5/21		DATE: 3/15/21	
SAMPLE NAME AND SIGNATURE PRINT NAME OF SAMPLER: [Signature]		DATE: 3/5/21		DATE: 3/15/21	

Temp in °C	Received on Co (Y/N)	Custody Sealed Cooler (Y/N)	Sampler Initial (Y/N)

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

Page 1 of 2

Section A Requested Client Information: Company: GA Power Address: Atlanta, GA	Section B Requested Project Information: Request To: SCS Contacts Copy To: Geosynetic Contacts	Section C Invoicing Information: Attention: Southern Co. Company Name: Address:	REGULATORY AGENCY: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER
Email To: SCS Contacts	Purchase Order No:	Address:	<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER
Phone: Fax:	Project Name: Plant Hammond AP-1 Semianual	Site Address: Site Location: GA	
Requested Due Date/TIME: to Dry	Project Number: GW055618	State: GA	

Section D Valid Matrix Codes Requested Client Information Sample ID INZ-09/01 Sample IDs MUST BE UNIQUE	MATRIX CODE (See valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filled (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab ID.			
			DATE	TIME					Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol					Other	Y	N
1	HGWA-1	WT G						5	2	3												
2	HGWA-2	WT G						5	2	3												
3	HGWA-3	WT G						5	2	3												
4	HGWA-3U	WT G						5	2	3												
5	HGWA-3D	WT G						5	2	3												
6	HGWC-7	WT G						5	2	3												
7	HGWC-7	WT G						5	2	3												
8	HGWC-8	WT G						5	2	3												
9	HGWC-9	WT G						5	2	3												
10	HGWC-10	WT G						5	2	3												
11	HGWC-11	WT G						5	2	3												
12	HGWC-12	WT G						5	2	3												
	HGWC-13	WT G						5	2	3												

Section E ADDITIONAL COMMENTS	REINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Request notes dry wet, state through any work not sampled and Note when the difference for the years has been taken VAPOR & TV MEASURES: SP, AG, BA, BB, B, CD, CA, CC, CO, PO, U Mo, Sa, Tl One Sample set submitted for HGWA-1120445042 but they will be reported for AP-1218 SD09	Thomas Kessler John Williams/Rice	3/16/11	1532	John Williams/Rice HARVEY	3/16/11	1532	Y Y Y

SAMPLER NAME AND SIGNATURE	PROJECT NAME OR STOPPER	DATE SIGNED	Signature	Received on (Y/N)	Cooler Sealed (Y/N)	Sampler Intact (Y/N)
	HGWA-3	3/15/11	Thomas Kessler			



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

Section A
 Required Client Information

Section B
 Required Project Information

Section C
 Analytical Information

Company: GA Power
 Address: Atlanta, GA
 Copy To: Geosynetic Contacts
 Project Name: Plant Hammond AP-1 Semiannual
 Project Number: QW6561B
 Company Name: Southern Co.
 Address:
 Project Dates: 10 Day
 Project Manager: Kevin Herring
 Fee Profile: 10339-10
 Regulatory Agency: NPDES GROUNDWATER DRINKING WATER
 UST RORA OTHER 9999
 Site Location: GA
 State: GA

Section D Required Core Information	VADT Matrix Codes VALUES CODE	MATRIX CODE (See valid codes to use)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES	ANALYSIS TEST	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)
				DATE	TIME						
1	MW-5	WT G					5		Chloride, Fluoride, Sulfate	N	
2	MW-6	WT G					5		As III & IV Metals*	N	
3	MW-7	WT G	3/13/21	12:00		18	5		RAD 226/228	N	6.66
4	MW-10	WT G	3/15/21	14:22		18	5		TDS	N	6.97
5	MW-20	WT G					5			N	
6	MW-24D	WT G					5			N	
7	MW-26D	WT G					5			N	
8	MW-27D	WT G					5			N	
9	MW-28D	WT G	3/15/21	18:25		16	5			N	7.61
10	MW-29	WT G	3/15/21	17:52		17	5			N	7.05
11											
12											

ADDITIONAL COMMENTS
 Probe made dry, stable through 100' well not sampled and
 probe when the last sample for the event has been taken
 *App # & IV Metals = Sp. As. Bar. Br. B. Cd. Cr. D. Co. Pb. Pt. U.
 Mo. Se. Th
 One sample set submitted for HGMMA-1720403040 but they will
 be reported for AP-12/15 S.D.S.

RELEASING BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Francis Hester Gen. Williams Plant	3/16/21	15:38	Kevin Herring Gen. Williams Plant	3/16/21	15:38	Temp 12 Received on ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE
 PRINT NAME OF SAMPLER: Francis Hester
 SIGNATURE OF SAMPLER: *[Signature]*
 DATE SIGNED: 3/15/21
 TIME SIGNED: 15:38



CHAIN-OF-CUSTODY / Analytical Request Document

Section A Requested Client Information Company: GA Power Address: Atlanta, GA		Section B Requested Project Information Request to SCS Contacts Copy To: Geosyntec Contacts		Section C Request Information Company Name: Southern Co. Address: Plant Name: Plant Address: Plant Phone # 10839-10	
Email To: SCS Contacts		Purchase Order No:		REGULATORY AGENCY <input type="checkbox"/> NPOES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER USE	
Phone: Par		Project Name: Plant Hermitage AP-1 Semi-annual		Site Location: State: GA	
Requested Due Date/TIME: to day		Project Number: GW6561B		Requested Analysis Filtered (Y/N)	

ITEM #	Section D Requested Client Information Sample ID: JAT-1391-3 Sample ID MUST BE UNIQUE	Vial Matrix Codes MATERIALS WATER WASTE WATER PRECIPIT SOIL SLURRY OTHER TISSUE	CODES WT WT WT WT WT WT WT	MATRIX CODE (See valid codes to list)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
						DATE	TIME					DATE	TIME		
1	HQWA-1		WT G						5 2			X	X	X	
2	HQWA-2		WT G						5 2			X	X	X	
3	HQWA-3		WT G						5 2			X	X	X	
4	HQWA-43D		WT G						5 2			X	X	X	
5	HQWA-44D		WT G						5 2			X	X	X	
6	HQWC-7		WT G						5 2			X	X	X	
7	HQWC-8		WT G						5 2			X	X	X	
8	HQWC-9		WT G						5 2			X	X	X	
9	HQWC-10		WT G						5 2			X	X	X	
10	HQWC-11		WT G						5 2			X	X	X	
11	HQWC-12		WT G						5 2			X	X	X	
12	HQWC-13		WT G						5 2			X	X	X	

ADDITIONAL COMMENTS:

Please note dry weight, 50% through any water not sampled and note when the last sample for the event was taken.

App. III & IV Metals = Sb, As, Ba, Br, S, Cd, Cr, Co, Pb, Li, Mo, Se, Tl

One sample set submitted for HQWA-1234567890 but they will be reported for AP-1234 SDCs

REQUISITIONER BY / AFFILIATION: Thomas Ressler / Pace
Ryan Williams / Pace

DATE: 3/17/21

TIME: 1510

ACCEPTED BY / AFFILIATION: Ryan Williams / Pace

DATE: 3/17/21

TIME: 1510

TEMPERATURE: 62

RECOVERED ON ICE (Y/N): Y

CUSTODY SEALED COOLER (Y/N): N

SAMPLES INTACT (Y/N): Y

SAMPLER NAME AND SIGNATURE: Ryan Williams

PRINT NAME OF SAMPLER: Ryan Williams

SIGNATURE OF SAMPLER: [Signature]

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
Requested Client Information
Company: GA Power
Address: Atlanta, GA

Section B
Requested Project Information
Report To: SCS Contacts
Copy To: Geosyntec Contacts

Section C
Typical Information
Attention: Southern Co.
Company Name
Address

Requester Name: Kevin Herring
Project Name: Plant Hammond AP-1 (Seminarville)
Project Number: GWS5818

REGULATORY AGENCY
 NIDES GROUND WATER
 UST RCRA DRINKING WATER
 OTHER

Site Location: STATE: GA

Page: 3 of 3

#	ITEM	Section D Required Client Information	VALID Matrix Codes MATRIX CODE	COLLECTED		PRESERVED		ANALYSIS TEST				Requester Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS				
				DATE	TIME	DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl				NaOH	Na ₂ S ₂ O ₃	Methanol	Other
1	EB-1		WT G	3/16/21	16:45													
2	FB-1		WT G	3/16/21	16:45													
3			WT G															
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

SAMPLE ID
JA-2-1197-1
Sample IDs MUST BE UNIQUE

MATRIX CODE (Fill in valid codes to left)
SAMPLE TYPE (G=GRAB C=COMP)

Section D
Required Client Information
Requester Name: Kevin Herring
Project Name: Plant Hammond AP-1 (Seminarville)
Project Number: GWS5818

ADDITIONAL COMMENTS

REQUISITIONED BY / AFFILIATION

DATE

TIME

ACCEPTED BY / AFFILIATION

DATE

TIME

SAMPLE CONDITIONS

Please note that wells struck through any wells not sampled, and indicate when the last attempt for the event has been taken.
*App. III & IV Metals - Sb, As, Ba, Be, B, Cd, Cr, Cu, Pb, U, Mo, Se, Tl
One sample set submitted for MSWA-102/90-30344D but they will be accepted for AP-1273 SDC1

Requested by: *Kevin Herring*
Date: *3/16/21* Time: *16:45*
Accepted by: *Kevin Herring*
Date: *3/17/21* Time: *13:10*
Temp in °C: *5.9*
Received on Ice (Y/N): *N*
Custody Sealed Cooler (Y/N): *N*
Samples Intact (Y/N): *Y*

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: *Kevin Herring*
SIGNATURE OF SAMPLER: *[Signature]*

DATE signed: *3/16/21*

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

Section B Required Project Information
 Request for: SCS Contacts
 Copy To: Geosyntec Contacts

Section C Internal Information
 Atlanta Southern Co.

Project Name: Plant Hammond AP-1 Semiannual
 Project Number: GWS5818

Site Location: GA
 State: GA

Requested Date/Time: 10 Day

Requested Analysis Filtered (Y/N)

REGULATORY AGENCY: NPOES GROUND WATER DRINKING WATER
 UST RCRA OTHER

Page: 1 of 2

Section D Required Client Information
 VARI Matrix Codes: DAY, WASTE, PRODUCT, SOLID, LIQ, GAS, OTHER
 MATRIX CODE (see vari codes to left)
 SAMPLE TYPE (G=GRAB C=COMP)
 DATE TIME DATE TIME
 SAMPLE TEMP AT COLLECTION
 # OF CONTAINERS: Unpreserved, H₂SO₄, HNO₃, HCl, NaOH, Na₂S₂O₈, Methanol, Other
 Analysis Test: Chloride, Fluoride, Sulfate, App III & IV Metals, RAD 226/228, TDS
 Residual Chlorine (Y/N)
 Paco Project Nat. Lab I.D.

ITEM #	VARI Matrix Code	MATRIX CODE	SAMPLE TYPE	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Residual Chlorine (Y/N)	pH =
1	HQWA-1	WT G	G						5 2 3		X	N	
2	HQWA-2	WT G	G						5 2 3		X	N	
3	HQWA-3	WT G	G						5 2 3		X	N	
4	HQWA-43D	WT G	G						5 2 3		X	N	
5	HQWA-44D	WT G	G						5 2 3		X	N	
6	HQWC-7	WT G	G						5 2 3		X	N	
7	HQWC-8	WT G	G						5 2 3		X	N	
8	HQWC-9	WT G	G						5 2 3		X	N	
9	HQWC-10	WT G	G						5 2 3		X	N	
10	HQWC-11	WT G	G						5 2 3		X	N	
11	HQWC-12	WT G	G						5 2 3		X	N	
12	HQWC-13	WT G	G						5 2 3		X	N	

ADDITIONAL COMMENTS
 Please note dry weight, unless through, are not sampled and void when the last sample for the event has been taken.
 App III & IV Metals - SA, AS, BR, BS, B, CA, CB, CC, CD, PE, U, MO, SA, T

REQUISITIONED BY / AFFILIATION
 Name: *Sharon Hester Price*
 Date: 3/18/17

ACCEPTED BY / AFFILIATION
 Name: *Roy Wilton Price*
 Date: 3/18/17

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: *Joshua Kelson*
 SIGNATURE of SAMPLER: *[Signature]*
 DATE Signed: 3/16/17

Temp in °C
 Received on (ba (Y/N)
 Custody Sealed Container (Y/N)
 Samples Intact (Y/N)

The Client of Face Analytical is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information
Section B Required Project Information
Section C Invoice Information

Company: GA Power
 Address: Atlanta, GA
 Report To: SCS Contacts
 Copy To: Gossynetic Contacts
 Email To: SCS Contacts
 Project Name: Plant Hammond AP-1 Semiannual
 Project Number: GWSS51B
 Requested Due Date/TAT: Mid Day

Address: Southern Co
 Company Name: Southern Co
 Address: 10839-10
 Project Name: Kevin Henning
 Project Manager: Kevin Henning

REGULATORY AGENCY
 HPOES GROUND WATER DRINKING WATER
 UST RCRA OTHER (see...)
 Site Location: GA
 STATE: GA

Requested Analysis Filtered (Y/N)
 Residual Chlorine (Y/N)
 Pace Project No. Lab ID.

ITEM #	Section B Required Client Information Matrix	Section D Valid Matrix Codes CODE WATER WWT WASTE WATER WW PRODUCT P SOLVENT S OIL O AIR A OTHER C 2004 2	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₅ Methanol Other	Analysis Test				Temp in °C	Received on top (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
					DATE	TIME	DATE				TIME	Chloride	Fluoride	Sulfate				
1	MMW-5							5			X	X	X	X				
2	MMW-6							5			X	X	X	X				
3	MMW-7							5			X	X	X	X				
4	MMW-19							5			X	X	X	X				
6	MMW-20	MMW-24D						5			X	X	X	X				
8	MMW-20T							5			X	X	X	X				
7	MMW-25D							5			X	X	X	X				
9	MMW-26D							5			X	X	X	X				
9	MMW-27D							5			X	X	X	X				
10	MMW-28D							5			X	X	X	X				
11	MMW-29							5			X	X	X	X				
12	Dup-1							5			X	X	X	X				

ADDITIONAL COMMENTS
 BELONGING BY APPLICATION
 DATE TIME
 ACCEPTED BY / APPLICATION
 DATE TIME
 SAMPLE CONDITIONS

Requested note by weight, status through any wells not sampled, and note when the last sample for the creek has been taken.
 App. III & IV Metals = Sn, Al, Ba, Be, B, Cd, Cr, Cu, Pb, Li, Mn, Se, Ti

One sample was submitted for HCON-10204-04-04-04-04 but they will be resubmitted for 02-1229 SCS

Relinquished by: Ryan Williams, Date: 3/19/01, Time: 15:21
 Accepted by: Ryan Williams, Date: 3/19/01, Time: 15:17

SAMPLER NAME AND SIGNATURE
 FRONT NAME of SAMPLER: Justin H. Beckler
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed: 3/16/01

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

April 26, 2021

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

RE: Project: HAMMOND AP-1 SEMIANNUAL RADS
Pace Project No.: 92527270

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between March 11, 2021 and March 18, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



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

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-1 SEMIANNUAL RADDS
Pace Project No.: 92527270

Pace Analytical Services Pennsylvania

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

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

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SAMPLE SUMMARY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92527270001	HGWA-1	Water	03/10/21 16:10	03/11/21 15:55
92527270002	HGWA-44D	Water	03/10/21 14:30	03/11/21 15:55
92527270003	HGWA-2	Water	03/11/21 09:59	03/12/21 13:43
92527270004	HGWA-3	Water	03/11/21 11:25	03/12/21 13:43
92527270005	HGWA-43D	Water	03/11/21 09:57	03/12/21 13:43
92527270006	HGWC-10	Water	03/12/21 10:11	03/15/21 12:00
92527270007	MW-27D	Water	03/12/21 09:47	03/15/21 12:00
92527270008	HGWC-7 FILTERED	Water	03/15/21 16:25	03/16/21 13:42
92527270009	HGWC-7	Water	03/15/21 16:10	03/16/21 13:42
92527270010	HGWC-8	Water	03/15/21 11:00	03/16/21 13:42
92527270011	MW-7	Water	03/15/21 12:00	03/16/21 13:42
92527270012	MW-20	Water	03/15/21 14:22	03/16/21 13:42
92527270013	MW-28D	Water	03/15/21 18:25	03/16/21 13:42
92527270014	MW-29	Water	03/15/21 12:52	03/16/21 13:42
92527270015	HGWC-9	Water	03/16/21 14:48	03/17/21 13:10
92527270016	HGWC-11	Water	03/16/21 09:45	03/17/21 13:10
92527270017	HGWC-12	Water	03/16/21 11:12	03/17/21 13:10
92527270018	MW-5	Water	03/16/21 16:08	03/17/21 13:10
92527270019	MW-6	Water	03/16/21 15:43	03/17/21 13:10
92527270020	MW-25D	Water	03/16/21 12:32	03/17/21 13:10
92527270021	DUP-1	Water	03/16/21 00:00	03/17/21 13:10
92527270022	EB-1	Water	03/16/21 16:40	03/17/21 13:10
92527270023	FB-1	Water	03/16/21 16:25	03/17/21 13:10
92527270024	HGWC-13	Water	03/17/21 14:58	03/18/21 13:17
92527270025	MW-19	Water	03/17/21 10:20	03/18/21 13:17
92527270026	MW-24D	Water	03/17/21 16:00	03/18/21 13:17
92527270027	MW-26D	Water	03/17/21 08:50	03/18/21 13:17

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 SEMIANNUAL RADS
Pace Project No.: 92527270

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92527270001	HGWA-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527270002	HGWA-44D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527270003	HGWA-2	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527270004	HGWA-3	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527270005	HGWA-43D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527270006	HGWC-10	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527270007	MW-27D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527270008	HGWC-7 FILTERED	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527270009	HGWC-7	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527270010	HGWC-8	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527270011	MW-7	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527270012	MW-20	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527270013	MW-28D	EPA 9315	LAL	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 SEMIANNUAL RADS
Pace Project No.: 92527270

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92527270014	MW-29	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527270015	HGWC-9	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527270016	HGWC-11	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92527270017	HGWC-12	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527270018	MW-5	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527270019	MW-6	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92527270020	MW-25D	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527270021	DUP-1	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
92527270022	EB-1	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
92527270023	FB-1	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527270024	HGWC-13	Total Radium Calculation	CMC	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92527270025	MW-19	EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92527270026	MW-24D	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
92527270027	MW-26D	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	LAL	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 SEMIANNUAL RADS
Pace Project No.: 92527270

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527270001	HGWA-1					
EPA 9315	Radium-226	-0.0744 ± 0.0713 (0.306) C:76% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	-0.473 ± 0.501 (1.24) C:75% T:67%	pCi/L		04/09/21 13:14	
Total Radium Calculation	Total Radium	0.000 ± 0.572 (1.55)	pCi/L		04/14/21 16:39	
92527270002	HGWA-44D					
EPA 9315	Radium-226	0.119 ± 0.127 (0.231) C:79% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.692 ± 0.477 (0.922) C:63% T:82%	pCi/L		04/09/21 15:22	
Total Radium Calculation	Total Radium	0.811 ± 0.604 (1.15)	pCi/L		04/14/21 16:39	
92527270003	HGWA-2					
EPA 9315	Radium-226	0.206 ± 0.172 (0.304) C:81% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	0.531 ± 0.488 (0.990) C:58% T:71%	pCi/L		04/09/21 15:22	
Total Radium Calculation	Total Radium	0.737 ± 0.660 (1.29)	pCi/L		04/14/21 16:39	
92527270004	HGWA-3					
EPA 9315	Radium-226	0.128 ± 0.181 (0.393) C:82% T:NA	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	-0.0144 ± 0.302 (0.724) C:65% T:75%	pCi/L		04/09/21 15:22	
Total Radium Calculation	Total Radium	0.128 ± 0.483 (1.12)	pCi/L		04/14/21 16:39	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 SEMIANNUAL RADS
Pace Project No.: 92527270

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527270005	HGWA-43D					
EPA 9315	Radium-226	0.118 ± 0.160 (0.335)	pCi/L		03/29/21 07:58	
EPA 9320	Radium-228	C:68% T:NA 1.39 ± 0.825 (1.53)	pCi/L		04/09/21 19:20	
Total Radium Calculation	Total Radium	C:62% T:77% 1.51 ± 0.985 (1.87)	pCi/L		04/14/21 16:39	
92527270006	HGWC-10					
EPA 9315	Radium-226	0.286 ± 0.243 (0.471)	pCi/L		04/05/21 09:41	
EPA 9320	Radium-228	C:84% T:NA 0.829 ± 0.526 (1.00)	pCi/L		04/09/21 11:34	
Total Radium Calculation	Total Radium	C:64% T:80% 1.12 ± 0.769 (1.47)	pCi/L		04/14/21 16:39	
92527270007	MW-27D					
EPA 9315	Radium-226	0.649 ± 0.300 (0.455)	pCi/L		04/05/21 09:42	
EPA 9320	Radium-228	C:92% T:NA -0.139 ± 0.407 (0.968)	pCi/L		04/09/21 11:34	
Total Radium Calculation	Total Radium	C:63% T:88% 0.649 ± 0.707 (1.42)	pCi/L		04/14/21 16:39	
92527270008	HGWC-7 FILTERED					
EPA 9315	Radium-226	0.0393 ± 0.241 (0.593)	pCi/L		04/05/21 09:45	
EPA 9320	Radium-228	C:77% T:NA 0.110 ± 0.432 (0.980)	pCi/L		04/09/21 14:42	
Total Radium Calculation	Total Radium	C:62% T:80% 0.149 ± 0.673 (1.57)	pCi/L		04/14/21 16:39	

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527270009	HGWC-7					
EPA 9315	Radium-226	0.243 ± 0.197 (0.352)	pCi/L		04/05/21 09:45	
EPA 9320	Radium-228	C:76% T:NA 0.423 ± 0.460 (0.955)	pCi/L		04/09/21 14:42	
Total Radium Calculation	Total Radium	C:65% T:77% 0.666 ± 0.657 (1.31)	pCi/L		04/14/21 16:39	
92527270010	HGWC-8					
EPA 9315	Radium-226	0.478 ± 0.311 (0.584)	pCi/L		04/05/21 09:45	
EPA 9320	Radium-228	C:88% T:NA 0.825 ± 0.471 (0.845)	pCi/L		04/09/21 14:42	
Total Radium Calculation	Total Radium	C:63% T:83% 1.30 ± 0.782 (1.43)	pCi/L		04/14/21 16:39	
92527270011	MW-7					
EPA 9315	Radium-226	-0.0446 ± 0.252 (0.651)	pCi/L		04/05/21 10:07	
EPA 9320	Radium-228	C:76% T:NA 0.386 ± 0.541 (1.16)	pCi/L		04/09/21 14:42	
Total Radium Calculation	Total Radium	C:67% T:78% 0.386 ± 0.793 (1.81)	pCi/L		04/14/21 16:39	
92527270012	MW-20					
EPA 9315	Radium-226	0.270 ± 0.231 (0.456)	pCi/L		04/05/21 10:07	
EPA 9320	Radium-228	C:90% T:NA 0.966 ± 0.478 (0.826)	pCi/L		04/09/21 14:42	
Total Radium Calculation	Total Radium	C:83% T:76% 1.24 ± 0.709 (1.28)	pCi/L		04/14/21 16:39	

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 SEMIANNUAL RADS
Pace Project No.: 92527270

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527270013	MW-28D					
EPA 9315	Radium-226	0.389 ± 0.277 (0.524)	pCi/L		04/05/21 10:08	
EPA 9320	Radium-228	C:84% T:NA 0.175 ± 0.459 (1.02)	pCi/L		04/09/21 14:42	
Total Radium Calculation	Total Radium	C:68% T:77% 0.564 ± 0.736 (1.54)	pCi/L		04/14/21 16:39	
92527270014	MW-29					
EPA 9315	Radium-226	0.272 ± 0.190 (0.287)	pCi/L		04/05/21 11:04	
EPA 9320	Radium-228	C:72% T:NA 0.164 ± 0.439 (0.983)	pCi/L		04/09/21 14:42	
Total Radium Calculation	Total Radium	C:69% T:73% 0.436 ± 0.629 (1.27)	pCi/L		04/14/21 16:39	
92527270015	HGWC-9					
EPA 9315	Radium-226	0.222 ± 0.171 (0.291)	pCi/L		04/05/21 11:04	
EPA 9320	Radium-228	C:85% T:NA 0.224 ± 0.344 (0.744)	pCi/L		04/09/21 12:06	
Total Radium Calculation	Total Radium	C:79% T:83% 0.446 ± 0.515 (1.04)	pCi/L		04/14/21 16:39	
92527270016	HGWC-11					
EPA 9315	Radium-226	0.139 ± 0.146 (0.282)	pCi/L		04/05/21 11:04	
EPA 9320	Radium-228	C:87% T:NA 1.57 ± 0.520 (0.731)	pCi/L		04/09/21 12:06	
Total Radium Calculation	Total Radium	C:79% T:90% 1.71 ± 0.666 (1.01)	pCi/L		04/14/21 16:39	

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527270017	HGWC-12					
EPA 9315	Radium-226	0.245 ± 0.174 (0.279)	pCi/L		04/05/21 11:04	
EPA 9320	Radium-228	C:83% T:NA -0.244 ± 0.404 (0.969)	pCi/L		04/09/21 12:06	
Total Radium Calculation	Total Radium	C:75% T:82% 0.245 ± 0.578 (1.25)	pCi/L		04/14/21 16:39	
92527270018	MW-5					
EPA 9315	Radium-226	0.0838 ± 0.130 (0.281)	pCi/L		04/05/21 11:04	
EPA 9320	Radium-228	C:74% T:NA 1.14 ± 0.493 (0.800)	pCi/L		04/09/21 12:06	
Total Radium Calculation	Total Radium	C:74% T:76% 1.22 ± 0.623 (1.08)	pCi/L		04/14/21 16:39	
92527270019	MW-6					
EPA 9315	Radium-226	0.307 ± 0.196 (0.306)	pCi/L		04/05/21 11:04	
EPA 9320	Radium-228	C:84% T:NA 0.420 ± 0.365 (0.734)	pCi/L		04/09/21 12:07	
Total Radium Calculation	Total Radium	C:73% T:83% 0.727 ± 0.561 (1.04)	pCi/L		04/14/21 16:39	
92527270020	MW-25D					
EPA 9315	Radium-226	0.324 ± 0.223 (0.398)	pCi/L		04/05/21 11:04	
EPA 9320	Radium-228	C:89% T:NA 0.418 ± 0.371 (0.753)	pCi/L		04/09/21 12:07	
Total Radium Calculation	Total Radium	C:74% T:84% 0.742 ± 0.594 (1.15)	pCi/L		04/14/21 16:39	

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 SEMIANNUAL RADS
Pace Project No.: 92527270

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527270021	DUP-1					
EPA 9315	Radium-226	0.455 ± 0.228 (0.291) C:82% T:NA	pCi/L		04/05/21 11:04	
EPA 9320	Radium-228	0.713 ± 0.447 (0.838) C:74% T:85%	pCi/L		04/09/21 13:13	
Total Radium Calculation	Total Radium	1.17 ± 0.675 (1.13)	pCi/L		04/16/21 09:20	
92527270022	EB-1					
EPA 9315	Radium-226	-0.0125 ± 0.0916 (0.273) C:89% T:NA	pCi/L		04/05/21 11:04	
EPA 9320	Radium-228	0.181 ± 0.395 (0.872) C:74% T:83%	pCi/L		04/09/21 12:36	
Total Radium Calculation	Total Radium	0.181 ± 0.487 (1.15)	pCi/L		04/16/21 09:20	
92527270023	FB-1					
EPA 9315	Radium-226	0.0600 ± 0.214 (0.515) C:87% T:NA	pCi/L		04/05/21 10:10	
EPA 9320	Radium-228	0.137 ± 0.376 (0.841) C:75% T:84%	pCi/L		04/09/21 13:14	
Total Radium Calculation	Total Radium	0.197 ± 0.590 (1.36)	pCi/L		04/16/21 09:20	
92527270024	HGWC-13					
EPA 9315	Radium-226	0.490 ± 0.296 (0.435) C:93% T:NA	pCi/L		04/16/21 07:31	
EPA 9320	Radium-228	0.961 ± 0.708 (1.41) C:63% T:68%	pCi/L		04/20/21 12:16	
Total Radium Calculation	Total Radium	1.45 ± 1.00 (1.85)	pCi/L		04/21/21 12:50	

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 SEMIANNUAL RADS
Pace Project No.: 92527270

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92527270025	MW-19					
EPA 9315	Radium-226	0.261 ± 0.244 (0.455) C:93% T:NA	pCi/L		04/16/21 07:31	
EPA 9320	Radium-228	0.205 ± 0.509 (1.13) C:65% T:74%	pCi/L		04/20/21 12:16	
Total Radium Calculation	Total Radium	0.466 ± 0.753 (1.59)	pCi/L		04/21/21 12:50	
92527270026	MW-24D					
EPA 9315	Radium-226	0.143 ± 0.219 (0.478) C:87% T:NA	pCi/L		04/16/21 07:31	
EPA 9320	Radium-228	0.0313 ± 0.534 (1.22) C:68% T:73%	pCi/L		04/20/21 12:16	
Total Radium Calculation	Total Radium	0.174 ± 0.753 (1.70)	pCi/L		04/21/21 12:50	
92527270027	MW-26D					
EPA 9315	Radium-226	0.165 ± 0.191 (0.372) C:94% T:NA	pCi/L		04/16/21 07:31	
EPA 9320	Radium-228	-0.289 ± 0.632 (1.49) C:68% T:66%	pCi/L		04/20/21 12:16	
Total Radium Calculation	Total Radium	0.165 ± 0.823 (1.86)	pCi/L		04/21/21 12:50	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-1 Lab ID: 92527270001 Collected: 03/10/21 16:10 Received: 03/11/21 15:55 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	-0.0744 ± 0.0713 (0.306) C:76% T:NA	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.473 ± 0.501 (1.24) C:75% T:67%	pCi/L	04/09/21 13:14	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.000 ± 0.572 (1.55)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-44D Lab ID: 92527270002 Collected: 03/10/21 14:30 Received: 03/11/21 15:55 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.119 ± 0.127 (0.231) C:79% T:NA	pCi/L	03/29/21 07:58	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.692 ± 0.477 (0.922) C:63% T:82%	pCi/L	04/09/21 15:22	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.811 ± 0.604 (1.15)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-2 Lab ID: 92527270003 Collected: 03/11/21 09:59 Received: 03/12/21 13:43 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.206 ± 0.172 (0.304) C:81% T:NA	pCi/L	03/29/21 07:58	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.531 ± 0.488 (0.990) C:58% T:71%	pCi/L	04/09/21 15:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.737 ± 0.660 (1.29)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-3 Lab ID: 92527270004 Collected: 03/11/21 11:25 Received: 03/12/21 13:43 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.128 ± 0.181 (0.393) C:82% T:NA	pCi/L	03/29/21 07:58	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.0144 ± 0.302 (0.724) C:65% T:75%	pCi/L	04/09/21 15:22	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.128 ± 0.483 (1.12)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-43D Lab ID: 92527270005 Collected: 03/11/21 09:57 Received: 03/12/21 13:43 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.118 ± 0.160 (0.335) C:68% T:NA	pCi/L	03/29/21 07:58	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.39 ± 0.825 (1.53) C:62% T:77%	pCi/L	04/09/21 19:20	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.51 ± 0.985 (1.87)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-10 Lab ID: 92527270006 Collected: 03/12/21 10:11 Received: 03/15/21 12:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.286 ± 0.243 (0.471) C:84% T:NA	pCi/L	04/05/21 09:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.829 ± 0.526 (1.00) C:64% T:80%	pCi/L	04/09/21 11:34	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.12 ± 0.769 (1.47)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-27D Lab ID: 92527270007 Collected: 03/12/21 09:47 Received: 03/15/21 12:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.649 ± 0.300 (0.455) C:92% T:NA	pCi/L	04/05/21 09:42	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.139 ± 0.407 (0.968) C:63% T:88%	pCi/L	04/09/21 11:34	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.649 ± 0.707 (1.42)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-7 FILTERED Lab ID: 92527270008 Collected: 03/15/21 16:25 Received: 03/16/21 13:42 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0393 ± 0.241 (0.593) C:77% T:NA	pCi/L	04/05/21 09:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.110 ± 0.432 (0.980) C:62% T:80%	pCi/L	04/09/21 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.149 ± 0.673 (1.57)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-7 Lab ID: 92527270009 Collected: 03/15/21 16:10 Received: 03/16/21 13:42 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.243 ± 0.197 (0.352) C:76% T:NA	pCi/L	04/05/21 09:45	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.423 ± 0.460 (0.955) C:65% T:77%	pCi/L	04/09/21 14:42	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.666 ± 0.657 (1.31)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Sample: HGWC-8 **Lab ID: 92527270010** Collected: 03/15/21 11:00 Received: 03/16/21 13:42 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.478 ± 0.311 (0.584) C:88% T:NA	pCi/L	04/05/21 09:45	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.825 ± 0.471 (0.845) C:63% T:83%	pCi/L	04/09/21 14:42	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.30 ± 0.782 (1.43)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-7 Lab ID: 92527270011 Collected: 03/15/21 12:00 Received: 03/16/21 13:42 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	-0.0446 ± 0.252 (0.651) C:76% T:NA	pCi/L	04/05/21 10:07	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.386 ± 0.541 (1.16) C:67% T:78%	pCi/L	04/09/21 14:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.386 ± 0.793 (1.81)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-20 Lab ID: 92527270012 Collected: 03/15/21 14:22 Received: 03/16/21 13:42 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.270 ± 0.231 (0.456) C:90% T:NA	pCi/L	04/05/21 10:07	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.966 ± 0.478 (0.826) C:83% T:76%	pCi/L	04/09/21 14:42	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.24 ± 0.709 (1.28)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-28D Lab ID: 92527270013 Collected: 03/15/21 18:25 Received: 03/16/21 13:42 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.389 ± 0.277 (0.524) C:84% T:NA	pCi/L	04/05/21 10:08	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.175 ± 0.459 (1.02) C:68% T:77%	pCi/L	04/09/21 14:42	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.564 ± 0.736 (1.54)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-29 Lab ID: 92527270014 Collected: 03/15/21 12:52 Received: 03/16/21 13:42 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.272 ± 0.190 (0.287) C:72% T:NA	pCi/L	04/05/21 11:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.164 ± 0.439 (0.983) C:69% T:73%	pCi/L	04/09/21 14:42	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.436 ± 0.629 (1.27)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-9 Lab ID: 92527270015 Collected: 03/16/21 14:48 Received: 03/17/21 13:10 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.222 ± 0.171 (0.291) C:85% T:NA	pCi/L	04/05/21 11:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.224 ± 0.344 (0.744) C:79% T:83%	pCi/L	04/09/21 12:06	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.446 ± 0.515 (1.04)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-11 Lab ID: 92527270016 Collected: 03/16/21 09:45 Received: 03/17/21 13:10 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.139 ± 0.146 (0.282) C:87% T:NA	pCi/L	04/05/21 11:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.57 ± 0.520 (0.731) C:79% T:90%	pCi/L	04/09/21 12:06	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.71 ± 0.666 (1.01)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-12 Lab ID: 92527270017 Collected: 03/16/21 11:12 Received: 03/17/21 13:10 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.245 ± 0.174 (0.279) C:83% T:NA	pCi/L	04/05/21 11:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.244 ± 0.404 (0.969) C:75% T:82%	pCi/L	04/09/21 12:06	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.245 ± 0.578 (1.25)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-5 Lab ID: 92527270018 Collected: 03/16/21 16:08 Received: 03/17/21 13:10 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0838 ± 0.130 (0.281) C:74% T:NA	pCi/L	04/05/21 11:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.14 ± 0.493 (0.800) C:74% T:76%	pCi/L	04/09/21 12:06	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.22 ± 0.623 (1.08)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Sample: MW-6 **Lab ID: 92527270019** Collected: 03/16/21 15:43 Received: 03/17/21 13:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.307 ± 0.196 (0.306) C:84% T:NA	pCi/L	04/05/21 11:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.420 ± 0.365 (0.734) C:73% T:83%	pCi/L	04/09/21 12:07	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.727 ± 0.561 (1.04)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Sample: MW-25D **Lab ID: 92527270020** Collected: 03/16/21 12:32 Received: 03/17/21 13:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.324 ± 0.223 (0.398) C:89% T:NA	pCi/L	04/05/21 11:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.418 ± 0.371 (0.753) C:74% T:84%	pCi/L	04/09/21 12:07	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.742 ± 0.594 (1.15)	pCi/L	04/14/21 16:39	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Sample: DUP-1 **Lab ID: 92527270021** Collected: 03/16/21 00:00 Received: 03/17/21 13:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.455 ± 0.228 (0.291) C:82% T:NA	pCi/L	04/05/21 11:04	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.713 ± 0.447 (0.838) C:74% T:85%	pCi/L	04/09/21 13:13	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.17 ± 0.675 (1.13)	pCi/L	04/16/21 09:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EB-1 Lab ID: 92527270022 Collected: 03/16/21 16:40 Received: 03/17/21 13:10 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	-0.0125 ± 0.0916 (0.273) C:89% T:NA	pCi/L	04/05/21 11:04	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.181 ± 0.395 (0.872) C:74% T:83%	pCi/L	04/09/21 12:36	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.181 ± 0.487 (1.15)	pCi/L	04/16/21 09:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FB-1 Lab ID: 92527270023 Collected: 03/16/21 16:25 Received: 03/17/21 13:10 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0600 ± 0.214 (0.515) C:87% T:NA	pCi/L	04/05/21 10:10	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.137 ± 0.376 (0.841) C:75% T:84%	pCi/L	04/09/21 13:14	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.197 ± 0.590 (1.36)	pCi/L	04/16/21 09:20	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-13 Lab ID: 92527270024 Collected: 03/17/21 14:58 Received: 03/18/21 13:17 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.490 ± 0.296 (0.435) C:93% T:NA	pCi/L	04/16/21 07:31	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.961 ± 0.708 (1.41) C:63% T:68%	pCi/L	04/20/21 12:16	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.45 ± 1.00 (1.85)	pCi/L	04/21/21 12:50	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-19 Lab ID: 92527270025 Collected: 03/17/21 10:20 Received: 03/18/21 13:17 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.261 ± 0.244 (0.455) C:93% T:NA	pCi/L	04/16/21 07:31	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.205 ± 0.509 (1.13) C:65% T:74%	pCi/L	04/20/21 12:16	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.466 ± 0.753 (1.59)	pCi/L	04/21/21 12:50	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-24D Lab ID: 92527270026 Collected: 03/17/21 16:00 Received: 03/18/21 13:17 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.143 ± 0.219 (0.478) C:87% T:NA	pCi/L	04/16/21 07:31	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.0313 ± 0.534 (1.22) C:68% T:73%	pCi/L	04/20/21 12:16	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.174 ± 0.753 (1.70)	pCi/L	04/21/21 12:50	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Sample: MW-26D **Lab ID: 92527270027** Collected: 03/17/21 08:50 Received: 03/18/21 13:17 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.165 ± 0.191 (0.372) C:94% T:NA	pCi/L	04/16/21 07:31	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.289 ± 0.632 (1.49) C:68% T:66%	pCi/L	04/20/21 12:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.165 ± 0.823 (1.86)	pCi/L	04/21/21 12:50	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

QC Batch:	440498	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527270006, 92527270007, 92527270008, 92527270009, 92527270010, 92527270011, 92527270012, 92527270013, 92527270014, 92527270015, 92527270016, 92527270017, 92527270018, 92527270019, 92527270020, 92527270021, 92527270022

METHOD BLANK: 2126660 Matrix: Water

Associated Lab Samples: 92527270006, 92527270007, 92527270008, 92527270009, 92527270010, 92527270011, 92527270012, 92527270013, 92527270014, 92527270015, 92527270016, 92527270017, 92527270018, 92527270019, 92527270020, 92527270021, 92527270022

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0542 ± 0.165 (0.401) C:87% T:NA	pCi/L	04/05/21 09:41	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

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: 92527270023

METHOD BLANK: 2126661

Matrix: Water

Associated Lab Samples: 92527270023

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0900 ± 0.196 (0.458) C:77% T:NA	pCi/L	04/05/21 10:10	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

QC Batch:	440197	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527270006, 92527270007, 92527270008, 92527270009, 92527270010, 92527270011, 92527270012, 92527270013, 92527270014

METHOD BLANK: 2125126 Matrix: Water

Associated Lab Samples: 92527270006, 92527270007, 92527270008, 92527270009, 92527270010, 92527270011, 92527270012, 92527270013, 92527270014

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.833 ± 0.523 (0.984) C:64% T:74%	pCi/L	04/09/21 11:35	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

QC Batch: 443236	Analysis Method: EPA 9315
QC Batch Method: EPA 9315	Analysis Description: 9315 Total Radium
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92527270024, 92527270025, 92527270026, 92527270027

METHOD BLANK: 2139349 Matrix: Water

Associated Lab Samples: 92527270024, 92527270025, 92527270026, 92527270027

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0175 ± 0.115 (0.371) C:93% T:NA	pCi/L	04/16/21 07:31	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

QC Batch:	443103	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527270024, 92527270025, 92527270026, 92527270027

METHOD BLANK: 2138547 Matrix: Water

Associated Lab Samples: 92527270024, 92527270025, 92527270026, 92527270027

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.751 ± 0.461 (0.850) C:65% T:74%	pCi/L	04/20/21 12:17	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

QC Batch: 440490 Analysis Method: EPA 9320
QC Batch Method: EPA 9320 Analysis Description: 9320 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92527270001, 92527270015, 92527270016, 92527270017, 92527270018, 92527270019, 92527270020, 92527270021, 92527270022, 92527270023

METHOD BLANK: 2126643 Matrix: Water
Associated Lab Samples: 92527270001, 92527270015, 92527270016, 92527270017, 92527270018, 92527270019, 92527270020, 92527270021, 92527270022, 92527270023

Table with 5 columns: Parameter, Act ± Unc (MDC) Carr Trac, Units, Analyzed, Qualifiers. Row 1: Radium-228, 0.738 ± 0.321 (0.495) C:74% T:97%, pCi/L, 04/09/21 12:06

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

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: 92527270002, 92527270003, 92527270004, 92527270005

METHOD BLANK: 2126646 Matrix: Water

Associated Lab Samples: 92527270002, 92527270003, 92527270004, 92527270005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.826 ± 0.447 (0.791) C:67% T:78%	pCi/L	04/09/21 15:22	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

QC Batch:	439773	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92527270001, 92527270002, 92527270003, 92527270004, 92527270005

METHOD BLANK: 2123469 Matrix: Water

Associated Lab Samples: 92527270001, 92527270002, 92527270003, 92527270004, 92527270005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0133 ± 0.113 (0.309) C:70% T:NA	pCi/L	03/29/21 07:58	

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

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QUALIFIERS

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 SEMIANNUAL RADS

Pace Project No.: 92527270

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527270001	HGWA-1	EPA 9315	439773		
92527270002	HGWA-44D	EPA 9315	439773		
92527270003	HGWA-2	EPA 9315	439773		
92527270004	HGWA-3	EPA 9315	439773		
92527270005	HGWA-43D	EPA 9315	439773		
92527270006	HGWC-10	EPA 9315	440498		
92527270007	MW-27D	EPA 9315	440498		
92527270008	HGWC-7 FILTERED	EPA 9315	440498		
92527270009	HGWC-7	EPA 9315	440498		
92527270010	HGWC-8	EPA 9315	440498		
92527270011	MW-7	EPA 9315	440498		
92527270012	MW-20	EPA 9315	440498		
92527270013	MW-28D	EPA 9315	440498		
92527270014	MW-29	EPA 9315	440498		
92527270015	HGWC-9	EPA 9315	440498		
92527270016	HGWC-11	EPA 9315	440498		
92527270017	HGWC-12	EPA 9315	440498		
92527270018	MW-5	EPA 9315	440498		
92527270019	MW-6	EPA 9315	440498		
92527270020	MW-25D	EPA 9315	440498		
92527270021	DUP-1	EPA 9315	440498		
92527270022	EB-1	EPA 9315	440498		
92527270023	FB-1	EPA 9315	440499		
92527270024	HGWC-13	EPA 9315	443236		
92527270025	MW-19	EPA 9315	443236		
92527270026	MW-24D	EPA 9315	443236		
92527270027	MW-26D	EPA 9315	443236		
92527270001	HGWA-1	EPA 9320	440490		
92527270002	HGWA-44D	EPA 9320	440491		
92527270003	HGWA-2	EPA 9320	440491		
92527270004	HGWA-3	EPA 9320	440491		
92527270005	HGWA-43D	EPA 9320	440491		
92527270006	HGWC-10	EPA 9320	440197		
92527270007	MW-27D	EPA 9320	440197		
92527270008	HGWC-7 FILTERED	EPA 9320	440197		
92527270009	HGWC-7	EPA 9320	440197		
92527270010	HGWC-8	EPA 9320	440197		
92527270011	MW-7	EPA 9320	440197		
92527270012	MW-20	EPA 9320	440197		
92527270013	MW-28D	EPA 9320	440197		
92527270014	MW-29	EPA 9320	440197		
92527270015	HGWC-9	EPA 9320	440490		
92527270016	HGWC-11	EPA 9320	440490		
92527270017	HGWC-12	EPA 9320	440490		
92527270018	MW-5	EPA 9320	440490		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 SEMIANNUAL RAD5
Pace Project No.: 92527270

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92527270019	MW-6	EPA 9320	440490		
92527270020	MW-25D	EPA 9320	440490		
92527270021	DUP-1	EPA 9320	440490		
92527270022	EB-1	EPA 9320	440490		
92527270023	FB-1	EPA 9320	440490		
92527270024	HGWC-13	EPA 9320	443103		
92527270025	MW-19	EPA 9320	443103		
92527270026	MW-24D	EPA 9320	443103		
92527270027	MW-26D	EPA 9320	443103		
92527270001	HGWA-1	Total Radium Calculation	443374		
92527270002	HGWA-44D	Total Radium Calculation	443374		
92527270003	HGWA-2	Total Radium Calculation	443374		
92527270004	HGWA-3	Total Radium Calculation	443374		
92527270005	HGWA-43D	Total Radium Calculation	443374		
92527270006	HGWC-10	Total Radium Calculation	443374		
92527270007	MW-27D	Total Radium Calculation	443374		
92527270008	HGWC-7 FILTERED	Total Radium Calculation	443374		
92527270009	HGWC-7	Total Radium Calculation	443374		
92527270010	HGWC-8	Total Radium Calculation	443374		
92527270011	MW-7	Total Radium Calculation	443374		
92527270012	MW-20	Total Radium Calculation	443374		
92527270013	MW-28D	Total Radium Calculation	443374		
92527270014	MW-29	Total Radium Calculation	443374		
92527270015	HGWC-9	Total Radium Calculation	443374		
92527270016	HGWC-11	Total Radium Calculation	443374		
92527270017	HGWC-12	Total Radium Calculation	443374		
92527270018	MW-5	Total Radium Calculation	443374		
92527270019	MW-6	Total Radium Calculation	443374		
92527270020	MW-25D	Total Radium Calculation	443374		
92527270021	DUP-1	Total Radium Calculation	443625		
92527270022	EB-1	Total Radium Calculation	443625		
92527270023	FB-1	Total Radium Calculation	443625		
92527270024	HGWC-13	Total Radium Calculation	444310		
92527270025	MW-19	Total Radium Calculation	444310		
92527270026	MW-24D	Total Radium Calculation	444310		
92527270027	MW-26D	Total Radium Calculation	444310		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt	Client Name: GA Power	Project #:
--	--	-------------------

Courier: FedEx UPS USPS Client
 Commercial Pace Other: _____

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

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer: Wet Blue None

Cooler Temp: 1.8 **Correction Factor:** Add/Subtract (°C) 0.00

Cooler Temp Corrected (°C): 1.8

USDA Regulated Soil: N/A, water sample
 Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Date/Initials Person Examining Contents: 3/12/24
CO*

Biological Tissue Frozen?
 Yes No N/A

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

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

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

COMMENTS/SAMPLE DISCREPANCY Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ **Date/Time:** _____

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

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



CHAIN-OF-CUSTODY
The Chain-of-Custody is a LEGAL

MO#: 92527270
92527270

Section A Requested Client Information Company: GA Power Address: Atlanta, GA		Section B Requested Project Information Report for: SCS Contacts Copy to: Geosynthetic Contacts		Section C Media Information Institution: Southern Co. Address: Company Name: Project Name: Project Number: GWS681B	
Requested Date/Time: 18 Day	Project Name: Plant Hammond AP-1 Semiannual	Requested Analytic Filtered (Y/N):	REGULATORY AGENCY: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER (specify)	Site Location: STATE: GA	Page: 1 of 1

ITEM #	Section D Required Chain Information SAMPLE ID JAZ 09/11 Gauge #s MUST BE UNIQUE	VADZ Media Codes BATTZ DRAIN WATER WASTE WATER PRECIPIT CONDENSATE SPLASH AIR OTHER ISSUE	SCDS DN WT WW SL CA WP AR OT	MATRIX CODE (see vads codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₅ Merband Other	Analysis Test Chloride, Fluoride, Sulfate App. III & IV Metals* RAD 228/228 TOB	Requested Analytic Filtered (Y/N)	Residual Chlorine (Y/N)	pH = 6.95 pH = 2.92
						DATE	TIME	DATE							
1	HGWA-1			WT	G	3/10/11	1610		17	5	2	3			
2	HGWA-2			WT	G					2	2	3			
3	HGWA-3			WT	G					2	2	3			
4	HGWA-3D			WT	G					2	2	3			
5	HGWA-4AD			WT	G	3/10/11	1430		19	5	2	3			
6	HGWC-7			WT	G					5	2	3			
7	HGWC-8			WT	G					5	2	3			
8	HGWC-9			WT	G					5	2	3			
9	HGWC-10			WT	G					5	2	3			
10	HGWC-11			WT	G					5	2	3			
11	HGWC-12			WT	G					5	2	3			
12	HGWC-13			WT	G					5	2	3			

Placed into dry bags, stored through air-ways not tampered, and
DO NOT WRITE ON THIS FORM FOR ANY REASON. USE OTHER LABELS.
VADZ, H & I Number: 50, A3, B4, B5, B6, B7, B8, B9, B10, C1, C2, C3, C4, C5, C6, C7, C8, C9, C10
VADZ, H & I Number: 50, A3, B4, B5, B6, B7, B8, B9, B10, C1, C2, C3, C4, C5, C6, C7, C8, C9, C10
One sample set submitted for HGMCA-1728AD0405 for imp will
be reported for AP-1728 SD-G3

RELINQUISHED BY / AFFILIATION: *Deborah Henderson* DATE: 3/10/11 TIME: 1730
Deborah Henderson DATE: 3/11/11 TIME: 0910
Deborah Henderson DATE: 3/11/11 TIME: 1555

ACCEPTED BY / AFFILIATION: *Thomas Lee* DATE: 3/10/11 TIME: 1730
Thomas Lee DATE: 3/11/11 TIME: 1040
Thomas Lee DATE: 3/11/11 TIME: 1555

Temp in °C: 2.0
Received on Ice (Y/N): Y
Custody Sealed Codes (Y/N): N
Sample Intact (Y/N): Y

SAMPLER NAME AND SIGNATURE: *Deborah Henderson*
PRINT Name of SAMPLER: *Deborah Henderson*
SIGNATURE of SAMPLER: *Deborah Henderson*
DATE Signed (MM/DD/YYYY): 03/10/11

FALL-0-20 (rev. 07, 15-Feb-2007)

Section A Requested Client Information: Company: GA Power Address: Atlanta, GA Request Due Date/TIME: 10 Day		Section B Requested Project Information Report To: SCS Contacts Copy To: Geosyntec Contacts Purchase Order No.:		Section C Project Information Job Number: Southern Co. Address: Site Name: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER	
Email To: SCS Contacts Phone: Fax:		Project Name: Plant Hammond AP-1 Semimetal Project Number: GW65818		Company Name: Site Location: GA Project Manager: Kevin Herring File Number: 10839.10	

SAMPLE ID
VAZ-09 /
SAMPLE ID MUST BE UNIQUE

ITEM #	Section D Requested Client Information Matrix Code	Matrix Code	Sample Type (G=GRAB C=COMB)	Collected		Sample Temp at Collection	# of Containers	Preservatives	Requested Analyte Filtered (Y/N)		Residual Chlorine (Y/N)	pH	
				DATE	TIME				Y/N	Y/N			
1	HGW-1	WT 5	WT 5	3/12/21	1343	1639	3/12/21	1343	X	X	X	N	5.80
2	HGWA-2	WT 5	WT 5	3/12/21	1343	1639	3/12/21	1343	X	X	X	N	7.33
3	HGWA-3	WT 5	WT 5	3/12/21	1343	1639	3/12/21	1343	X	X	X	N	7.46
4	HGWA-4RD	WT 5	WT 5	3/12/21	1343	1639	3/12/21	1343	X	X	X	N	
5	HGWA-4AD	WT 5	WT 5	3/12/21	1343	1639	3/12/21	1343	X	X	X	N	
6	HGWA-7	WT 5	WT 5	3/12/21	1343	1639	3/12/21	1343	X	X	X	N	
7	HGWA-8	WT 5	WT 5	3/12/21	1343	1639	3/12/21	1343	X	X	X	N	
8	HGWA-9	WT 5	WT 5	3/12/21	1343	1639	3/12/21	1343	X	X	X	N	
9	HGWA-10	WT 5	WT 5	3/12/21	1343	1639	3/12/21	1343	X	X	X	N	
10	HGWA-11	WT 5	WT 5	3/12/21	1343	1639	3/12/21	1343	X	X	X	N	
11	HGWA-12	WT 5	WT 5	3/12/21	1343	1639	3/12/21	1343	X	X	X	N	
12	HGWA-13	WT 5	WT 5	3/12/21	1343	1639	3/12/21	1343	X	X	X	N	

ADDITIONAL COMMENTS:
Please note dry wells, rain through any wells not sampled, and note when the last sample for the event has been taken.
App. II & IV Metals = Sb, As, Ba, Cd, Cr, Cu, Pb, Li, Mn, Se, Ti.
One sample set submitted for HGWA-11/GWA4RD/4AD but they will be re-worked for AP-1/2/3 SOCs

REQUISITIONED BY / APPLICATION: Thomas Heston, Washish
DATE: 3/12/21 TIME: 1639
ACCEPTED BY / APPLICATION: [Signature]
DATE: 3/12/21 TIME: 1343

SAMPLER NAME AND SIGNATURE:
PRINT Name of SAMPLER: Thomas Heston, Washish
SIGNATURE OF SAMPLER: [Signature]
DATE SIGNED: 03/12/21

TEMPERATURE: _____
RECEIVED ON: _____
CUSTODY BEARED COOLER: _____
SAMPLES INTACT: _____

Page 54 of 75

Section A Required Client Information Company: GA Power Address: Atlanta, GA		Section B Required Project Information Project Name: SCS Contacts Project Number: GW6591B		Section C Institutional Information Agency Name: Southern Co. Address:	
Required Order No. Purchase Order No.		Company Name		REGULATORY AGENCY NPDDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>	
Project Name Plant Hammond AP-1 Semianual		Address		REGULATORY AGENCY NPDDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>	
Requested Date/Quantity: 10 Day		Project Number: GW6591B		REGULATORY AGENCY NPDDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>	
Requested Date/Quantity: 10 Day		Project Number: GW6591B		REGULATORY AGENCY NPDDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/>	

WELL #	Section D Required Client Information Well Name	Valid Matrix Codes MATRIX CODE	WT	G	DATE	TIME	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	Preservatives						Analyte Test				Residual Chlorine (Y/N)	pH =	
													H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Chloride	Fluoride	Sulfate			App. H ₂ & V Metals
1	HQWA-1		WT	G							5	2	3												
2	HQWA-2		WT	G							5	2	3												
3	HQWA-3		WT	G							5	2	3												
4	HQWA-43D		WT	G							5	2	3												
5	HQWA-44D		WT	G							5	2	3												
6	HQWA-7		WT	G							5	2	3												
7	HQWA-8		WT	G							5	2	3												
8	HQWA-9		WT	G							5	2	3												
9	HQWA-10		WT	G	3/21/11	1011				18	5	2	3												
10	HQWA-12		WT	G							5	2	3												
11	HQWA-13		WT	G							5	2	3												
12	HQWA-13		WT	G							5	2	3												

Section D
Requested Client Information
Well Name: HQWA-1, HQWA-2, HQWA-3, HQWA-43D, HQWA-44D, HQWA-7, HQWA-8, HQWA-9, HQWA-10, HQWA-12, HQWA-13

Matrix Code: (see valid codes to left)

Sample Type: (G=GRAB C=COMP)

DATE: 3/21/11

TIME: 1011

SAMPLE TEMP AT COLLECTION: 18

OF CONTAINERS: 5

Unpreserved: 2

Preservatives: H₂SO₄, HNO₃, HCl, NaOH, Na₂S₂O₃, Methanol, Other

Analyte Test: Chloride, Fluoride, Sulfate, App. H₂ & V Metals, SAO 228/228, TD5

Residual Chlorine (Y/N): N

pH = 6.76

REQUIREMENT BY AFFILIATION: 3/15/21

ACCEPTED BY AFFILIATION: 3/15/21

DATE: 3/15/21

TIME: 1145

ADDITIONAL COMMENTS: Please note dry well, aerial thorough, any wells not sampled, and note when the last sample for the year has been taken. App. H₂ & V Metals: SO, AS, BA, BE, B, CR, CA, CI, CO, PO, T, NO, SE, TI. One sample not submitted for HQWA-12/3/4/5/6/7/8/9/10/11/12 reported for AP-1/2/3 SCS.

REQUIREMENT BY AFFILIATION: 3/15/21

ACCEPTED BY AFFILIATION: 3/15/21

DATE: 3/15/21

TIME: 1145

DATE: 3/15/21

TIME: 1145

DATE: 3/15/21

TIME: 1145

DATE: 3/15/21

TIME: 1145

SAMPLER NAME AND SIGNATURE: [Signature]

PRINT Name of SAMPLER: Chad Russo

SIGNATURE of SAMPLER: [Signature]

DATE Signed (MM/DD/YYYY): 03/12/21

Temp in °C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Sample Intact (Y/N)

Section A Required Client Information Company: GA Power Address: Atlanta, GA		Section B Required Project Information Report To: SCS Contacts Copy To: Geosyntec Contacts		Section C Project Information Address: Southern Co. Company Name: _____ Reference: _____ Pace Order #: 10833-10	
Final To: SCS Contacts Home: Per Requested DOW DDM/TAT: 10 Day		Purchase Order No.: _____ Project Name: Plant Henriwood AP-1 Serranwald Project Number: GW65818		Pace Client: _____ Pace Project Manager: Kentt Herring Requested Analysis Filtered (Y/N): _____	
Regulatory Agency: <input type="checkbox"/> NDECS <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER: _____		Site Location: GA STATE: _____		Residual Chlorine (Y/N): _____ Pace Project No./ Lab ID: _____	

ITEM #	Section D Required Client Information	VALID Matrix Codes ORING WATER WATER WASTE WATER P SEWAGE DI WIFE AIR OTHER	E00E	MATRIX CODE (see valid codes on pg. 15)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Preservatives	Requested Analysis Filtered (Y/N)		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)	
														WIN	NON					
1	MW-5										5	2	3							
2	MW-5										5	2	3							
3	MW-7										5	2	3							
4	MW-19										5	2	3							
5	MW-20										5	2	3							
6	MW-24D										5	2	3							
7	MW-25D										5	2	3							
8	MW-26D										5	2	3							
9	MW-27D										5	2	3							
10	MW-28D										5	2	3							
11	MW-29										5	2	3							
12	DUP-1										5	2	3							

ADDITIONAL COMMENTS:

These notes dry wells, strike through very water and sampled, and
 note when they last sample for the event that been taken.
 App. # of W/Heads = 50, 75, 80, 82, B, C, D, Ca, Cr, Co, Pd, U,
 Mo, Ba, Ti

The sample get submitted for HGVWA-102340040 but they will
 be reported for AP-1023 SCS

RELEASED BY: **SCS** DATE: **3/15/21** TIME: **11:45**

ACCEPTED BY: **[Signature]** DATE: **3/15/21** TIME: **12:00**

REGULATORY AGENCY: NDECS GROUND WATER DRINKING WATER
 UST RCRA OTHER: _____

SAMPLER NAME AND SIGNATURE:

PRINT NAME OF SAMPLER: **James Kessler**
 SIGNATURE OF SAMPLER: **[Signature]**
 DATE SIGNED: **03/12/21**

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

F-FALL 0-030 Rev. 07.15-FEB-2007



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

Section A
 Requested Client Information
 Company: GA Power
 Address: Atlanta, GA
 Report To: SCS Contacts
 Copy To: Geosynthetic Contacts
 Project Name: Plant Hammond AP-1 Semiannual
 Project Number: GW65818

Section B
 Requested Project Information
 Report To: SCS Contacts
 Copy To: Geosynthetic Contacts
 Project Name: Plant Hammond AP-1 Semiannual
 Project Number: GW65818

Section C
 Project Information
 Address: Atlanta, GA
 Company Name: Southern Co.
 Project Name: Plant Hammond AP-1 Semiannual
 Project Number: GW65818
 Requested Analysis: 10839-10
 State: GA

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

ITEM #	Valid Matrix Codes MATRIX CODE	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES	Requested Analysis Filtered (Y/N)				Residual Chlorine (Y/N)						
									Chloride, Fluoride, Sulfate	App. Ni & V Metals*	RAD 226/228	TDS							
1	HGWVA-1	WT	G				5	2	3										
2	HGWVA-2	WT	G				5	2	3										
3	HGWVA-3	WT	G				5	2	3										
4	HGWVA-3B	WT	G				5	2	3										
5	HGWVA-7 LEAKWATER filtered	WT	G	3/15/21	1625	18	5	2	3	X	X	X	X						
6	HGWVA-7	WT	G	3/15/21	1640	18	5	2	3	X	X	X	X						
7	HGWVA-8	WT	G	3/15/21	1600	18	5	2	3	X	X	X	X						
8	HGWVA-9	WT	G				5	2	3										
9	HGWVA-10	WT	G				5	2	3										
10	HGWVA-11	WT	G				5	2	3										
11	HGWVA-12	WT	G				5	2	3										
12	HGWVA-13	WT	G				5	2	3										

ADDITIONAL COMMENTS
 RELinquISHED BY / AFFILIATION: Thomas Kessler
 DATE: 3/10/21
 TIME: 1540
 ACCEPTED BY / AFFILIATION: Jon Williams
 DATE: 3/10/21
 TIME: 1532

SAMPLER NAME AND SIGNATURE: Thomas Kessler
 PRINT NAME OF SAMPLER: Thomas Kessler
 SIGNATURE OF SAMPLER: [Signature]
 DATE SIGNED: 3/15/21
 TIME: 1540

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

Section A Required Client Information
Company: GA Power
Address: Atlanta, GA
Request Date: 10/24/11
Requested Date: 10/24/11

Section B Requested Project Information
Report To: SCS Contacts
Copy To: Geosyntec Contacts
Project Name: Plant Hammond AP-1 Semi-Annual
Project Number: GW5581B

Section C Service Information
Attention: Southern Co.
Company Name: Southern Co.
Address: [Redacted]
Site Location: GA
Requested Analysis Filtered (Y/N):
Residual Chlorine (Y/N):

REGULATORY AGENCY:
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

ITEM #	Section D Requested Client Information	Valid Matrix Codes DLE WATER WASTEWATER PRECIPITATION SPRINKLING SLURRY WASTE OTHER	MATERIALS	LAB USE WWT WW SI SI SI SI SI SI SI	MATRIX CODE (see valid codes in 11a)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES	ANALYSIS TEST	REGULATORY AGENCY		Residual Chlorine (Y/N)	PH		
							DATE	TIME					DATE	TIME			UNPRESERVED	H ₂ SO ₄
1	MM-5					WT G				5								
2	MM-6					WT G				5								
3	MM-7					WT D	3/10/11	12:00		5								
4	MM-10					WT G				5								
5	MM-20					WT G	3/10/11	14:22		5								
6	MM-24D					WT G				5								
7	MM-25D					WT G				5								
8	MM-26D					WT G				3								
9	MM-27D					WT G				5								
10	MM-28D					WT G	3/18/11	18:25		5								
11	MM-29					WT G	3/18/11	12:52		5								
12	MM-1					WT G				4								

ADDITIONAL COMMENTS: [Redacted]

RELINQUISHED BY / AFFILIATION: *Thomas W. ...*

ACCEPTED BY / AFFILIATION: *William ...*

DATE: 3/10/11

TIME: 15:32

PH: 7.03

SAMPLER NAME AND SIGNATURE: *Thomas W. ...*

PRINT NAME OF SUBJECT: *Thomas W. ...*

SIGNATURE OF SAMPLER: *[Signature]*

DATE SHIPPED: 3/15/11

DATE RECEIVED: 3/15/11

Temp °C: 23.3

Received on Ice (Y/N): Y

Custody Sealed Cooler (Y/N): Y

Samples Intact (Y/N): Y

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

Section A Required Client Information		Section B Required Project Information		Section C Inchase Information	
Company	GA Power	Report To	SCS Contacts	Attention:	Southern Co.
Address	Atlanta, GA	Copy To	Geosyntec Contacts	Company Name	
Order To	SCS Contacts	Purchase Order No.		Address	
Phone	For	Project Name	Plant Hammond AP-1 Semiannual	Site Location	GA
Requested Date/Deliverable	NO Day	Project Number	GW6881B	State	GA
				Requested Analyte Filtered (Y/N)	
				Requested Analyte Filtered (Y/N)	

ITEM #	Section D Required Client Information	VALID Matrix Codes WATER WASTE WATER PRECIPIT SOIL WASTE AIR SOLID TRASH	CODE	MATRIX CODE (SEE VALID CODES TO TAB)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Y/N	REGULATORY AGENCY	NPDDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RORA <input type="checkbox"/> OTHER <input type="checkbox"/>	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.	
						DATE	TIME														DATE
1	HGWA-1				WT G								5	2	3						
2	HGWA-2				WT G								5	2	3						
3	HGWA-3				WT G								5	2	3						
4	HGWA-43D				WT G								5	2	3						
5	HGWA-44D				WT G								5	2	3						
6	HGWA-4				WT G								5	2	3						
7	HGWA-8				WT G								5	2	3						
8	HGWA-9				WT G								5	2	3						
9	HGWA-10				WT G								5	2	3						
10	HGWA-11				WT G								5	2	3						
11	HGWA-12				WT G								5	2	3						
12	HGWA-13				WT G								5	2	3						

ADDITIONAL COMMENTS:
Please note dry wells still through any wells not sampled and close within the last semester for new wells has been taken.
*App. III & IV Metals - Sr, As, Ba, Be, B, Cd, Ca, Cr, Co, Pb, Li, Mo, Se, H.
One sample set submitted for HGWA-12/13/14/15/16/17 but they will be reported for AP-12/13 SDCs.

RELINQUISHED BY / AFFILIATION: Thomas Keister / Pace
Ryan Williams / Pace

ACCEPTED BY / AFFILIATION: Ryan Williams / Pace

DATE: 3/17/21

TIME: 1510

DATE: 3/17/21

TIME: 1510

Temp in °C: 5.9

Received on Ice (Y/N): Y

Custody Sealed Cooler (Y/N): N

Sample Intact (Y/N): Y

PH = 8.95
PH = 7.15
PH = 7.10



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information		Section B Required Project Information		Section C Process Information	
Company: GA Power	Address: Allenton, GA	Report to: SCS Contacts	Copy to: Geosyntec Contacts	Attention: Southern Co.	Address:
Enter To: SCS Contacts	Phone: _____ Fax: _____	Purchase Order No.:	Project Name: Plant Hammond AP-1 Semiannual	Site Name: _____	Site Address: _____
Requested Due Date/TIME: 11:00 AM	Project Number: GW056818	Project Name: Plant Hammond AP-1 Semiannual	Site Name: Plant Hammond	Site Name: Plant Hammond	Site Address: 10829-10
Requested Analytic Filtered (Y/N)		Requested Analytic Filtered (Y/N)		Requested Analytic Filtered (Y/N)	
_____		_____		_____	

ITEM #	Section B Required Client Information	Matrix Code (See valid codes to left)	Sample Type (G=GRAM C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES							Analysis Test				Residual Chlorine (Y/N)	pH = 5.78 6.96				
										Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol	Other	Chloride, Fluoride, Sulfate	App. III & IV Metals*	RAO 226/228			TDS			
1	MMW-5	WT G	WT G	3/16/21	1232	3/17/21	1232	17	5	2	2	3														
2	MMW-6	WT G	WT G	3/16/21	1540	3/17/21	1540	18	5	2	3															
3	MMW-7	WT G	WT G	3/16/21	1540	3/17/21	1540	18	5	2	3															
4	MMW-19	WT G	WT G	3/16/21	1540	3/17/21	1540	18	5	2	3															
5	MMW-20	WT G	WT G	3/16/21	1540	3/17/21	1540	18	5	2	3															
6	MMW-24D	WT G	WT G	3/16/21	1232	3/17/21	1232	17	5	2	3															
7	MMW-25D	WT G	WT G	3/16/21	1232	3/17/21	1232	17	5	2	3															
8	MMW-26D	WT G	WT G	3/16/21	1232	3/17/21	1232	17	5	2	3															
9	MMW-27D	WT G	WT G	3/16/21	1232	3/17/21	1232	17	5	2	3															
10	MMW-28D	WT G	WT G	3/16/21	1232	3/17/21	1232	17	5	2	3															
11	MMW-29	WT G	WT G	3/16/21	1232	3/17/21	1232	17	5	2	3															
12	Dup-1	WT G	WT G	3/16/21	1232	3/17/21	1232	17	5	2	3															

ADDITIONAL COMMENTS:

Physical room dry weeks, sample through any water not sampled, and note when the last sample for the device has been taken.

APP. III & IV METALS * SH. AS. BA. BV. B. CD. EA. ET. CO. PA. PL. U.

40. Se. Th.

One stem (on set submitted for HGMVA-TR24WD5040) but they will be reported by AP-1723 SDCs.

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Thomas Kessler / Pace	3/17/21	1510	Dyan Williams / Pace	3/17/21	1510	
Dyan Williams / Pace	3/17/21	1510	Dyan Williams / Pace	3/17/21	1510	

SAMPLER NAME AND SIGNATURE		DATE SIGNED	
PRINT NAME OF SAMPLER: Vishish Kulkarni, Chad Rouse	SIGNATURE OF SAMPLER: [Signature]	DATE SIGNED: 3/17/21	TIME: 1510

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

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

Section A
Requested Client Information

Company: GA Power
Address: Atlanta, GA
Email To: SCS Contacts
Phone: For:
Requested Date/Time: 1/20/17

Section B
Requested Project Information

Report To: SCS Contacts
Copy To: Geospatial Contacts
Purchase Order No.
Project Name: Plant Hammond AP-1 Semiannual
Project Number: GW65818

Section C
Two-Can Information

Attention: Southern Co.
Company Name:
Address:
Site Code:
Reference:
Project Name:
Manager:
Feed Profile # 10859-10

Section D
Regulatory Agency

REGULATORY AGENCY:
 NPDES GROUND WATER DRINKING WATER
 UST RORA OTHER:
Site Location STATE: GA

Section D
Requested Client Information

Void Matrix Codes:
MATRIX CODE:
SAMPLER CODE:
DATE/TIME:
PRODUCT:
SOLUTION:
APP:
OTHER:
LAB:
ANALYST:
SAMPLE ID: (AP-2, 0, 9, 1, 1)
SAMPLE ID MUST BE UNIQUE

WT	WT	WT	WT	WT	WT	WT	WT	WT	WT	WT
1	2	3	4	5	6	7	8	9	10	11
EB-1										
	FB-1									

MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analyte Test
		3/17/17	1645			5	3	Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Chloride Fluoride Sulfate App. III & IV Metals RAD 226/228 TDS
		3/17/17	1625			5	3		

Section E
Requested Analyte Filtered (Y/N)

Residual Chlorine (Y/N)

Proc Project No./ Lab ID:

Temp in °C: 5.9

Received on Ice (Y/N): Y

Custody Sealed Cooler (Y/N): N

Samples Intact (Y/N): Y

Please note dry weight. After thorough dry weight not sampled and note when the last sample for the event has been taken.
App. III & IV Metals - SO, As, Cr, Co, B, Cd, Cu, Cr, Co, Pb, Li, Mo, Se, Ti
One sample set submitted for MGVNA-1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16/17/18/19/20 but they will be reported by AP-1/2/3 SCS

Requester Name and Signature: *Ronny Hessler*
Date: 3/17/17
Time: 1510
Accepted by/Affiliation: *Ryan Williams Price*
Date: 3/17/17
Time: 1510

Sampler Name and Signature: *Ronny Hessler*
Date Signed: 3/16/17
Signature of Sampler: *RH*
Date/Time: 3/16/17

Section A Requested Client Information Company: <u>GA Power</u> Address: <u>Auburton, GA</u>				Section B Requested Project Information Report to: <u>SCS Contacts</u> Copy to: <u>Geosyntec Contacts</u>				Section C Project Information Attention: <u>Southern Co.</u> Company Name: _____ Address: _____ Project Name: <u>Plant Hammond AP-1 Semiannual</u> Purchase Order No.: _____ Project Number: <u>GW6381B</u>				Section D Requested Analysis Filtered (Y/N) <input type="checkbox"/> NROES <input type="checkbox"/> GROUNDWATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER <small>OSM</small> Site Location: <u>GA</u> STATE: _____												
Section E Requested Data Quantities 18 Day				Section F Requested Analysis Filtered (Y/N) Chloride Fluoride Sulfate App. III & IV Metals HAD 226/228 OS				Section G Residual Chlorine (Y/N)				Section H Price Project M/Lab LD.												
Section D Requested Client Information SAMPLE ID (4-Z, 03 / J) Sample IDs MUST BE UNIQUE												Section E Valid Matrix Codes MATRIS CODE Change water, WATER WASTE WATER, WASTE WATER PRODUCT, PRODUCT AIR, AIR OTHER, OTHER						Section F Valid Matrix Codes MATRIS CODE Change water, WATER WASTE WATER, WASTE WATER PRODUCT, PRODUCT AIR, AIR OTHER, OTHER						
ITEM #	MATRIX CODE	SAMPLE TYPE (G-GRAB C-COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₈	Methanol	Other	Analysis Test	Chloride Fluoride Sulfate	App. III & IV Metals	HAD 226/228	OS	Residual Chlorine (Y/N)	pH =	
1	HGWA-1	WT G						5	2	3														
2	HGWA-2	WT G						5	2	3														
3	HGWA-3	WT G						5	2	3														
4	HGWA-43D	WT G						5	2	3														
5	HGWA-44D	WT G						5	2	3														
6	HGWA-47	WT G						5	2	3														
7	HGWA-8	WT G						5	2	3														
8	HGWA-9	WT G						5	2	3														
9	HGWA-10	WT G						5	2	3														
10	HGWA-11	WT G						5	2	3														
11	HGWA-12	WT G						5	2	3														
12	HGWA-13	WT G						5	2	3														

ADDITIONAL COMMENTS: _____

RELINQUISHED BY / AFFILIATION: _____

DATE: 3/18 TIME: 1217

ACCEPTED BY / AFFILIATION: _____

DATE: 3/19 TIME: 1317

DATE SIGNED (MANDATORY): 3/16/12

DATE SIGNED (MANDATORY): 3/16/12

SAMPLER NAME AND SIGNATURE: _____

PRINT Name of SAMPLER: Joshua Keenan

SIGNATURE of SAMPLER: *[Signature]*

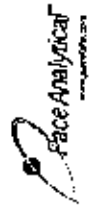
Important Note: By signing this form, you are accepting Paces' AET 20 day payment terms and agreeing to rate charged at 1.5% per month for any amounts not paid within 20 days.

F-ALL-Q-020TW 07 15-Feb-2007

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
 Analyst: CLA
 Date: 3/28/2021
 Worksheet: 59450
 Matrix: LW



Method Blank Assessment

MB Sample ID	212469
MB Concentration:	0.013
MB Counting Uncertainty:	0.313
MB MDC:	0.309
MB Numerical Performance Indicator:	0.23
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment

LCSD Y or N?	Y
LCSD59450	LCSD59450
3/28/2021	3/28/2021
Count Date:	19.033
Spike I.D.:	24.039
Decay Corrected Spike Concentration (pCi/mL):	0.10
Volume Used (mL):	0.504
Aliquot Volume (L, p, F):	4.773
Target Conc. (pCi/L, p, F):	0.057
Uncertainty (Calculated):	5.482
Result (pCi/L, p, F):	0.737
LCSD Counting Uncertainty (pCi/L, p, F):	1.38
Numerical Performance Indicator:	93.15%
Percent Recovery:	N/A
Status vs Numerical Indicator:	Pass
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment

Sample I.D.:	LCSD59450
Duplicate Sample I.D.:	4.437
Sample Result Counting Uncertainty (pCi/L, p, F):	0.594
Sample Duplicate Result Counting Uncertainty (pCi/L, p, F):	5.482
Sample Duplicate Result Counting Uncertainty (pCi/L, p, F):	0.737
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator	-2.156
(Based on the LCSD Percent Recoveries) Duplicate RPD:	20.88%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Sample Matrix Spike Control Assessment

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

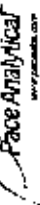
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, p, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, p, F):	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, p, 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:

Am 3/29/21

Quality Control Sample Performance Assessment



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

Test: **RA-228**
 Analyst: **CLA**
 Date: **3/26/2021**
 Worksheet: **59450**
 Matrix: **DW**

Method Blank Assessment	MB Sample ID: 2123469
	MB Concentration: 0.013
	MB Counting Uncertainty: 0.113
	MB MDC: 0.309
	MB Numerical Performance Indicator: 0.23
	MB Status vs Numerical Indicator: N/A
	MB Status vs MDC: Pass

LCSD TV or N/A?	N
Count Date: 3/25/2021	LCSD:59450
Spike I.D.: 19-003	
Decay Corrected Spike Concentration (pCi/mL): 24.039	
Volume Used (mL): 0.10	
Aliquot Volume (L, g, F): 0.505	
Target Conc. (pCi/L, g, F): 4.763	
Uncertainty (Calculated): 0.057	
Result (pCi/L, g, F): 4.437	
LCSD Counting Uncertainty (pCi/L, g, F): 0.564	
Numerical Performance Indicator: -1.07	
Percent Recovery: 93.15%	
Status vs Numerical Indicator: Pass	
Status vs Recovery: Pass	
Upper % Recovery Limits: 125%	
Lower % Recovery Limits: 75%	

Duplicate Sample Assessment	Sample I.D.: 92527259001
	Duplicate Sample I.D.: 92527259001DUP
	Sample Result (pCi/L, g, F): -0.074
	Sample Duplicate Result (pCi/L, g, F): 0.070
	Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.120
	Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.146
	Are sample and/or duplicate results below RL? See Below #
	Duplicate Numerical Performance Indicator: -2.957
	Duplicate RPD: 652.72%
	Duplicate Status vs Numerical Indicator: N/A
	Duplicate Status vs RPD: Pass
	% RPD Limit: 25%

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

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

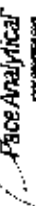
Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Batch must be re-prepared due to unacceptable precision.

Handwritten: CHANGING

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Figures Highlighted in Yellow

Test: Ra-228
Analyst: LAL
Date: 4/5/2021
Worksheet: 59559
Matrix: DW

Method Blank Assessment

MB Sample ID	2128860
MB Concentration	0.054
MB Counting Uncertainty	0.165
MB MDC	0.401
MB Numerical Performance Indicator	0.54
MB Status vs Numerical Indicator	N/A
MB Status vs MDC	PASS

Laboratory Control Sample Assessment

LCSD (Y or NJ)?	N
LCSD59559	
Count Date:	4/5/2021
Spike I.D.:	19-0331
Decay Corrected Spike Concentration (pCi/mL):	24.039
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.517
Target Conc. (pCi/L, g, F):	4.653
Uncertainty (Calculated):	0.056
Result (pCi/L, g, F):	5.219
LCSD Counting Uncertainty (pCi/L, g, F):	0.630
Numerical Performance Indicator:	1.75
Percent Recovery:	112.16%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limit:	125%
Lower % Recovery Limit:	75%

Duplicate Sample Assessment

Sample I.D.:	92527263017
Duplicate Sample I.D.:	92527263017DUP
Sample Result (pCi/L, g, F):	0.425
Sample Result Counting Uncertainty (pCi/L, g, F):	0.274
Sample Duplicate Result (pCi/L, g, F):	0.294
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.289
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	0.645
Duplicate RPD:	36.56%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**
% RPD Limit:	25%

Enter Duplicate sample IDs if other than LCSD in the spike below:
92527263017
92527263017DUP

Sample Matrix Spike Control Assessment

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

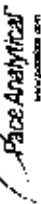
** Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

**Sample result below RL processed due to unacceptable precision. N/A
4/5/21

4/5/21

Quality Control Sample Performance Assessment



Analyst Most Manually Edited All Fields Highlighted in Yellow

Test: Ra-226
 Analyst: LAL
 Date: 4/5/2021
 Worksheet: 59559
 Matrix: UWr

Method Blank Assessment

MB Sample ID	2126660
MB Concentration:	0.054
MB Counting Uncertainty:	0.165
MB MDC:	0.401
MB Numerical Performance Indicator:	0.94
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

LCSD ID or NJ?	Y
LCSD59559	4/5/2021
LCSD59559	19-033
LCSD59559	24-039
LCSD59559	0.10
LCSD59559	0.511
LCSD59559	4.853
LCSD59559	0.056
LCSD59559	4.719
LCSD59559	0.614
LCSD59559	0.04
LCSD59559	100.28%
LCSD59559	N/A
LCSD59559	Pass
LCSD59559	125%
LCSD59559	75%

Duplicate Sample Assessment

Sample ID:	LCSD59559
Duplicate Sample ID:	LCSD59559
Sample Result (pCi/L, g, F):	5.219
Sample Result Counting Uncertainty (pCi/L, g, F):	0.630
Sample Duplicate Result (pCi/L, g, F):	4.719
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.614
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	1.112
(Based on the LC5/LCSD Percent Recoveries) Duplicate RPD:	11.18%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Sample Matrix Spike Control Assessment

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

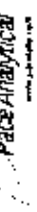
Sample ID:	
Sample MS ID:	
Sample MSD ID:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent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

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

Comments:

UNW-4-21-21

Quality Control Sample Performance Assessment



Analysis Must Manually Enter All Fields Highlighted in Yellow

Test: Ra-226
Analyst: LAL
Date: 4/5/2021
Worklist: 59580
Matrix: DW

Method Blank Assessment	
MB Sample ID	212668
MB Concentration	0.090
MB Counting Uncertainty	0.196
MB MDC	0.458
MB Numerical Performance Indicator	0.90
MB Status vs. Numerical Indicator	N/A
MB Status vs. MDC	Pass

Laboratory Control Sample Assessment	
LCSD (Y or N)?	N
LCSD 59580	LCSD 59580
Count Date	4/5/2021
Spike ID	19-033
Decay Corrected Spike Concentration (pCi/mL)	24.038
Volume Used (mL)	0.30
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
LCSD/CSO Counting Uncertainty (pCi/L, g, F)	0.277
Numerical Performance Indicator	2.04
Status vs. Numerical Indicator	N/A
Status vs. Recovery	Pass
Upper % Recovery Limit	125%
Lower % Recovery Limit	75%

Duplicate Sample Assessment	
Sample ID	92527258011
Duplicate Sample ID	92527258011DUP
Sample Result (pCi/L, g, F)	-0.015
Sample Duplicate Result (pCi/L, g, F)	0.075
Sample Duplicate Counting Uncertainty (pCi/L, g, F)	0.050
Avg sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator	-1.328
Duplicate RPD	375.86%
Duplicate Status vs. Numerical Indicator	N/A
Duplicate Status vs. RPD	Fail**
% RPD Limit	25%

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

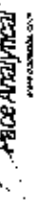
Comments:

Batch Control: <https://progress.duke.edu/submit/submit> N/A LAM y | 4/6/21

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

LAM y | 4/6/21

Quality Control Sample Performance Assessment



Test: Ra-228
 Analyst: LAL
 Date: 4/5/2021
 Worksheet: 59560
 Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	2126661
MB Concentration	0.090
MB Counting Uncertainty	0.186
MB MDC	0.458
MB Numerical Performance Indicator	0.90
MB Status vs. Numerical Indicator	N/A
MB Status vs. MDC	Pass

Laboratory Control Sample Assessment

LCSD ID or N/P	Y
LCSD59560	4/5/2021
Count Date	4/5/2021
Sample ID	19-033
Decay Corrected Spike Concentration (pCi/L)	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
LCSD Counting Uncertainty (pCi/L, g, F)	0.277
Numerical Performance Indicator	2.04
Percent Recovery	106.17%
Status vs. Numerical Indicator	N/A
Status vs. Recovery	Pass
Upper % Recovery Limits	125%
Lower % Recovery Limits	75%

Duplicate Sample Assessment

Sample ID:	LCSD59560
Duplicate Sample ID:	LCSD55960
Sample Result (pCi/L, g, F):	5.065
Sample Result Counting Uncertainty (pCi/L, g, F):	0.277
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	4.810
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.261
Are sample and/or duplicate results below RL?	N/A
Duplicate Numerical Performance Indicator	1.314
(Based on the LCSD Percent Recoveries) Duplicate RPD	2.40%
Duplicate Status vs Numerical Indicator	N/A
Duplicate Status vs RPD	Pass
% RPD Limit	25%

Enter Duplicate sample IDs if other than LCSD in the space below:
 9257258011
 9257258011DUP

Sample Matrix Spike Control Assessment

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

Final

com 4/16/21

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-226
 Analyst: LAL
 Date: 4/15/2021
 Worksheet: 59924
 Matrix: DW

Method Blank Assessment	MB Sample ID: 2139349 MB Concentration: -0.038 MB Counting Uncertainty: 0.115 MB MDC: 0.371 I/B Numerical Performance Indicator: -0.30 MB Status vs Numerical Indicator: N/A MB Status vs MDC: Pass
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LCSID: Y or N?	N
LCSID: 4/16/2021	LCSID: 59924
Count Date:	4/16/2021
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.038
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.503
Target Conc. (pCi/L, g, F):	4.781
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.829
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.848
Numerical Performance Indicator:	-0.33
Percent Recovery:	97.03%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limit:	125%
Lower % Recovery Limit:	75%

Duplicate Sample Assessment	Sample I.D.: 92527270024 Duplicate Sample I.D.: 92527270024DUP Sample Result (pCi/L, g, F): 0.490 Sample Duplicate Result (pCi/L, g, F): 0.287 Sample Duplicate Counting Uncertainty (pCi/L, g, F): 0.327 Sample Duplicate Result Counting Uncertainty (pCi/L, g, F): 0.341 Are sample and/or duplicate results below RL? See below Duplicate Numerical Performance Indicator: 0.761 Duplicate RPD: 41.85% Duplicate Status vs Numerical Indicator: N/A Duplicate Status vs RPD: Fail % RPD Limit: 25%	Enter Duplicate sample IDs if other than LCS/LCSD in the space below: 92527270024 92527270024DUP
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*** Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

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

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

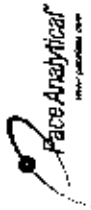
Matrix Spike/Matrix Spike Duplicate Sample Assessment Sample I.D.: Sample MS I.D.: Sample MSD I.D.: Sample Matrix Spike Result: Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): Duplicate Numerical Performance Indicator: Duplicate Numerical Performance Indicator: MS/MSD Duplicates Status vs Numerical Indicator: MS/MSD Duplicates Status vs RPD: % RPD Limit:		
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Handwritten notes:
 10/10/17
 OMA
 LAM 4/16/21

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 4/5/2021
Worksheet: 59651
Matrix: WT



Method Blank Assessment

MB Sample ID: 21Z6643
 MB Concentration: 0.738
 MB 2 Sigma CSU: 0.921
 MB MDC: 0.495
 MB Numerical Performance Indicator: 4.51
 MB Status vs Numerical Indicator: Pass
 MB Status vs MDC: See Comment*

LCSD ID or NP?	Y
LCSD59551	4/8/2021
LCSD59551	21-003
Count Data:	38.142
Spike ID:	0.10
Detected Spike Concentration (pCi/mL):	0.904
Volume Used (mL):	4.743
Aliquot Volume (L, g, F):	0.232
Target Conc (pCi/L, g, F):	5.331
Uncertainty (Calculated):	1.168
Result (pCi/L, g, F):	0.97
LCSD/CSU 2 Sigma CSU (pCi/L, g, F):	112.40%
Numerical Performance Indicator:	N/A
Percent Recovery:	Pass
Status vs Numerical Indicator:	135%
Status vs Recovery:	60%
Upper % Recovery Limits:	
Lower % Recovery Limits:	

Duplicate Sample Assessment

Sample ID:	Duplicate Sample ID:
LCSD59651	LCSD59651
Sample Result (pCi/L, g, F):	5.331
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.168
Sample Duplicate Result (pCi/L, g, F):	5.382
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.184
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.050
(Based on the LCSD/CSU Percent Recoveries) Duplicate RPD:	1.92%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable.

Sample Matrix Spike Control Assessment

Sample Collection Date:
 Sample ID:
 Sample MS ID:
 Sample MSD ID:
 Spike ID:

MS/MSD Dyeing Corrected Spike Concentration (pCi/mL):
 Spike Volume Used in MS (mL):
 MS Aliquot (L, g, F):
 MS Target Conc. (pCi/L, g, F):
 MSD Aliquot (L, g, F):
 MSD Target Conc. (pCi/L, g, F):
 MS Spike Uncertainty (calculated):
 MSD Spike Uncertainty (calculated):

Sample Result 2 Sigma CSU (pCi/L, g, F):
 Sample Matrix Spike Result:
 Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):
 Sample Matrix Spike Duplicate Result:
 Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):
 MS Numerical Performance Indicator:
 MSD Numerical Performance Indicator:
 MS Percent Recovery:
 MSD Percent Recovery:
 MS Status vs Numerical Indicator:
 MSD Status vs Numerical Indicator:
 MS Status vs Recovery:
 MSD Status vs Recovery:
 MS/MSD Upper % Recovery Limits:
 MS/MSD Lower % Recovery Limits:

Matrix Spike/Matrix Spike Duplicate Sample Assessment

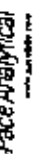
Sample ID:
 Sample MS ID:
 Sample MSD ID:

Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):
 Sample Matrix Spike Duplicate Result:
 Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):
 Duplicate Numerical Performance Indicator:
 (Based on the Percent Recoveries) MS/MSD Duplicate RPD:
 MS/MSD Duplicate Status vs Numerical Indicator:
 MS/MSD Duplicate Status vs RPD:
 % RPD Limit:

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Handwritten signature/initials

Quality Control Sample Performance Assessment



Analyst must manually enter all fields highlighted in yellow.

Test: Rn-228
Analyst: VAL
Date: 4/8/2021
Worksheet: 59552
Matrix: WT

Method Blank Assessment

MB Sample ID	2126846
MB concentration:	0.826
MB 2 Sigma CSU:	0.447
MB MDC:	0.791
MB Numerical Performance Indicator	3.62
MB Status vs Numerical Indicator	Fail
MB Status vs MDC:	See Comment

Laboratory Control Sample Assessment

Count Date	LCSID# or N17	Y
4/8/2021	LCS059552	4/8/2021
21-003	21-003	38.140
0.10	0.10	0.10
0.815	0.803	0.815
4.682	4.762	4.682
0.233	0.233	0.229
4.576	4.576	4.583
1.068	1.068	1.068
-0.31	-0.31	-0.18
96.36%	96.36%	97.88%
N/A	N/A	N/A
Pass	Pass	Pass
135%	135%	135%
80%	80%	80%

Duplicate Sample Assessment

Sample ID:	Duplicate Sample ID:
LCS059552	LCS059552
4.576	4.576
1.068	1.068
4.583	4.583
1.068	1.068
NO	NO
-0.008	-0.008
1.62%	1.62%
Pass	Pass
Pass	Pass
35%	35%

Sample Matrix Spike Control Assessment

Sample Collection Date:	MS/MSD 1	MS/MSD 2
Sample ID:		
Sample MS ID:		
Sample MSD ID:		
Spike ID:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
MS Aliquot (L, g, F):		
MS Target Conc (pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc (pCi/L, g, F):		
MSD Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MS Numerical Performance Indicator:		
MS Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limit:		
MS/MSD Lower % Recovery Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment

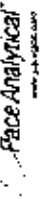
Sample ID:	Sample MS ID:	Sample MSD ID:
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:		
MS/MSD Duplicate Status vs Numerical Indicator:		
MS/MSD Duplicate Status vs RPD:		
% RPD Limit:		

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

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable

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Quality Control Sample Performance Assessment



Test: Ra-226
 Analyst: LAL
 Date: 4/15/2021
 Worksheet: S9924
 Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment

MB Sample ID	2139349
MB Concentration	-0.016
MB Counting Uncertainty	0.115
MB NDC	0.371
MB Numerical Performance Indicator	-0.30
MB Status vs Numerical Indicator	N/A
MB Status vs NDC	Pass

Laboratory Control Sample Assessment

LCSD ID or N1?	Y
LCSD59924	
Count Date	4/16/2021
Spike I.D.	19-033
Decay Corrected Spike Concentration (pCi/mL)	24.038
Volume Used (mL)	0.10
Aliquot Volume (L, g, F)	0.513
Target Conc (pCi/L, g, F)	4.687
Uncertainty (Calculated)	0.056
Result (pCi/L, g, F)	4.453
LCSD Counting Uncertainty (pCi/L, g, F)	0.846
Numerical Performance Indicator	-0.33
Percent Recovery	97.03%
Status vs Numerical Indicator	N/A
Status vs Recovery	Pass
Upper % Recovery Limits	125%
Lower % Recovery Limits	75%

Duplicate Sample Assessment

Sample I.D.	LCSD59924
Duplicate Sample ID	LCSD59924
Sample Result (pCi/L, g, F)	4.639
Sample Result Counting Uncertainty (pCi/L, g, F)	0.846
Sample Duplicate Result (pCi/L, g, F)	4.463
Sample Duplicate Counting Uncertainty (pCi/L, g, F)	0.822
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator	0.309
(Based on the LCSD Percent Recoveries) Duplicate RPD	2.12%
Duplicate Status vs Numerical Indicator	N/A
Duplicate Status vs RPD	Pass
% RPD Limit	25%

Sample Matrix Spike Control Assessment

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

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

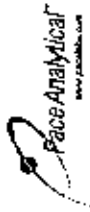
Comments:

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 4/15/2021
 2139349

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: R0-228
Analyst: VAL
Date: 4/16/2021
Worksheet: S9913
Matrix: W1



Method Blank Assessment	
MB Sample ID	2138547
MB Concentration:	0.751
MB 2 Sigma CSU:	0.461
MB MDC:	0.850
MB Numerical Performance Indicator:	3.39
MB Status vs Numerical Indicator:	Fail
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment	LCS(DY or N)?	
	LCS-S9913	Y
Count Date:	4/20/2021	LCS059913
Spike I.D.:	21-003	4/20/2021
Decay Corrected Spike Concentration (pCi/mL):	38.002	21.003
Volume Used (mL):	0.10	38.002
Aliquot Volume (L, g, F):	0.809	0.10
Target Conc. (pCi/L, g, F):	4.641	4.696
Uncertainty (calculated):	0.227	0.230
Result (pCi/L, g, F):	5.523	5.739
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.421	1.456
Numerical Performance Indicator:	1.20	1.39
Percent Recovery:	119.00%	122.21%
Status vs Numerical Indicator:	N/A	N/A
Upper % Recovery Limit:	Pass	Pass
Lower % Recovery Limit:	135%	135%
	60%	60%

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	LCS-S9913
Duplicate Sample I.D.:	LCS-S059913
Sample Result (pCi/L, g, F):	5.523
Sample Duplicate Result (pCi/L, g, F):	1.421
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	5.739
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.456
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.204
Duplicate Status vs Numerical Indicator:	2.66%
Duplicate Status vs RPD:	Pass
% RPD Limit:	38%

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

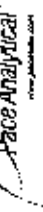
Comments:
If the lowest activity is from a tube which is greater than ten times the blank value, the blank is acceptable; otherwise this batch must be re-prepped.

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample MS I.D.:
Sample MSD I.D.:	Sample Matrix Spike Result:
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Duplicate Numerical Performance Indicator:
Duplicate Numerical Performance Indicator:	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:
% RPD Limit:	

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Quality Control Sample Performance Assessment



Test: Ra-228
 Analyst: VAL
 Date: 4/5/2021
 Worksheet: 59502
 Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MS Sample ID	2125128
MB Concentration	0.835
MB 2 Sigma CSU	0.523
MB MDC	0.984
MB Numerical Performance Indicator	3.42
MB Status vs Numerical Indicator	Fail
MB Status vs. MDC	Pass

Laboratory Control Sample Assessment	LCS/DY or NI?	
	Y	N
Count Date:	4/8/2021	LCS059502
Spike I.D.:	21-003	48/2021
Decay Corrected Spike Concentration (pCi/mL):	38.142	21-003
Volume Used (mL):	0.10	38.142
Aliquot Volume (L, R, F):	0.808	0.10
Target Conc. (pCi/L, G, F):	4.723	0.810
Uncertainty (Calculated):	0.231	4.767
Result (pCi/L, G, F):	5.059	0.231
LCS/LCSD 2 Sigma CSU (pCi/L, G, F):	1.327	1.202
Numerical Performance Indicator	1.47	0.56
Percent Recovery	121.45%	107.45%
Status vs Numerical Indicator	N/A	N/A
Status vs Recovery	Pass	Pass
Upper % Recovery Limit	150%	135%
Lower % Recovery Limit	60%	60%

Duplicate Sample Assessment	Enter Duplicate sample I.D.s if other than LCS/LCSD in the space below
Sample I.D.:	LCS059502
Duplicate Sample ID	LCS059502
Sample Result (pCi/L, G, F):	5.726
Sample Result 2 Sigma CSU (pCi/L, G, F):	1.327
Sample Duplicate Result (pCi/L, G, F):	5.059
Sample Duplicate Result 2 Sigma CSU (pCi/L, G, F):	1.202
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator	0.744
Duplicate Percent Recovery	12.20%
Duplicate Status vs Numerical Indicator	Pass
Duplicate Status vs RPD	Pass
% RPD Limit	36%

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Matrix Spike Result 2 Sigma CSU (pCi/L, G, F):
Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, G, F):
Duplicate Numerical Performance Indicator:
Duplicate Percent Recovery:
Duplicate Status vs Numerical Indicator:
Duplicate Status vs RPD:
% RPD Limit:

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

Comments:

If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable, otherwise this batch must be re-prepped

Outlier!

August 2021

September 24, 2021

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

RE: Project: HAMMOND ASH POND #1 & #2
Pace Project No.: 92555520

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 13, 2021 and August 16, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

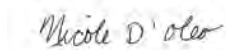
The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

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

This report was revised 9/24/21 to report the correct TDS result for sample HGWA-2 (92555520-003)

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

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

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

Dawit Yifru, Geosyntec Consultants, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

Pace Analytical Services Charlotte

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

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

Pace Analytical Services Asheville

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

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

Pace Analytical Services Peachtree Corners

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92555520001	HGWA-1	Water	08/11/21 17:00	08/13/21 14:55
92555520002	HGWA-43D	Water	08/11/21 17:03	08/13/21 14:55
92555520003	HGWA-2	Water	08/12/21 15:35	08/13/21 14:55
92555520004	HGWA-3	Water	08/12/21 10:17	08/13/21 14:55
92555520005	HGWA-44D	Water	08/13/21 11:25	08/16/21 13:25

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92555520001	HGWA-1	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555520002	HGWA-43D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555520003	HGWA-2	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555520004	HGWA-3	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555520005	HGWA-44D	EPA 6010D	KH	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92555520001	HGWA-1					
	Performed by	CUSTOME			08/16/21 11:23	
		R				
	pH	6.98	Std. Units		08/16/21 11:23	
EPA 6010D	Calcium	113	mg/L	1.0	08/18/21 18:00	
EPA 6020B	Barium	0.030	mg/L	0.0050	08/19/21 19:05	
EPA 6020B	Boron	0.020J	mg/L	0.040	08/19/21 19:05	
EPA 6020B	Lithium	0.00078J	mg/L	0.030	08/19/21 19:05	
SM 2540C-2011	Total Dissolved Solids	366	mg/L	10.0	08/18/21 08:30	
EPA 300.0 Rev 2.1 1993	Chloride	9.6	mg/L	1.0	08/20/21 06:28	
EPA 300.0 Rev 2.1 1993	Fluoride	0.058J	mg/L	0.10	08/20/21 06:28	
EPA 300.0 Rev 2.1 1993	Sulfate	48.9	mg/L	1.0	08/20/21 06:28	
92555520002	HGWA-43D					
	Performed by	CUSTOME			08/16/21 11:23	
		R				
	pH	7.40	Std. Units		08/16/21 11:23	
EPA 6010D	Calcium	61.0	mg/L	1.0	08/18/21 18:04	
EPA 6020B	Arsenic	0.0015J	mg/L	0.0050	08/19/21 19:10	
EPA 6020B	Barium	0.28	mg/L	0.0050	08/19/21 19:10	
EPA 6020B	Boron	0.042	mg/L	0.040	08/19/21 19:10	
EPA 6020B	Lithium	0.0024J	mg/L	0.030	08/19/21 19:10	
EPA 6020B	Molybdenum	0.0034J	mg/L	0.010	08/19/21 19:10	
SM 2540C-2011	Total Dissolved Solids	277	mg/L	10.0	08/18/21 08:30	
EPA 300.0 Rev 2.1 1993	Chloride	3.5	mg/L	1.0	08/20/21 07:13	
EPA 300.0 Rev 2.1 1993	Fluoride	0.15	mg/L	0.10	08/20/21 07:13	
EPA 300.0 Rev 2.1 1993	Sulfate	30.5	mg/L	1.0	08/20/21 07:13	
92555520003	HGWA-2					
	Performed by	CUSTOME			08/16/21 11:24	
		R				
	pH	5.05	Std. Units		08/16/21 11:24	
EPA 6010D	Calcium	21.9	mg/L	1.0	08/18/21 18:09	
EPA 6020B	Barium	0.12	mg/L	0.0050	08/19/21 19:16	
EPA 6020B	Beryllium	0.00014J	mg/L	0.00050	08/19/21 19:16	
EPA 6020B	Boron	0.044	mg/L	0.040	08/19/21 19:16	
EPA 6020B	Cadmium	0.00014J	mg/L	0.00050	08/19/21 19:16	
EPA 6020B	Cobalt	0.022	mg/L	0.0050	08/19/21 19:16	
EPA 6020B	Lithium	0.0012J	mg/L	0.030	08/19/21 19:16	
SM 2540C-2011	Total Dissolved Solids	118	mg/L	10.0	08/19/21 15:09	
EPA 300.0 Rev 2.1 1993	Chloride	5.2	mg/L	1.0	08/20/21 08:28	
EPA 300.0 Rev 2.1 1993	Sulfate	47.4	mg/L	1.0	08/20/21 08:28	
92555520004	HGWA-3					
	Performed by	CUSTOME			08/16/21 11:24	
		R				
	pH	7.31	Std. Units		08/16/21 11:24	
EPA 6010D	Calcium	84.0	mg/L	1.0	08/18/21 18:14	
EPA 6020B	Barium	0.11	mg/L	0.0050	08/19/21 19:22	
EPA 6020B	Lithium	0.0028J	mg/L	0.030	08/19/21 19:22	
SM 2540C-2011	Total Dissolved Solids	265	mg/L	10.0	08/19/21 15:09	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92555520004	HGWA-3					
EPA 300.0 Rev 2.1 1993	Chloride	4.8	mg/L	1.0	08/20/21 08:43	
EPA 300.0 Rev 2.1 1993	Sulfate	38.6	mg/L	1.0	08/20/21 08:43	
92555520005	HGWA-44D					
	Performed by	CUSTOMER			08/16/21 17:40	
	pH	7.77	Std. Units		08/16/21 17:40	
EPA 6010D	Calcium	28.9	mg/L	1.0	08/18/21 18:29	
EPA 6020B	Barium	0.22	mg/L	0.0050	08/19/21 19:39	
EPA 6020B	Boron	0.31	mg/L	0.040	08/19/21 19:39	
EPA 6020B	Chromium	0.0016J	mg/L	0.0050	08/19/21 19:39	
EPA 6020B	Lithium	0.032	mg/L	0.030	08/19/21 19:39	
EPA 6020B	Molybdenum	0.0051J	mg/L	0.010	08/19/21 19:39	
SM 2540C-2011	Total Dissolved Solids	436	mg/L	20.0	08/19/21 15:11	
EPA 300.0 Rev 2.1 1993	Chloride	39.9	mg/L	1.0	08/20/21 22:01	
EPA 300.0 Rev 2.1 1993	Fluoride	0.87	mg/L	0.10	08/20/21 22:01	
EPA 300.0 Rev 2.1 1993	Sulfate	56.1	mg/L	1.0	08/20/21 22:01	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND ASH POND #1 & #2
Pace Project No.: 92555520

Sample: HGWA-1		Lab ID: 92555520001		Collected: 08/11/21 17:00		Received: 08/13/21 14:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/16/21 11:23		
pH	6.98	Std. Units			1		08/16/21 11:23		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	113	mg/L	1.0	0.12	1	08/18/21 09:54	08/18/21 18:00	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/21 09:57	08/19/21 19:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:05	7440-38-2	
Barium	0.030	mg/L	0.0050	0.00067	1	08/18/21 09:57	08/19/21 19:05	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 09:57	08/19/21 19:05	7440-41-7	
Boron	0.020J	mg/L	0.040	0.0086	1	08/18/21 09:57	08/19/21 19:05	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 09:57	08/19/21 19:05	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:05	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 09:57	08/19/21 19:05	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 09:57	08/19/21 19:05	7439-92-1	
Lithium	0.00078J	mg/L	0.030	0.00073	1	08/18/21 09:57	08/19/21 19:05	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 09:57	08/19/21 19:05	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 09:57	08/19/21 19:05	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 09:57	08/19/21 19:05	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	366	mg/L	10.0	10.0	1		08/18/21 08:30		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	9.6	mg/L	1.0	0.60	1		08/20/21 06:28	16887-00-6	
Fluoride	0.058J	mg/L	0.10	0.050	1		08/20/21 06:28	16984-48-8	
Sulfate	48.9	mg/L	1.0	0.50	1		08/20/21 06:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

Sample: HGWA-43D		Lab ID: 92555520002		Collected: 08/11/21 17:03	Received: 08/13/21 14:55	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/16/21 11:23		
pH	7.40	Std. Units			1		08/16/21 11:23		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	61.0	mg/L	1.0	0.12	1	08/18/21 09:54	08/18/21 18:04	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/21 09:57	08/19/21 19:10	7440-36-0	
Arsenic	0.0015J	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:10	7440-38-2	
Barium	0.28	mg/L	0.0050	0.00067	1	08/18/21 09:57	08/19/21 19:10	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 09:57	08/19/21 19:10	7440-41-7	
Boron	0.042	mg/L	0.040	0.0086	1	08/18/21 09:57	08/19/21 19:10	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 09:57	08/19/21 19:10	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:10	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 09:57	08/19/21 19:10	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 09:57	08/19/21 19:10	7439-92-1	
Lithium	0.0024J	mg/L	0.030	0.00073	1	08/18/21 09:57	08/19/21 19:10	7439-93-2	
Molybdenum	0.0034J	mg/L	0.010	0.00074	1	08/18/21 09:57	08/19/21 19:10	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 09:57	08/19/21 19:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 09:57	08/19/21 19:10	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	277	mg/L	10.0	10.0	1		08/18/21 08:30		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	3.5	mg/L	1.0	0.60	1		08/20/21 07:13	16887-00-6	
Fluoride	0.15	mg/L	0.10	0.050	1		08/20/21 07:13	16984-48-8	
Sulfate	30.5	mg/L	1.0	0.50	1		08/20/21 07:13	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

Sample: HGWA-2		Lab ID: 92555520003		Collected: 08/12/21 15:35		Received: 08/13/21 14:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/16/21 11:24		
pH	5.05	Std. Units			1		08/16/21 11:24		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	21.9	mg/L	1.0	0.12	1	08/18/21 09:54	08/18/21 18:09	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/21 09:57	08/19/21 19:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:16	7440-38-2	
Barium	0.12	mg/L	0.0050	0.00067	1	08/18/21 09:57	08/19/21 19:16	7440-39-3	
Beryllium	0.00014J	mg/L	0.00050	0.000054	1	08/18/21 09:57	08/19/21 19:16	7440-41-7	
Boron	0.044	mg/L	0.040	0.0086	1	08/18/21 09:57	08/19/21 19:16	7440-42-8	
Cadmium	0.00014J	mg/L	0.00050	0.00011	1	08/18/21 09:57	08/19/21 19:16	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:16	7440-47-3	
Cobalt	0.022	mg/L	0.0050	0.00039	1	08/18/21 09:57	08/19/21 19:16	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 09:57	08/19/21 19:16	7439-92-1	
Lithium	0.0012J	mg/L	0.030	0.00073	1	08/18/21 09:57	08/19/21 19:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 09:57	08/19/21 19:16	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 09:57	08/19/21 19:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 09:57	08/19/21 19:16	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	118	mg/L	10.0	10.0	1		08/19/21 15:09		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.2	mg/L	1.0	0.60	1		08/20/21 08:28	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/21 08:28	16984-48-8	
Sulfate	47.4	mg/L	1.0	0.50	1		08/20/21 08:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND ASH POND #1 & #2
Pace Project No.: 92555520

Sample: HGWA-3		Lab ID: 92555520004		Collected: 08/12/21 10:17		Received: 08/13/21 14:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/16/21 11:24		
pH	7.31	Std. Units			1		08/16/21 11:24		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	84.0	mg/L	1.0	0.12	1	08/18/21 09:54	08/18/21 18:14	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/21 09:57	08/19/21 19:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:22	7440-38-2	
Barium	0.11	mg/L	0.0050	0.00067	1	08/18/21 09:57	08/19/21 19:22	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 09:57	08/19/21 19:22	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/18/21 09:57	08/19/21 19:22	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 09:57	08/19/21 19:22	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:22	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 09:57	08/19/21 19:22	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 09:57	08/19/21 19:22	7439-92-1	
Lithium	0.0028J	mg/L	0.030	0.00073	1	08/18/21 09:57	08/19/21 19:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/18/21 09:57	08/19/21 19:22	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 09:57	08/19/21 19:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 09:57	08/19/21 19:22	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	265	mg/L	10.0	10.0	1		08/19/21 15:09		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	4.8	mg/L	1.0	0.60	1		08/20/21 08:43	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/21 08:43	16984-48-8	
Sulfate	38.6	mg/L	1.0	0.50	1		08/20/21 08:43	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

Sample: HGWA-44D		Lab ID: 92555520005		Collected: 08/13/21 11:25		Received: 08/16/21 13:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/16/21 17:40		
pH	7.77	Std. Units			1		08/16/21 17:40		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	28.9	mg/L	1.0	0.12	1	08/18/21 09:54	08/18/21 18:29	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/21 09:57	08/19/21 19:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:39	7440-38-2	
Barium	0.22	mg/L	0.0050	0.00067	1	08/18/21 09:57	08/19/21 19:39	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/21 09:57	08/19/21 19:39	7440-41-7	
Boron	0.31	mg/L	0.040	0.0086	1	08/18/21 09:57	08/19/21 19:39	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/21 09:57	08/19/21 19:39	7440-43-9	
Chromium	0.0016J	mg/L	0.0050	0.0011	1	08/18/21 09:57	08/19/21 19:39	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/21 09:57	08/19/21 19:39	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/21 09:57	08/19/21 19:39	7439-92-1	
Lithium	0.032	mg/L	0.030	0.00073	1	08/18/21 09:57	08/19/21 19:39	7439-93-2	
Molybdenum	0.0051J	mg/L	0.010	0.00074	1	08/18/21 09:57	08/19/21 19:39	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/21 09:57	08/19/21 19:39	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/21 09:57	08/19/21 19:39	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	436	mg/L	20.0	20.0	1		08/19/21 15:11		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	39.9	mg/L	1.0	0.60	1		08/20/21 22:01	16887-00-6	
Fluoride	0.87	mg/L	0.10	0.050	1		08/20/21 22:01	16984-48-8	
Sulfate	56.1	mg/L	1.0	0.50	1		08/20/21 22:01	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

QC Batch:	641193	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples:	92555520001, 92555520002, 92555520003, 92555520004, 92555520005		

METHOD BLANK: 3365273 Matrix: Water
Associated Lab Samples: 92555520001, 92555520002, 92555520003, 92555520004, 92555520005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/18/21 16:31	

LABORATORY CONTROL SAMPLE: 3365274

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3365275 3365276

Parameter	Units	3365275		3365276		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	5.4	1	6.6	6.4	113	103	75-125	2	20	

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QUALITY CONTROL DATA

Project: HAMMOND ASH POND #1 & #2
Pace Project No.: 92555520

QC Batch: 641199 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92555520001, 92555520002, 92555520003, 92555520004, 92555520005

METHOD BLANK: 3365292 Matrix: Water
Associated Lab Samples: 92555520001, 92555520002, 92555520003, 92555520004, 92555520005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/19/21 17:50	
Arsenic	mg/L	ND	0.0050	0.0011	08/19/21 17:50	
Barium	mg/L	ND	0.0050	0.00067	08/19/21 17:50	
Beryllium	mg/L	ND	0.00050	0.000054	08/19/21 17:50	
Boron	mg/L	ND	0.040	0.0086	08/19/21 17:50	
Cadmium	mg/L	ND	0.00050	0.00011	08/19/21 17:50	
Chromium	mg/L	ND	0.0050	0.0011	08/19/21 17:50	
Cobalt	mg/L	ND	0.0050	0.00039	08/19/21 17:50	
Lead	mg/L	ND	0.0010	0.00089	08/19/21 17:50	
Lithium	mg/L	ND	0.030	0.00073	08/19/21 17:50	
Molybdenum	mg/L	ND	0.010	0.00074	08/19/21 17:50	
Selenium	mg/L	ND	0.0050	0.0014	08/19/21 17:50	
Thallium	mg/L	ND	0.0010	0.00018	08/19/21 17:50	

LABORATORY CONTROL SAMPLE: 3365293

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.098	98	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.094	94	80-120	
Boron	mg/L	1	0.95	95	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.10	101	80-120	
Cobalt	mg/L	0.1	0.10	100	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.094	94	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3365294 3365295

Parameter	Units	92555504001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.099	0.097	98	97	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.098	0.098	98	98	75-125	0	20	

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QUALITY CONTROL DATA

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

Parameter	Units	92555504001		3365294		3365295		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Barium	mg/L	0.034	0.1	0.1	0.13	0.13	99	98	75-125	1	20			
Beryllium	mg/L	0.00021J	0.1	0.1	0.10	0.10	102	100	75-125	2	20			
Boron	mg/L	0.014J	1	1	1.0	1.0	102	101	75-125	1	20			
Cadmium	mg/L	ND	0.1	0.1	0.10	0.098	100	98	75-125	1	20			
Chromium	mg/L	ND	0.1	0.1	0.11	0.11	110	107	75-125	2	20			
Cobalt	mg/L	0.00070J	0.1	0.1	0.11	0.11	110	106	75-125	4	20			
Lead	mg/L	ND	0.1	0.1	0.096	0.095	96	94	75-125	2	20			
Lithium	mg/L	0.0013J	0.1	0.1	0.11	0.11	106	104	75-125	1	20			
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.097	100	97	75-125	3	20			
Selenium	mg/L	ND	0.1	0.1	0.093	0.094	93	94	75-125	1	20			
Thallium	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	1	20			

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND ASH POND #1 & #2
Pace Project No.: 92555520

QC Batch: 640931 Analysis Method: SM 2540C-2011
QC Batch Method: SM 2540C-2011 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92555520001, 92555520002

METHOD BLANK: 3363778 Matrix: Water
Associated Lab Samples: 92555520001, 92555520002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/18/21 08:29	

LABORATORY CONTROL SAMPLE: 3363779

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	388	97	90-111	

SAMPLE DUPLICATE: 3363780

Parameter	Units	92555514001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	366	378	3	10	

SAMPLE DUPLICATE: 3363781

Parameter	Units	92555501001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	212	217	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

QC Batch: 641466	Analysis Method: SM 2540C-2011
QC Batch Method: SM 2540C-2011	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92555520003, 92555520004, 92555520005

METHOD BLANK: 3366949 Matrix: Water

Associated Lab Samples: 92555520003, 92555520004, 92555520005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/19/21 15:09	

LABORATORY CONTROL SAMPLE: 3366950

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	401	100	90-111	

SAMPLE DUPLICATE: 3366951

Parameter	Units	92555514003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	118	131	10	10	

SAMPLE DUPLICATE: 3366952

Parameter	Units	92555514005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	272	268	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND ASH POND #1 & #2
Pace Project No.: 92555520

QC Batch: 641753 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92555520001

METHOD BLANK: 3368331 Matrix: Water
Associated Lab Samples: 92555520001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/19/21 22:58	
Fluoride	mg/L	ND	0.10	0.050	08/19/21 22:58	
Sulfate	mg/L	ND	1.0	0.50	08/19/21 22:58	

LABORATORY CONTROL SAMPLE: 3368332

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.2	100	90-110	
Fluoride	mg/L	2.5	2.5	102	90-110	
Sulfate	mg/L	50	50.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368333 3368334

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92554551025 Result	Spike Conc.	Spike Conc.	MS Result						
Chloride	mg/L	3.4	50	50	56.6	56.8	106	107	90-110	0	10
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	99	100	90-110	2	10
Sulfate	mg/L	6.9	50	50	59.8	60.3	106	107	90-110	1	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368335 3368336

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92555501002 Result	Spike Conc.	Spike Conc.	MS Result						
Chloride	mg/L	2.2	50	50	50.0	54.8	95	105	90-110	9	10
Fluoride	mg/L	0.064J	2.5	2.5	2.4	2.6	92	102	90-110	10	10
Sulfate	mg/L	4.3	50	50	51.7	56.7	95	105	90-110	9	10

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND ASH POND #1 & #2
Pace Project No.: 92555520

QC Batch: 641754 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92555520002, 92555520003, 92555520004

METHOD BLANK: 3368337 Matrix: Water
Associated Lab Samples: 92555520002, 92555520003, 92555520004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/20/21 06:43	
Fluoride	mg/L	ND	0.10	0.050	08/20/21 06:43	
Sulfate	mg/L	ND	1.0	0.50	08/20/21 06:43	

LABORATORY CONTROL SAMPLE: 3368338

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	47.9	96	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	50	47.3	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368339 3368340

Parameter	Units	92555514002		3368339		3368340		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	3.5	50	50	53.7	54.7	100	102	90-110	2	10		
Fluoride	mg/L	0.15	2.5	2.5	2.6	2.6	98	99	90-110	1	10		
Sulfate	mg/L	30.5	50	50	81.4	81.9	102	103	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368341 3368342

Parameter	Units	92555652002		3368341		3368342		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	2.3	50	50	52.0	56.1	99	108	90-110	8	10		
Fluoride	mg/L	ND	2.5	2.5	2.4	2.7	96	105	90-110	9	10		
Sulfate	mg/L	8.3	50	50	58.0	62.4	99	108	90-110	7	10		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND ASH POND #1 & #2
Pace Project No.: 92555520

QC Batch: 641887 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92555520005

METHOD BLANK: 3368749 Matrix: Water
Associated Lab Samples: 92555520005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/20/21 15:20	
Fluoride	mg/L	ND	0.10	0.050	08/20/21 15:20	
Sulfate	mg/L	ND	1.0	0.50	08/20/21 15:20	

LABORATORY CONTROL SAMPLE: 3368750

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.5	103	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	50	51.4	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368751 3368752

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92556598001	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	13.8	50	50	63.6	64.6	100	102	90-110	2	10		
Fluoride	mg/L	ND	2.5	2.5	2.7	2.7	107	108	90-110	1	10		
Sulfate	mg/L	2.1	50	50	52.0	52.9	100	102	90-110	2	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3368753 3368754

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92555514006	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	2.6	50	50	53.3	54.0	101	103	90-110	1	10		
Fluoride	mg/L	0.065J	2.5	2.5	2.6	2.6	102	103	90-110	1	10		
Sulfate	mg/L	42.1	50	50	90.9	91.6	98	99	90-110	1	10		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: HAMMOND ASH POND #1 & #2

Pace Project No.: 92555520

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND ASH POND #1 & #2
Pace Project No.: 92555520

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555520001	HGWA-1				
92555520002	HGWA-43D				
92555520003	HGWA-2				
92555520004	HGWA-3				
92555520005	HGWA-44D				
92555520001	HGWA-1	EPA 3010A	641193	EPA 6010D	641263
92555520002	HGWA-43D	EPA 3010A	641193	EPA 6010D	641263
92555520003	HGWA-2	EPA 3010A	641193	EPA 6010D	641263
92555520004	HGWA-3	EPA 3010A	641193	EPA 6010D	641263
92555520005	HGWA-44D	EPA 3010A	641193	EPA 6010D	641263
92555520001	HGWA-1	EPA 3005A	641199	EPA 6020B	641271
92555520002	HGWA-43D	EPA 3005A	641199	EPA 6020B	641271
92555520003	HGWA-2	EPA 3005A	641199	EPA 6020B	641271
92555520004	HGWA-3	EPA 3005A	641199	EPA 6020B	641271
92555520005	HGWA-44D	EPA 3005A	641199	EPA 6020B	641271
92555520001	HGWA-1	SM 2540C-2011	640931		
92555520002	HGWA-43D	SM 2540C-2011	640931		
92555520003	HGWA-2	SM 2540C-2011	641466		
92555520004	HGWA-3	SM 2540C-2011	641466		
92555520005	HGWA-44D	SM 2540C-2011	641466		
92555520001	HGWA-1	EPA 300.0 Rev 2.1 1993	641753		
92555520002	HGWA-43D	EPA 300.0 Rev 2.1 1993	641754		
92555520003	HGWA-2	EPA 300.0 Rev 2.1 1993	641754		
92555520004	HGWA-3	EPA 300.0 Rev 2.1 1993	641754		
92555520005	HGWA-44D	EPA 300.0 Rev 2.1 1993	641887		

REPORT OF LABORATORY ANALYSIS

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Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
 Page 1 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
 Upon Receipt

Client Name:

GIA POWER

Project #:

WO# : 92555520



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

Custody Seal Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer: Gun ID: TH2083 Type of Ice: Wet Blue None

Cooler Temp: 3.7 Correction Factor: Add/Subtract (°C) ± 0

Cooler Temp Corrected (°C): 3.7

USDA Regulated Soil (N/A, water sample)

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

Date/Initials Person Examining Contents: 3/13/21 KRW

Biological Tissue Frozen?

Yes No N/A

Temp should be above freezing to 6°C

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

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

Comments/Discrepancy:

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Document Name:
 Sample Condition Upon Receipt(SCUR)
 Document No.:
 F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
 Page 2 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

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

Project #

WO# : 9255520

PM: NMG Due Date: 08/27/21

CLIENT: GA-GA Power

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

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

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

pH Adjustment Log for Preserved Samples

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

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

Section B Required Project Information: Report To: SCS Contacts Copy To: Goodsynric Contacts

Section C Invoice Information: Attention: Southern Co. Company Name: Address: P.O. Box 10839

Page: 1 of 1

Requested One Date/TAT: 18 Day

Requested Analysis Filtered (Y/N):

REGULATORY AGENCY: NPDES, GROUND WATER, DRINKING WATER, UST, RCRA, OTHER TUE

Site Location: STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes MATERIALS CODE SAMPLER/WATER QW WATER WWT WASTE WATER WW PRODUCT F SOLVENT/SOIL S OIL OIL WSE WSP AIR AAR OTHER OT	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)
					DATE	TIME	DATE					
1	HGWA-1		WT G	G	8/11/21	1700		19	5	2	3	
2	HGWA-43D		WT G	G	8/11/21	1703		19	5	2	3	
3	_____		_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
4	_____		_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
5	_____		_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
6	_____		_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
7	_____		_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
8	_____		_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
9	_____		_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
10	_____		_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
11	_____		_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
12	_____		_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

ADDITIONAL COMMENTS: Please note dry wells, straws through any wells not sampled, and coils when the last sample for the event has been taken.

RELINQUISHED BY / AFFILIATION: Thomas Kessler / Georgia Power

DATE: 8/13/21

TIME: 1445

ACCEPTED BY / AFFILIATION: Connor Cain / Georgia Power

DATE: 8/13/21

TIME: 1455

SAMPLER NAME AND SIGNATURE: Thomas Kessler

DATE SIGNED: 8/11/2021

TEMP IN °C: _____

RECEIVED ON ICE (Y/N): _____

CUSTODY SEALED COOLER (Y/N): _____

SAMPLES INTACT (Y/N): _____

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

Section A Required Client Information:		Section B Required Project Information:		Section C Site Information:	
Company: GA Power	Report To: SCS Contacts	Address: Southcoast Co.	City/State: Southcoast Co.	Site Location: NPOCS	GROUND WATER
Address: Atlanta, GA	Copy To: Geosyntec Contacts	Company Name:	Address:	UST	RCRA
Email To: SCS Contacts	Purchase Order No.:	City/State:	Address:	Other: <input checked="" type="checkbox"/>	OTHER
Phone: <input type="checkbox"/> Fax: <input type="checkbox"/>	Project Name: Plant Hamilton Ash Pond #1 & #2	City/State:	Address:	Site Location: <input type="checkbox"/>	STATE: GA
Requested Due Date/TAT: 18 Day	Project Number:	City/State:	Address:	Requested Analysis Filtered (Y/N)	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE (See valid codes on list)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservative:	Analysis Test	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab ID.
				COMPOSITE	CANISTER												
1	HGWA-2		WT G	8/12/21	1535					21	5	2	3				
2	HGWA-3		WT G	8/12/21	10:17					21	5	2	3				
3	XXXXXXXXXX		WT G	8/12/21	10:17					21	5	2	3				
4	XXXXXXXXXX		WT G	8/12/21	10:17					21	5	2	3				
5	XXXXXXXXXX		WT G	8/12/21	10:17					21	5	2	3				
6	XXXXXXXXXX		WT G	8/12/21	10:17					21	5	2	3				
7	XXXXXXXXXX		WT G	8/12/21	10:17					21	5	2	3				
8	XXXXXXXXXX		WT G	8/12/21	10:17					21	5	2	3				
9	XXXXXXXXXX		WT G	8/12/21	10:17					21	5	2	3				
10	XXXXXXXXXX		WT G	8/12/21	10:17					21	5	2	3				
11	XXXXXXXXXX		WT G	8/12/21	10:17					21	5	2	3				
12	XXXXXXXXXX		WT G	8/12/21	10:17					21	5	2	3				

Section D Additional Comments		REINQUISHED BY/AFFILIATION		DATE		TIME		ACCEPTED BY/AFFILIATION		DATE		TIME	
Please note dry walk, strike through any words not sampled, and note when the last sample for the event has been taken.		Thomas Kessler / Geo		8/13/21		1445		Cameron Cain / Geo		8/13/21		1445	
		Cameron Cain / Geo		8/13/21		1455		Ryan Williams / Pace		8/13/21		1455	
		Ryan Williams / Pace		8/13/21		1650		R. Williams / Pace		8/13/21		1650	

SAMPLER NAME AND SIGNATURE		PRINT Name of SAMPLER:		DATE Signed		TIME	
Cameron Cain / Ashley Raussey		Cameron Cain / Ashley Raussey		8/12/2021			
SIGNATURE of SAMPLER:		DATE Signed		TIME		Temp in °C	
[Signature]		8/12/2021					
Received on Ice (Y/N)		Custody Sealed Cooler (Y/N)		Temp in °C		Received on Ice (Y/N)	
Temp in °C		Received on Ice (Y/N)		Custody Sealed Cooler (Y/N)		Temp in °C	
Temp in °C		Received on Ice (Y/N)		Custody Sealed Cooler (Y/N)		Temp in °C	



Document Name:
Sample Condition Upon Receipt(SCUR)

Document Revised: October 28, 2020
Page 1 of 2

Document No.:
F-CAR-CS-033-Rev.07

Issuing Authority:
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
Upon Receipt

Client Name:

Project #

WO#: 9255520

Courier: Fed Ex Pace UPS USPS Client Other: _____

PM: NMG Due Date: 08/27/21
CLIENT: GA-GA Power

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 08/21/21 Kew

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?
 Yes No N/A

Thermometer: IR Gun ID: TH2230 Type of Ice: Wet Blue None

Cooler Temp: 4.3/5.4 Correction Factor: Add/Subtract (°C) +0.1

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

Cooler Temp Corrected (°C): 4.4/5.5

USDA Regulated Soil N/A, water sample

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



Document Name:
Sample Condition Upon Receipt(SCUR)
 Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
 Page 2 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

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

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

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

Project #

WO# : 92555520

PM: NMG

Due Date: 08/27/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

pH Adjustment Log for Preserved Samples

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

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

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

Section A Required Client Information
 Company: GA Power
 Address: Atlanta GA
 Email To: SCS Contacts
 Phone: [Blank] Fax: [Blank]
 Requested Due Date/Time: 10 Day

Section B Required Project Information
 Report To: SCS Contacts
 Copy To: Geosyntec Contacts
 Project Name: Plant Hammond Ash Pond #1 & #2
 Project Number: [Blank]
 Requested Analysis Filtered (Y/N): [Blank]

Section C Invoice Information:
 Attention: Southco Co
 Company Name: [Blank]
 Address: [Blank]
 Point of Contact: Kevin Harring
 Requested Analysis Filtered (Y/N): 10833

ITEM #	Section D Required Client Information	Valid Matrix Codes MA TDS SEWAGE TREATMENT PLANT WATER WASTEWATER INDUSTRIAL SOLIDWASTE SLURRY WASTE AIR OTHER TS	MATRIX CODE (See valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATION	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.	
					COMPOSITE	DATE	TIME								
1	HGWA-44D		WT	G	8/13/21	1125	20	5	2	Unpreserved	X	X	X	X	
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															

Section D ADDITIONAL COMMENTS

REINQUISHED BY / AFFILIATION: *Wanda Lee* DATE: 8/16/21 TIME: 0830
 ACCEPTED BY / AFFILIATION: *Kevin Harring* DATE: 8/13/21 TIME: 1325

DATE SIGNED (MM/DD/YYYY): 8/13

Temp in °C: [Blank]
 Received on (m/y): [Blank]
 Custody Sealed Cooler (Y/N): [Blank]
 Sample Intact (Y/N): [Blank]

October 15, 2021

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

RE: Project: HAMMOND ASH POND #1 & #2 RADS
Pace Project No.: 92555511

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 13, 2021 and August 16, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND ASH POND #1 & #2 RADS
Pace Project No.: 92555511

Pace Analytical Services Pennsylvania

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92555511001	HGWA-1	Water	08/11/21 17:00	08/13/21 14:55
92555511002	HGWA-43D	Water	08/11/21 17:03	08/13/21 14:55
92555511003	HGWA-2	Water	08/12/21 15:35	08/13/21 14:55
92555511004	HGWA-3	Water	08/12/21 10:17	08/13/21 14:55
92555511005	HGWA-44D	Water	08/13/21 11:25	08/16/21 13:25

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SAMPLE ANALYTE COUNT

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92555511001	HGWA-1	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555511002	HGWA-43D	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555511003	HGWA-2	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555511004	HGWA-3	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555511005	HGWA-44D	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND ASH POND #1 & #2 RADS
Pace Project No.: 92555511

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555511001	HGWA-1					
EPA 9315	Radium-226	0.115 ± 0.118 (0.222)	pCi/L		09/17/21 07:27	
EPA 9320	Radium-228	C:88% T:NA -0.0659 ± 0.329 (0.785)	pCi/L		09/03/21 14:23	
Total Radium Calculation	Total Radium	C:71% T:87% 0.115 ± 0.447 (1.01)	pCi/L		10/14/21 15:22	
92555511002	HGWA-43D					
EPA 9315	Radium-226	0.101 ± 0.153 (0.337)	pCi/L		09/16/21 08:31	
EPA 9320	Radium-228	C:82% T:NA 0.293 ± 0.366 (0.775)	pCi/L		09/03/21 14:23	
Total Radium Calculation	Total Radium	C:71% T:87% 0.394 ± 0.519 (1.11)	pCi/L		10/14/21 15:22	
92555511003	HGWA-2					
EPA 9315	Radium-226	0.283 ± 0.170 (0.239)	pCi/L		09/17/21 07:27	
EPA 9320	Radium-228	C:80% T:NA 0.463 ± 0.383 (0.759)	pCi/L		09/03/21 14:23	
Total Radium Calculation	Total Radium	C:80% T:81% 0.746 ± 0.553 (0.998)	pCi/L		10/14/21 15:22	
92555511004	HGWA-3					
EPA 9315	Radium-226	0.0698 ± 0.160 (0.378)	pCi/L		09/16/21 14:16	
EPA 9320	Radium-228	C:67% T:NA 0.319 ± 0.393 (0.831)	pCi/L		09/03/21 14:23	
Total Radium Calculation	Total Radium	C:75% T:82% 0.389 ± 0.553 (1.21)	pCi/L		10/14/21 15:22	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555511005	HGWA-44D					
EPA 9315	Radium-226	0.319 ± 0.198 (0.285)	pCi/L		09/16/21 08:30	
EPA 9320	Radium-228	C:73% T:NA 0.878 ± 0.486 (0.892)	pCi/L		09/03/21 11:26	
Total Radium Calculation	Total Radium	C:67% T:85% 1.20 ± 0.684 (1.18)	pCi/L		10/14/21 15:22	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-1 Lab ID: 92555511001 Collected: 08/11/21 17:00 Received: 08/13/21 14:55 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.115 ± 0.118 (0.222) C:88% T:NA	pCi/L	09/17/21 07:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.0659 ± 0.329 (0.785) C:71% T:87%	pCi/L	09/03/21 14:23	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.115 ± 0.447 (1.01)	pCi/L	10/14/21 15:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-43D Lab ID: 92555511002 Collected: 08/11/21 17:03 Received: 08/13/21 14:55 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.101 ± 0.153 (0.337) C:82% T:NA	pCi/L	09/16/21 08:31	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.293 ± 0.366 (0.775) C:71% T:87%	pCi/L	09/03/21 14:23	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.394 ± 0.519 (1.11)	pCi/L	10/14/21 15:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-2 Lab ID: 92555511003 Collected: 08/12/21 15:35 Received: 08/13/21 14:55 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.283 ± 0.170 (0.239) C:80% T:NA	pCi/L	09/17/21 07:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.463 ± 0.383 (0.759) C:80% T:81%	pCi/L	09/03/21 14:23	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.746 ± 0.553 (0.998)	pCi/L	10/14/21 15:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-3 Lab ID: 92555511004 Collected: 08/12/21 10:17 Received: 08/13/21 14:55 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0698 ± 0.160 (0.378) C:67% T:NA	pCi/L	09/16/21 14:16	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.319 ± 0.393 (0.831) C:75% T:82%	pCi/L	09/03/21 14:23	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.389 ± 0.553 (1.21)	pCi/L	10/14/21 15:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWA-44D Lab ID: 92555511005 Collected: 08/13/21 11:25 Received: 08/16/21 13:25 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.319 ± 0.198 (0.285) C:73% T:NA	pCi/L	09/16/21 08:30	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.878 ± 0.486 (0.892) C:67% T:85%	pCi/L	09/03/21 11:26	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.20 ± 0.684 (1.18)	pCi/L	10/14/21 15:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

QC Batch: 463298

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92555511005

METHOD BLANK: 2236861

Matrix: Water

Associated Lab Samples: 92555511005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.204 ± 0.329 (0.713) C:63% T:88%	pCi/L	09/03/21 11:28	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

QC Batch:	463426	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92555511001, 92555511002, 92555511003, 92555511004, 92555511005

METHOD BLANK: 2237360 Matrix: Water

Associated Lab Samples: 92555511001, 92555511002, 92555511003, 92555511004, 92555511005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.250 ± 0.184 (0.307) C:77% T:NA	pCi/L	09/16/21 08:31	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 92555511

QC Batch:	461961	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92555511001, 92555511002, 92555511003, 92555511004

METHOD BLANK: 2230398 Matrix: Water

Associated Lab Samples: 92555511001, 92555511002, 92555511003, 92555511004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.353 ± 0.350 (0.718) C:73% T:86%	pCi/L	09/03/21 14:24	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: HAMMOND ASH POND #1 & #2 RADS

Pace Project No.: 9255511

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND ASH POND #1 & #2 RADS
Pace Project No.: 92555511

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555511001	HGWA-1	EPA 9315	463426		
92555511002	HGWA-43D	EPA 9315	463426		
92555511003	HGWA-2	EPA 9315	463426		
92555511004	HGWA-3	EPA 9315	463426		
92555511005	HGWA-44D	EPA 9315	463426		
92555511001	HGWA-1	EPA 9320	461961		
92555511002	HGWA-43D	EPA 9320	461961		
92555511003	HGWA-2	EPA 9320	461961		
92555511004	HGWA-3	EPA 9320	461961		
92555511005	HGWA-44D	EPA 9320	463298		
92555511001	HGWA-1	Total Radium Calculation	468223		
92555511002	HGWA-43D	Total Radium Calculation	468223		
92555511003	HGWA-2	Total Radium Calculation	468223		
92555511004	HGWA-3	Total Radium Calculation	468223		
92555511005	HGWA-44D	Total Radium Calculation	468223		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

GPA POWER

Project #:

WO# : 92555511



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

Custody Seal Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer: TR Gun ID: TH2083 Type of Ice: Water Blue None

Cooler Temp: 3.7 Correction Factor: Add/Subtract (°C) +0

Cooler Temp Corrected (°C): 3.7

USDA Regulated Soil (N/A, water sample)

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

Date/Initials Person Examining Contents: 3/13/24 KRW

Biological Tissue Frozen?

Yes No N/A

Temp should be above freezing to 6°C

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

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

Comments/Discrepancy:

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



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

Project #

WO# : 92555511

PM: NMG

Due Date: 09/03/21

CLIENT: GA-GA Power

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

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

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

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-S035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

pH Adjustment Log for Preserved Samples

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: GA Power Address: Atlanta GA		Section B Required Project Information: Report to: SCS Contacts Copy To: Geographic Contacts		Section C Invoice Information: Address: Southern Co. Company Name:	
Email to: SCS Contacts Phone: Fax Requested Due Date/TAT: 10 Day		Project Name: Plant Hammond Ash Pond #1 & #2 Project Number:		Address: Plant Hammond Plant Code: 10839 Plant Project: Kevin Harding Plant Project: Kevin Harding Plant Code: 10839	
REGULATORY AGENCY NPDES GROUND WATER USE RCPA OTHER USE STATE: GA			Requested Analytic Filtered (Y/N) <input type="checkbox"/> Y <input type="checkbox"/> N		

ITEM #	Section D Required Client Information Valid Matrix Codes WATER WASTE WATER SLURRY SOLID SLUDGE SAMPLER CODE DATE COLLECTED DATE	Section E Matrix Code (see valid codes to left)	Section F Sample Type (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol	Other	Analysis Test	Y/N	Requested Analytic Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.	
																							MATRIX CODE
1	HQWA-1	WT	G	8/11/21	17:00	8/11/21	14:45	15	5	2	3												
2	HQWA-43D	WT	G	8/11/21	17:03	8/11/21	14:55	19	5	2	3												
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS
Please note dry vials, unless thorough any vials not sampled, and note when the last sample for the event has been taken.

REQUISITIONED BY / AFFILIATION
 Thomas Kessler / GenCo
 Connor Cain / GenCo
 Kyle Williams / Pace

DATE 8/11/21
TIME 1445

ACCEPTED BY / AFFILIATION
 Connor Cain / GenCo
 Kyle Williams / Pace

DATE 8/11/21
TIME 1455

SAMPLER NAME AND SIGNATURE
 Thomas Kessler / Connor Cain
 Kyle Williams / Pace

DATE SIGNED (MM/DD/YYYY) 8/11/2021

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

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

Section A Required Client Information: Company: GA Project Address: Atlanta GA	Section B Required Project Information: Request to: SCS Contacts Copy to: Geosynthetic Contacts	Section C Site Information: App: Southern Co. Company Name: Address: City/State: Site Location: State: GA
--	---	---

Section D Required Client Information: Valid Matrix Codes: MLTREQ, COLS, etc.	Section E Required Project Information: Purchase Order No.: Project Name: Plant Hazardous Air Pollut #1 & #2 Requested Due Date/Time: 30 Day	Section F Regulatory Agency: NPDSS, GROUND WATER, DRINKING WATER, etc.
---	---	---

ITEM #	MATRIX CODE	SAMPLE TYPE (G-GRAB C-CCMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVE	ANALYSIS TEST	Y/N	Residual Chlorine (Y/N)
			COMPOSITE	COMPOSITE								
1	HGWA-2	WT G			8/12/21	15:35	21	5	2	3		
2	HGWA-3	WT G			8/12/21	16:17	21	5	2	3		
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

ADDITIONAL COMMENTS Please note dry weight, since through any weight not sampled, and note when the last sample for the event has been taken.	REQUISITIONED BY / AFFILIATION Thomas Kessler / SCS Lemon Cain / SCS Ryan Williams / RCR	DATE 8/13/21 8/13/21 8/13/21	TIME 1445 1455 1650	ACCEPTED BY / AFFILIATION Lemon Cain / SCS Ryan Williams / RCR Ryan Williams / RCR	DATE 8/13/21 8/13/21 8/13/21	TIME 1445 1455 1650
---	--	--	-------------------------------------	--	--	-------------------------------------

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: <i>Lemon Cain</i> SIGNATURE OF SAMPLER: <i>[Signature]</i>	DATE SIGNED (IMMEDIATE) 8/12/2021	Temp in °C	Received on (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
---	---	-------------------	--------------------------	------------------------------------	-----------------------------



Document Name:
Sample Condition Upon Receipt(SCUR)

Document Revised: October 28, 2020
Page 1 of 2

Document No.:
F-CAR-CS-033-Rev.07

Issuing Authority:
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
Upon Receipt

Client Name:

Project #:

WO#: 92555511

PM: NMG

Due Date: 09/03/21

CLIENT: GA-GA Power

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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 09/03/21 KPW

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

IR Gun ID: THR230

Type of Ice:

Wet Blue None

Cooler Temp:

4.3/5.4

Correction Factor:

Add/Subtract (°C) +0.1

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C):

4.4/5.5

USDA Regulated Soil N/A, water sample

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

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

Yes No

Comments/Discrepancy:

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



Document Name:
Sample Condition Upon Receipt(SCUR)

Document Revised: October 28, 2020
Page 2 of 2

Document No.:
F-CAR-CS-033-Rev.07

Issuing Authority:
Pace Carolinas Quality Office

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

Project #

W0# : 92555511

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

PM: NMG

Due Date: 09/03/21

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

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (C-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2SO3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG9U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
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7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
9	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	

pH Adjustment Log for Preserved Samples

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
Required Client Information

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

Section B
Required Provider Information

Report To: SCS Contacts
Copy To: Gwynneth Contacts
Purchase Order No.:
Project Name: Plant Hammond Ash Pond #1 & #2
Project Number:

Section C
Invoice Information:

Attention: South gm Co.
Company Name:
Address:
City/State/Zip:
Project Name: Kevin Henry
Project Manager: Kevin Henry
Phone Number: 10839

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER
 Site Location: _____ STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes MA 1302 SW WA 1000 AT WASTE WATER MW PRODUCT P SOIL/SOLID SL DIE DL WIP WP AIR AR OTW OT TST TS	MATRIX CODE (Non-Valid codes in left)	SAMPLE TYPE (G-GRAB C-COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. pH = 7.77				
											H2SO4	HNO3	HCl	NaOH	Na2S2O5	Methanol						Other	Chloride/Fluoride/Sulfate	Sb, As, Bn, Be, B, Cd, Ca, Cr, Co	Pb, Li, Mo, Se, Ti
1	HGWA-440		G	G	8/13/21	11:25			20	5	2	3					X	X	X	X	X				
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION: *Yuan Willcox Price* DATE: 8/13/21 TIME: 08:30
 ACCEPTED BY / AFFILIATION: *Kevin Henry* DATE: 8/13/21 TIME: 13:25

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: *Yuan Willcox Price* SIGNATURE of SAMPLER: *[Signature]*
 DATE signed (MM/DD/YYYY): 8/13

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

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



1 est. Ra-228
 Analyst: JJC2
 Date: 9/1/2021
 Worksheet: 62391
 Matrix: WT

Method Blank Assessment	
MB Sample ID	2230398
MB Concentration	0.353
MB 2 Sigma CSU	0.350
MB MDX	0.718
MB Numerical Performance Indicator	1.97
MB Status vs Numerical Indicator	Pass
MB Status vs MDC	Pass

Laboratory Control Sample Assessment	
Count Date	9/1/2021
Spike ID	LCSD62391
Decay Corrected Spike Concentration (pCi/mL)	21.029
Volume Used (mL)	38.363
Aliquot Volume (L, B, F)	0.10
Target Conc (pCi/L, B, F)	0.609
Uncertainty (Calculated)	4.742
Result (pCi/L, B, F)	0.232
LCSD 2 Same CSU (pCi/L, B, F)	3.328
Numerical Performance Indicator	0.867
Status vs Numerical Indicator	Pass
Upper % Recovery Limits	135%
Lower % Recovery Limits	60%

Duplicate Sample Assessment	
Sample ID	LCSD62391
Duplicate Sample ID	LCSD62391
Sample Result 2 Sigma CSU (pCi/L, B, F)	3.364
Sample Duplicate Result (pCi/L, B, F)	0.857
Sample Duplicate Result 2 Sigma CSU (pCi/L, B, F)	3.328
Sample Duplicate Result 2 Sigma CSU (pCi/L, B, F)	0.867
Are Sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator	0.059
Duplicate Numerical Performance Indicator (Based on the LCS(LCSO Percent Recoveries) Duplicate RPDI)	1.858%
Duplicate Status vs Numerical Indicator	Pass
Duplicate Status vs RPDI % RPD Limit	36%

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

Comments:

Handwritten note: HOLDING

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample ID:
Sample MS ID:
Sample MSD ID:
Sample Matrix Spike Result:
Matrix Spike Result 2 Sigma CSU (pCi/L, B, F):
Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, B, F):
Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPDI:
MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPDI % RPD Limit:

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: R#-228
Analyst: VAL
Date: 9/17/2021
Worksheet: 62397
Matrix: WT



Method Blank Assessment	
MB Sample ID	228A408
MB Concentration	0.204
MB 2 Sigma CSU	0.328
MB MDC	0.713
MB Numerical Performance Indicator	1.22
MB Status vs Numerical Indicator	Pass
MB Status vs MDC	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	Y
Count Date		9/3/2021	LCSD62397
Spikes (ID)		932621	932621
Decay Corrected Spike Concentration (pCi/mL)		21.029	21.029
Volume Used (mL)		39.364	39.364
Aliquot Volume (L (g, F))		0.10	0.10
Target Conc (pCi/L (g, F))		0.807	0.808
Uncertainty (Calculated)		4.756	4.749
Result (pCi/L (g, F))		0.233	0.233
LCSD CSU 2 Sigma CSU (pCi/L (g, F))		5.599	7.050
Numerical Performance Indicator		1.34	1.488
Percent Recovery		117.73%	148.47%
Status vs Numerical Indicator		N/A	Warning
Status vs Recovery		Pass	Fail High**
Upper % Recovery Limit		135%	135%
Lower % Recovery Limit		80%	80%

Duplicate Sample Assessment		LCSD (Y or N)?	Y
Sample ID:		LC562397	
Duplicate Sample ID:		LC562397	
Sample Result (pCi/L (g, F))		5.598	Enter Duplicate sample IDs if other than LCSD CSU in the space below.
Sample Duplicate Result (pCi/L (g, F))		1.216	
Sample Duplicate Result 2 Sigma CSU (pCi/L (g, F))		7.050	
Sample Duplicate Result 2 Sigma CSU (pCi/L (g, F))		1.488	
Are sample and/or duplicate results below RLT?		NO	
Duplicate Numerical Performance Indicator:		-1.480	
(Based on the LCSD CSU Percent Recoveries) Duplicate RPD:		23.10%	
Duplicate Status vs Numerical Indicator:		Pass	
Duplicate Status vs RPD:		Pass	
% RPD Limit		36%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample ID: Sample MS ID: Sample MSO ID: Spike ID:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL)		
Spike Volume Used in MS (mL)		
Spike Volume Used in MSD (mL)		
MS Aliquot (L (g, F))		
MS Target Conc (pCi/L (g, F))		
MSO 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		
Main Spike Result 2 Sigma CSU (pCi/L (g, F))		
Sample Matrix Spike Duplicate Result		
Main Spike Duplicate Result 2 Sigma CSU (pCi/L (g, F))		
MS Numerical Performance Indicator		
MSO Numerical Performance Indicator		
MS Percent Recovery		
MSO Percent Recovery		
MS Status vs Numerical Indicator		
MSO Status vs Numerical Indicator		
MS Status vs Recovery		
MSO Status vs Recovery		
MS/MSD Upper % Recovery Limit		
MS/MSD Lower % Recovery Limit		

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample ID
Sample MS ID
Sample MSD ID
Matrix Spike Result 2 Sigma CSU (pCi/L (g, F))
Sample Matrix Spike Duplicate Result
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L (g, F))
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.

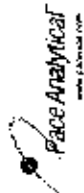
Comments:

** If all sample results are below MDC, the batch is acceptable, otherwise this batch must be retested due to LCSD failure.

(12/16/21)

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-226
Analyst: CLA
Date: 1/07/2021
Worksheet: 62605
Matrix: DW

Method Blank Assessment	
MB Sample ID	2337360
MB Concentration	0.250
MB Counting Uncertainty	0.160
MB MDC	0.307
MB Numerical Performance Indicator	3.72
MB Status vs Numerical Indicator	N/A
MB Status vs MDC	Pass

Laboratory Control Sample Assessment	LCS (Y or N) P		Y
	LCS#	Y or N	
(Decay Corrected Spike Concentration (pCi/mL))	9152021	9152021	9152021
	19-033	19-033	19-033
	24.034	24.034	24.034
	0.10	0.10	0.10
Volume Used (mL)	0.503	0.503	0.503
	4.775	4.775	4.759
	0.057	0.057	0.057
	4.197	4.197	3.605
Aliquot Volume (L, g, F)	0.691	0.691	0.617
	-1.66	-1.66	-3.68
	67.89%	67.89%	75.74%
	N/A	N/A	N/A
LCS0 CSO Counting Uncertainty (pCi/L, g, F)	Pass	Pass	Pass
	125%	125%	125%
	75%	75%	73%
	75%	75%	73%

Duplicate Sample Assessment	LCS (Y or N) P		Y
	LCS#	Y or N	
Sample ID	9255928001	9255928001	9255928001
	9255928005	9255928005	9255928001
	0.048	0.048	0.048
	0.190	0.190	0.190
Sample Result (pCi/L, g, F)	0.681	0.681	0.681
	3.605	3.605	3.605
	0.106	0.106	0.106
	See Below #	See Below #	See Below #
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	N/A	N/A	N/A
	1.269	1.269	-1.509
	14.86%	14.86%	106.01%
	N/A	N/A	N/A
Duplicate Numerical Performance Indicator	Pass	Pass	Fail**
	29%	29%	25%
	29%	29%	25%
	29%	29%	25%

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

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

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

Comments:

** Batch must be re-prepped due to unacceptable precision

September 14, 2021

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

RE: Project: HAMMOND AP-1
Pace Project No.: 92555945

Dear Joju Abraham:

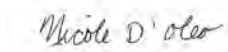
Enclosed are the analytical results for sample(s) received by the laboratory between August 17, 2021 and August 20, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

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

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: HAMMOND AP-1

Pace Project No.: 92555945

Pace Analytical Services Charlotte

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

Louisiana/NELAP Certification # LA170028

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-1
Pace Project No.: 92555945

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92555945001	MW-29	Water	08/16/21 17:06	08/17/21 11:25
92555945002	HGWC-7	Water	08/16/21 17:20	08/17/21 11:25
92555945003	MW-7	Water	08/17/21 14:59	08/18/21 14:00
92555945004	MW-20	Water	08/17/21 12:58	08/18/21 14:00
92555945005	MW-5	Water	08/17/21 09:50	08/18/21 14:00
92555945006	HGWC-10	Water	08/17/21 15:08	08/18/21 14:00
92555945007	HGWC-9	Water	08/17/21 12:15	08/18/21 14:00
92555945008	MW-26D	Water	08/17/21 11:05	08/18/21 14:00
92555945009	MW-6	Water	08/17/21 09:35	08/18/21 14:00
92555945010	MW-27D	Water	08/17/21 16:07	08/18/21 14:00
92555945011	MW-19	Water	08/18/21 15:10	08/19/21 12:40
92555945012	HGWC-11	Water	08/18/21 16:58	08/19/21 12:40
92555945013	HGWC-12	Water	08/18/21 15:07	08/19/21 12:40
92555945014	MW-28D	Water	08/18/21 13:30	08/19/21 12:40
92555945015	HGWC-8	Water	08/18/21 10:37	08/19/21 12:40
92555945016	HGWC-13	Water	08/19/21 10:43	08/20/21 12:15
92555945017	MW-25D	Water	08/19/21 14:44	08/20/21 12:15
92555945018	MW-24D	Water	08/19/21 12:37	08/20/21 12:15
92555945019	DUP-1	Water	08/19/21 00:00	08/20/21 12:15
92555945020	EB-1	Water	08/19/21 12:55	08/20/21 12:15
92555945021	FB-1	Water	08/19/21 12:50	08/20/21 12:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1
Pace Project No.: 92555945

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92555945001	MW-29	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555945002	HGWC-7	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555945003	MW-7	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92555945004	MW-20	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92555945005	MW-5	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92555945006	HGWC-10	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555945007	HGWC-9	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555945008	MW-26D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555945009	MW-6	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555945010	MW-27D	EPA 6010D	DRB	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1
Pace Project No.: 92555945

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92555945011	MW-19	EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
92555945012	HGWC-11	SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
92555945013	HGWC-12	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555945014	MW-28D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
92555945015	HGWC-8	EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
92555945016	HGWC-13	SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
92555945017	MW-25D	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92555945018	MW-24D	EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
92555945019	DUP-1	EPA 6020B	CW1	13
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1

Pace Project No.: 92555945

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92555945020	EB-1	SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
92555945021	FB-1	SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	1
		EPA 6020B	CW1	13
		SM 2540C-2011	ALW	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

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

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1
Pace Project No.: 92555945

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92555945001	MW-29					
	Performed by	CUSTOMER			08/17/21 16:35	
	pH	7.08	Std. Units		08/17/21 16:35	
EPA 6010D	Calcium	140	mg/L	1.0	08/25/21 16:13	
EPA 6020B	Barium	0.074	mg/L	0.0050	08/25/21 17:40	
EPA 6020B	Boron	1.1	mg/L	0.040	08/25/21 17:40	
EPA 6020B	Cobalt	0.0014J	mg/L	0.0050	08/25/21 17:40	
EPA 6020B	Lithium	0.0021J	mg/L	0.030	08/25/21 17:40	
EPA 6020B	Molybdenum	0.0027J	mg/L	0.010	08/25/21 17:40	
SM 2540C-2011	Total Dissolved Solids	512	mg/L	20.0	08/20/21 16:40	
EPA 300.0 Rev 2.1 1993	Chloride	68.0	mg/L	1.0	08/23/21 02:46	
EPA 300.0 Rev 2.1 1993	Sulfate	136	mg/L	3.0	08/23/21 14:45	
92555945002	HGWC-7					
	Performed by	CUSTOMER			08/17/21 16:35	
	pH	7.12	Std. Units		08/17/21 16:35	
EPA 6010D	Calcium	112	mg/L	1.0	08/25/21 16:43	M1
EPA 6020B	Antimony	0.0017J	mg/L	0.0030	08/25/21 18:04	
EPA 6020B	Barium	0.068	mg/L	0.0050	08/25/21 18:04	
EPA 6020B	Boron	1.1	mg/L	0.040	08/25/21 18:04	
EPA 6020B	Cobalt	0.0012J	mg/L	0.0050	08/25/21 18:04	
EPA 6020B	Lithium	0.0025J	mg/L	0.030	08/25/21 18:04	
EPA 6020B	Molybdenum	0.045	mg/L	0.010	08/25/21 18:04	
SM 2540C-2011	Total Dissolved Solids	407	mg/L	10.0	08/20/21 16:40	
EPA 300.0 Rev 2.1 1993	Chloride	40.3	mg/L	1.0	08/23/21 03:01	
EPA 300.0 Rev 2.1 1993	Fluoride	0.084J	mg/L	0.10	08/23/21 03:01	
EPA 300.0 Rev 2.1 1993	Sulfate	98.1	mg/L	2.0	08/23/21 15:01	
92555945003	MW-7					
	Performed by	CUSTOMER			08/18/21 16:34	
	pH	6.88	Std. Units		08/18/21 16:34	
EPA 6010D	Calcium	90.7	mg/L	1.0	08/25/21 17:02	
EPA 6020B	Barium	0.057	mg/L	0.0050	08/25/21 18:10	
EPA 6020B	Boron	0.20	mg/L	0.040	08/25/21 18:10	
EPA 6020B	Molybdenum	0.0030J	mg/L	0.010	08/25/21 18:10	
SM 2540C-2011	Total Dissolved Solids	344	mg/L	10.0	08/20/21 16:46	
EPA 300.0 Rev 2.1 1993	Chloride	8.9	mg/L	1.0	08/23/21 16:34	
EPA 300.0 Rev 2.1 1993	Sulfate	105	mg/L	2.0	08/24/21 00:06	
92555945004	MW-20					
	Performed by	CUSTOMER			08/18/21 16:34	
	pH	7.05	Std. Units		08/18/21 16:34	
EPA 6010D	Calcium	123	mg/L	1.0	08/25/21 17:07	
EPA 6020B	Barium	0.089	mg/L	0.0050	08/25/21 18:16	
EPA 6020B	Boron	0.11	mg/L	0.040	08/25/21 18:16	
EPA 6020B	Lithium	0.00091J	mg/L	0.030	08/25/21 18:16	
SM 2540C-2011	Total Dissolved Solids	437	mg/L	10.0	08/20/21 16:46	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1

Pace Project No.: 92555945

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92555945004	MW-20					
EPA 300.0 Rev 2.1 1993	Chloride	28.3	mg/L	1.0	08/23/21 17:25	
EPA 300.0 Rev 2.1 1993	Sulfate	98.6	mg/L	2.0	08/24/21 00:23	
92555945005	MW-5					
	Performed by	CUSTOMER			08/18/21 16:34	
	pH	5.99	Std. Units		08/18/21 16:34	
EPA 6010D	Calcium	73.3	mg/L	1.0	08/25/21 17:12	
EPA 6020B	Barium	0.045	mg/L	0.0050	08/25/21 18:22	
EPA 6020B	Boron	0.026J	mg/L	0.040	08/25/21 18:22	
EPA 6020B	Chromium	0.0018J	mg/L	0.0050	08/25/21 18:22	
EPA 6020B	Selenium	0.0017J	mg/L	0.0050	08/25/21 18:22	
SM 2540C-2011	Total Dissolved Solids	339	mg/L	10.0	08/20/21 16:46	
EPA 300.0 Rev 2.1 1993	Chloride	1.4	mg/L	1.0	08/23/21 17:42	
EPA 300.0 Rev 2.1 1993	Sulfate	154	mg/L	3.0	08/24/21 00:39	
92555945006	HGWC-10					
	Performed by	CUSTOMER			08/18/21 16:35	
	pH	6.75	Std. Units		08/18/21 16:35	
EPA 6010D	Calcium	153	mg/L	1.0	08/25/21 17:17	
EPA 6020B	Barium	0.055	mg/L	0.0050	08/26/21 17:32	
EPA 6020B	Boron	0.88	mg/L	0.040	08/26/21 17:32	
EPA 6020B	Molybdenum	0.0012J	mg/L	0.010	08/26/21 17:32	
SM 2540C-2011	Total Dissolved Solids	496	mg/L	20.0	08/20/21 16:46	
EPA 300.0 Rev 2.1 1993	Chloride	28.3	mg/L	1.0	08/25/21 04:52	
EPA 300.0 Rev 2.1 1993	Sulfate	156	mg/L	4.0	08/25/21 19:46	
92555945007	HGWC-9					
	Performed by	CUSTOMER			08/18/21 16:35	
	pH	7.10	Std. Units		08/18/21 16:35	
EPA 6010D	Calcium	183	mg/L	1.0	08/25/21 17:21	
EPA 6020B	Barium	0.095	mg/L	0.0050	08/26/21 17:38	
EPA 6020B	Boron	2.3	mg/L	0.040	08/26/21 17:38	
EPA 6020B	Cobalt	0.00045J	mg/L	0.0050	08/26/21 17:38	
EPA 6020B	Lithium	0.0040J	mg/L	0.030	08/26/21 17:38	
EPA 6020B	Molybdenum	0.035	mg/L	0.010	08/26/21 17:38	
SM 2540C-2011	Total Dissolved Solids	704	mg/L	20.0	08/20/21 16:46	
EPA 300.0 Rev 2.1 1993	Chloride	88.6	mg/L	1.0	08/25/21 05:09	
EPA 300.0 Rev 2.1 1993	Fluoride	0.095J	mg/L	0.10	08/25/21 05:09	
EPA 300.0 Rev 2.1 1993	Sulfate	207	mg/L	5.0	08/25/21 20:02	
92555945008	MW-26D					
	Performed by	CUSTOMER			08/18/21 16:35	
	pH	7.14	Std. Units		08/18/21 16:35	
EPA 6010D	Calcium	177	mg/L	1.0	08/25/21 17:26	
EPA 6020B	Barium	0.072	mg/L	0.0050	08/26/21 17:44	
EPA 6020B	Boron	2.2	mg/L	0.040	08/26/21 17:44	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1

Pace Project No.: 92555945

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92555945008	MW-26D					
EPA 6020B	Cobalt	0.00045J	mg/L	0.0050	08/26/21 17:44	
EPA 6020B	Lithium	0.0036J	mg/L	0.030	08/26/21 17:44	
EPA 6020B	Molybdenum	0.024	mg/L	0.010	08/26/21 17:44	
SM 2540C-2011	Total Dissolved Solids	746	mg/L	20.0	08/20/21 16:46	
EPA 300.0 Rev 2.1 1993	Chloride	89.2	mg/L	1.0	08/25/21 05:26	
EPA 300.0 Rev 2.1 1993	Fluoride	0.075J	mg/L	0.10	08/25/21 05:26	
EPA 300.0 Rev 2.1 1993	Sulfate	194	mg/L	4.0	08/25/21 20:19	
92555945009	MW-6					
	Performed by	CUSTOMER			08/18/21 16:35	
	pH	6.86	Std. Units		08/18/21 16:35	
EPA 6010D	Calcium	181	mg/L	1.0	08/25/21 17:41	
EPA 6020B	Barium	0.081	mg/L	0.0050	08/26/21 17:50	
EPA 6020B	Boron	0.85	mg/L	0.040	08/26/21 17:50	
EPA 6020B	Molybdenum	0.0027J	mg/L	0.010	08/26/21 17:50	
SM 2540C-2011	Total Dissolved Solids	656	mg/L	20.0	08/20/21 16:47	
EPA 300.0 Rev 2.1 1993	Chloride	43.5	mg/L	1.0	08/25/21 05:43	
EPA 300.0 Rev 2.1 1993	Fluoride	0.055J	mg/L	0.10	08/25/21 05:43	
EPA 300.0 Rev 2.1 1993	Sulfate	194	mg/L	4.0	08/25/21 21:09	
92555945010	MW-27D					
	Performed by	CUSTOMER			08/18/21 16:35	
	pH	7.75	Std. Units		08/18/21 16:35	
EPA 6010D	Calcium	28.5	mg/L	1.0	08/25/21 17:46	
EPA 6020B	Barium	1.1	mg/L	0.025	08/26/21 18:02	
EPA 6020B	Boron	0.14	mg/L	0.040	08/26/21 17:56	
EPA 6020B	Lithium	0.0079J	mg/L	0.030	08/26/21 17:56	
EPA 6020B	Molybdenum	0.0016J	mg/L	0.010	08/26/21 17:56	
SM 2540C-2011	Total Dissolved Solids	239	mg/L	10.0	08/20/21 16:47	
EPA 300.0 Rev 2.1 1993	Chloride	30.0	mg/L	1.0	08/25/21 06:00	
EPA 300.0 Rev 2.1 1993	Fluoride	0.24	mg/L	0.10	08/25/21 06:00	
EPA 300.0 Rev 2.1 1993	Sulfate	8.2	mg/L	1.0	08/25/21 06:00	
92555945011	MW-19					
	Performed by	CUSTOMER			08/19/21 17:04	
	pH	6.28	Std. Units		08/19/21 17:04	
EPA 6010D	Calcium	125	mg/L	1.0	08/25/21 17:51	
EPA 6020B	Barium	0.045	mg/L	0.0050	08/26/21 18:08	
EPA 6020B	Beryllium	0.000058J	mg/L	0.00050	08/26/21 18:08	
EPA 6020B	Boron	0.55	mg/L	0.040	08/26/21 18:08	
EPA 6020B	Cadmium	0.00027J	mg/L	0.00050	08/26/21 18:08	
EPA 6020B	Cobalt	0.039	mg/L	0.0050	08/26/21 18:08	
EPA 6020B	Lithium	0.014J	mg/L	0.030	08/26/21 18:08	
EPA 6020B	Molybdenum	0.032	mg/L	0.010	08/26/21 18:08	
EPA 6020B	Selenium	0.0026J	mg/L	0.0050	08/26/21 18:08	
EPA 6020B	Thallium	0.00023J	mg/L	0.0010	08/26/21 18:08	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1

Pace Project No.: 92555945

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92555945011	MW-19					
SM 2540C-2011	Total Dissolved Solids	464	mg/L	20.0	08/25/21 19:26	
EPA 300.0 Rev 2.1 1993	Chloride	14.3	mg/L	1.0	08/26/21 05:08	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	08/26/21 05:08	
EPA 300.0 Rev 2.1 1993	Sulfate	219	mg/L	5.0	08/31/21 18:07	M1,R1
92555945012	HGWC-11					
	Performed by	CUSTOME			08/19/21 17:05	
		R				
	pH	6.10	Std. Units		08/19/21 17:05	
EPA 6010D	Calcium	128	mg/L	1.0	08/25/21 17:56	
EPA 6020B	Barium	0.040	mg/L	0.0050	08/26/21 18:14	
EPA 6020B	Boron	0.91	mg/L	0.040	08/26/21 18:14	
EPA 6020B	Molybdenum	0.038	mg/L	0.010	08/26/21 18:14	
EPA 6020B	Selenium	0.0033J	mg/L	0.0050	08/26/21 18:14	
SM 2540C-2011	Total Dissolved Solids	566	mg/L	20.0	08/25/21 19:26	
EPA 300.0 Rev 2.1 1993	Chloride	19.9	mg/L	1.0	08/26/21 05:56	
EPA 300.0 Rev 2.1 1993	Fluoride	0.21	mg/L	0.10	08/26/21 05:56	
EPA 300.0 Rev 2.1 1993	Sulfate	237	mg/L	5.0	08/31/21 18:23	
92555945013	HGWC-12					
	Performed by	CUSTOME			08/19/21 17:05	
		R				
	pH	6.89	Std. Units		08/19/21 17:05	
EPA 6010D	Calcium	163	mg/L	1.0	08/25/21 18:00	
EPA 6020B	Arsenic	0.0028J	mg/L	0.0050	08/26/21 18:20	B
EPA 6020B	Barium	0.083	mg/L	0.0050	08/26/21 18:20	
EPA 6020B	Boron	1.9	mg/L	0.040	08/26/21 18:20	
EPA 6020B	Cobalt	0.0012J	mg/L	0.0050	08/26/21 18:20	
EPA 6020B	Lithium	0.0099J	mg/L	0.030	08/26/21 18:20	
EPA 6020B	Molybdenum	0.045	mg/L	0.010	08/26/21 18:20	
SM 2540C-2011	Total Dissolved Solids	600	mg/L	20.0	08/25/21 19:26	
EPA 300.0 Rev 2.1 1993	Chloride	47.3	mg/L	1.0	08/26/21 06:44	
EPA 300.0 Rev 2.1 1993	Fluoride	0.15	mg/L	0.10	08/26/21 06:44	
EPA 300.0 Rev 2.1 1993	Sulfate	226	mg/L	5.0	08/31/21 18:38	
92555945014	MW-28D					
	Performed by	CUSTOME			08/19/21 17:05	
		R				
	pH	7.16	Std. Units		08/19/21 17:05	
EPA 6010D	Calcium	82.8	mg/L	1.0	08/25/21 18:05	
EPA 6020B	Barium	0.53	mg/L	0.0050	08/26/21 18:26	
EPA 6020B	Boron	0.72	mg/L	0.040	08/26/21 18:26	
EPA 6020B	Lithium	0.0086J	mg/L	0.030	08/26/21 18:26	
EPA 6020B	Molybdenum	0.022	mg/L	0.010	08/26/21 18:26	
SM 2540C-2011	Total Dissolved Solids	396	mg/L	10.0	08/31/21 16:52	H1
EPA 300.0 Rev 2.1 1993	Chloride	33.7	mg/L	1.0	08/26/21 07:00	
EPA 300.0 Rev 2.1 1993	Fluoride	0.14	mg/L	0.10	08/26/21 07:00	
EPA 300.0 Rev 2.1 1993	Sulfate	82.1	mg/L	1.0	08/26/21 07:00	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1

Pace Project No.: 92555945

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92555945015	HGWC-8					
	Performed by	CUSTOME			08/19/21 17:05	
		R				
	pH	7.02	Std. Units		08/19/21 17:05	
EPA 6010D	Calcium	147	mg/L	1.0	08/25/21 18:10	
EPA 6020B	Barium	0.062	mg/L	0.0050	08/26/21 18:44	
EPA 6020B	Beryllium	0.000087J	mg/L	0.00050	08/26/21 18:44	
EPA 6020B	Boron	1.8	mg/L	0.040	08/26/21 18:44	
EPA 6020B	Cadmium	0.00020J	mg/L	0.00050	08/26/21 18:44	
EPA 6020B	Cobalt	0.0020J	mg/L	0.0050	08/26/21 18:44	
EPA 6020B	Lithium	0.0029J	mg/L	0.030	08/26/21 18:44	
EPA 6020B	Molybdenum	0.48	mg/L	0.010	08/26/21 18:44	
SM 2540C-2011	Total Dissolved Solids	620	mg/L	20.0	08/25/21 19:26	
EPA 300.0 Rev 2.1 1993	Chloride	50.9	mg/L	1.0	08/26/21 07:16	
EPA 300.0 Rev 2.1 1993	Fluoride	0.41	mg/L	0.10	08/26/21 07:16	
EPA 300.0 Rev 2.1 1993	Sulfate	245	mg/L	5.0	08/31/21 18:54	
92555945016	HGWC-13					
	Performed by	CUSTOME			08/20/21 15:34	
		R				
	pH	7.38	Std. Units		08/20/21 15:34	
EPA 6010D	Calcium	179	mg/L	1.0	08/25/21 18:15	
EPA 6020B	Arsenic	0.31	mg/L	0.0050	08/26/21 18:49	
EPA 6020B	Barium	0.049	mg/L	0.0050	08/26/21 18:49	
EPA 6020B	Beryllium	0.000073J	mg/L	0.00050	08/26/21 18:49	
EPA 6020B	Boron	0.73	mg/L	0.040	08/26/21 18:49	
EPA 6020B	Cobalt	0.0024J	mg/L	0.0050	08/26/21 18:49	
EPA 6020B	Lithium	0.028J	mg/L	0.030	08/26/21 18:49	
EPA 6020B	Molybdenum	0.032	mg/L	0.010	08/26/21 18:49	
EPA 6020B	Thallium	0.00020J	mg/L	0.0010	08/26/21 18:49	
SM 2540C-2011	Total Dissolved Solids	726	mg/L	20.0	08/26/21 18:47	
EPA 300.0 Rev 2.1 1993	Chloride	24.4	mg/L	1.0	08/27/21 15:00	
EPA 300.0 Rev 2.1 1993	Fluoride	0.53	mg/L	0.10	08/27/21 15:00	
EPA 300.0 Rev 2.1 1993	Sulfate	339	mg/L	8.0	08/27/21 22:07	
92555945017	MW-25D					
	Performed by	CUSTOME			08/20/21 15:34	
		R				
	pH	7.69	Std. Units		08/20/21 15:34	
EPA 6010D	Calcium	23.8	mg/L	1.0	08/25/21 18:20	
EPA 6020B	Barium	0.58	mg/L	0.0050	08/26/21 18:55	
EPA 6020B	Boron	0.40	mg/L	0.040	08/26/21 18:55	
EPA 6020B	Lithium	0.046	mg/L	0.030	08/26/21 18:55	
SM 2540C-2011	Total Dissolved Solids	373	mg/L	10.0	08/26/21 18:47	
EPA 300.0 Rev 2.1 1993	Chloride	30.8	mg/L	1.0	08/27/21 15:16	
EPA 300.0 Rev 2.1 1993	Fluoride	1.5	mg/L	0.10	08/27/21 15:16	
EPA 300.0 Rev 2.1 1993	Sulfate	4.1	mg/L	1.0	08/27/21 15:16	
92555945018	MW-24D					
	Performed by	CUSTOME			08/20/21 15:34	
		R				

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: HAMMOND AP-1

Pace Project No.: 92555945

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555945018	MW-24D					
	pH	7.61	Std. Units		08/20/21 15:34	
EPA 6010D	Calcium	99.5	mg/L	1.0	08/25/21 18:35	
EPA 6020B	Barium	0.048	mg/L	0.0050	08/26/21 19:01	
EPA 6020B	Boron	0.52	mg/L	0.040	08/26/21 19:01	
EPA 6020B	Lithium	0.0027J	mg/L	0.030	08/26/21 19:01	
EPA 6020B	Molybdenum	0.00087J	mg/L	0.010	08/26/21 19:01	
SM 2540C-2011	Total Dissolved Solids	420	mg/L	10.0	08/26/21 18:47	
EPA 300.0 Rev 2.1 1993	Chloride	37.2	mg/L	1.0	08/27/21 15:31	
EPA 300.0 Rev 2.1 1993	Sulfate	130	mg/L	3.0	08/27/21 22:22	
92555945019	DUP-1					
EPA 6010D	Calcium	179	mg/L	1.0	08/25/21 18:44	
EPA 6020B	Arsenic	0.31	mg/L	0.0050	08/26/21 19:07	
EPA 6020B	Barium	0.050	mg/L	0.0050	08/26/21 19:07	
EPA 6020B	Beryllium	0.000071J	mg/L	0.00050	08/26/21 19:07	
EPA 6020B	Boron	0.76	mg/L	0.040	08/26/21 19:07	
EPA 6020B	Cobalt	0.0024J	mg/L	0.0050	08/26/21 19:07	
EPA 6020B	Lithium	0.029J	mg/L	0.030	08/26/21 19:07	
EPA 6020B	Molybdenum	0.031	mg/L	0.010	08/26/21 19:07	
EPA 6020B	Thallium	0.00021J	mg/L	0.0010	08/26/21 19:07	
SM 2540C-2011	Total Dissolved Solids	740	mg/L	20.0	08/26/21 18:48	
EPA 300.0 Rev 2.1 1993	Chloride	24.4	mg/L	1.0	08/27/21 15:47	
EPA 300.0 Rev 2.1 1993	Fluoride	0.52	mg/L	0.10	08/27/21 15:47	
EPA 300.0 Rev 2.1 1993	Sulfate	346	mg/L	8.0	08/27/21 23:08	
92555945020	EB-1					
EPA 6010D	Calcium	0.18J	mg/L	1.0	08/25/21 18:49	
92555945021	FB-1					
SM 2540C-2011	Total Dissolved Solids	11.0	mg/L	10.0	08/26/21 18:48	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1
Pace Project No.: 92555945

Sample: MW-29		Lab ID: 92555945001		Collected: 08/16/21 17:06		Received: 08/17/21 11:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/17/21 16:35		
pH	7.08	Std. Units			1		08/17/21 16:35		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	140	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 16:13	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/25/21 17:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/25/21 17:40	7440-38-2	
Barium	0.074	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/25/21 17:40	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/25/21 17:40	7440-41-7	
Boron	1.1	mg/L	0.040	0.0086	1	08/25/21 10:14	08/25/21 17:40	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/25/21 17:40	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/25/21 17:40	7440-47-3	
Cobalt	0.0014J	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/25/21 17:40	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/25/21 17:40	7439-92-1	
Lithium	0.0021J	mg/L	0.030	0.00073	1	08/25/21 10:14	08/25/21 17:40	7439-93-2	
Molybdenum	0.0027J	mg/L	0.010	0.00074	1	08/25/21 10:14	08/25/21 17:40	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/25/21 17:40	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/25/21 17:40	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	512	mg/L	20.0	20.0	1		08/20/21 16:40		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	68.0	mg/L	1.0	0.60	1		08/23/21 02:46	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/23/21 02:46	16984-48-8	
Sulfate	136	mg/L	3.0	1.5	3		08/23/21 14:45	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1

Pace Project No.: 92555945

Sample: HGWC-7		Lab ID: 92555945002		Collected: 08/16/21 17:20		Received: 08/17/21 11:25		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/17/21 16:35		
pH	7.12	Std. Units			1		08/17/21 16:35		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	112	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 16:43	7440-70-2	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0017J	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/25/21 18:04	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/25/21 18:04	7440-38-2	
Barium	0.068	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/25/21 18:04	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/25/21 18:04	7440-41-7	
Boron	1.1	mg/L	0.040	0.0086	1	08/25/21 10:14	08/25/21 18:04	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/25/21 18:04	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/25/21 18:04	7440-47-3	
Cobalt	0.0012J	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/25/21 18:04	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/25/21 18:04	7439-92-1	
Lithium	0.0025J	mg/L	0.030	0.00073	1	08/25/21 10:14	08/25/21 18:04	7439-93-2	
Molybdenum	0.045	mg/L	0.010	0.00074	1	08/25/21 10:14	08/25/21 18:04	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/25/21 18:04	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/25/21 18:04	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	407	mg/L	10.0	10.0	1		08/20/21 16:40		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	40.3	mg/L	1.0	0.60	1		08/23/21 03:01	16887-00-6	
Fluoride	0.084J	mg/L	0.10	0.050	1		08/23/21 03:01	16984-48-8	
Sulfate	98.1	mg/L	2.0	1.0	2		08/23/21 15:01	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1

Pace Project No.: 92555945

Sample: MW-7 **Lab ID: 92555945003** Collected: 08/17/21 14:59 Received: 08/18/21 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/18/21 16:34		
pH	6.88	Std. Units			1		08/18/21 16:34		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	90.7	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 17:02	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/25/21 18:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/25/21 18:10	7440-38-2	
Barium	0.057	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/25/21 18:10	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/25/21 18:10	7440-41-7	
Boron	0.20	mg/L	0.040	0.0086	1	08/25/21 10:14	08/25/21 18:10	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/25/21 18:10	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/25/21 18:10	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/25/21 18:10	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/25/21 18:10	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/25/21 10:14	08/25/21 18:10	7439-93-2	
Molybdenum	0.0030J	mg/L	0.010	0.00074	1	08/25/21 10:14	08/25/21 18:10	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/25/21 18:10	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/25/21 18:10	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	344	mg/L	10.0	10.0	1		08/20/21 16:46		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	8.9	mg/L	1.0	0.60	1		08/23/21 16:34	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/23/21 16:34	16984-48-8	
Sulfate	105	mg/L	2.0	1.0	2		08/24/21 00:06	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1
Pace Project No.: 92555945

Sample: MW-20		Lab ID: 92555945004		Collected: 08/17/21 12:58		Received: 08/18/21 14:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/18/21 16:34		
pH	7.05	Std. Units			1		08/18/21 16:34		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	123	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 17:07	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/25/21 18:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/25/21 18:16	7440-38-2	
Barium	0.089	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/25/21 18:16	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/25/21 18:16	7440-41-7	
Boron	0.11	mg/L	0.040	0.0086	1	08/25/21 10:14	08/25/21 18:16	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/25/21 18:16	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/25/21 18:16	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/25/21 18:16	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/25/21 18:16	7439-92-1	
Lithium	0.00091J	mg/L	0.030	0.00073	1	08/25/21 10:14	08/25/21 18:16	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/25/21 10:14	08/25/21 18:16	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/25/21 18:16	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/25/21 18:16	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	437	mg/L	10.0	10.0	1		08/20/21 16:46		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	28.3	mg/L	1.0	0.60	1		08/23/21 17:25	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/23/21 17:25	16984-48-8	
Sulfate	98.6	mg/L	2.0	1.0	2		08/24/21 00:23	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1
Pace Project No.: 92555945

Sample: MW-5		Lab ID: 92555945005		Collected: 08/17/21 09:50		Received: 08/18/21 14:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/18/21 16:34		
pH	5.99	Std. Units			1		08/18/21 16:34		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	73.3	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 17:12	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/25/21 18:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/25/21 18:22	7440-38-2	
Barium	0.045	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/25/21 18:22	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/25/21 18:22	7440-41-7	
Boron	0.026J	mg/L	0.040	0.0086	1	08/25/21 10:14	08/25/21 18:22	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/25/21 18:22	7440-43-9	
Chromium	0.0018J	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/25/21 18:22	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/25/21 18:22	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/25/21 18:22	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/25/21 10:14	08/25/21 18:22	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/25/21 10:14	08/25/21 18:22	7439-98-7	
Selenium	0.0017J	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/25/21 18:22	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/25/21 18:22	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	339	mg/L	10.0	10.0	1		08/20/21 16:46		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	1.4	mg/L	1.0	0.60	1		08/23/21 17:42	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/23/21 17:42	16984-48-8	
Sulfate	154	mg/L	3.0	1.5	3		08/24/21 00:39	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1
Pace Project No.: 92555945

Sample: HGWC-10		Lab ID: 92555945006		Collected: 08/17/21 15:08		Received: 08/18/21 14:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/18/21 16:35		
pH	6.75	Std. Units			1		08/18/21 16:35		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	153	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 17:17	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/26/21 17:32	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 17:32	7440-38-2	
Barium	0.055	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/26/21 17:32	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/26/21 17:32	7440-41-7	
Boron	0.88	mg/L	0.040	0.0086	1	08/25/21 10:14	08/26/21 17:32	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/26/21 17:32	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 17:32	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/26/21 17:32	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/26/21 17:32	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/25/21 10:14	08/26/21 17:32	7439-93-2	
Molybdenum	0.0012J	mg/L	0.010	0.00074	1	08/25/21 10:14	08/26/21 17:32	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/26/21 17:32	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/26/21 17:32	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	496	mg/L	20.0	20.0	1		08/20/21 16:46		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	28.3	mg/L	1.0	0.60	1		08/25/21 04:52	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/25/21 04:52	16984-48-8	
Sulfate	156	mg/L	4.0	2.0	4		08/25/21 19:46	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1

Pace Project No.: 92555945

Sample: HGWC-9		Lab ID: 92555945007		Collected: 08/17/21 12:15		Received: 08/18/21 14:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/18/21 16:35		
pH	7.10	Std. Units			1		08/18/21 16:35		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	183	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 17:21	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/26/21 17:38	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 17:38	7440-38-2	
Barium	0.095	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/26/21 17:38	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/26/21 17:38	7440-41-7	
Boron	2.3	mg/L	0.040	0.0086	1	08/25/21 10:14	08/26/21 17:38	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/26/21 17:38	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 17:38	7440-47-3	
Cobalt	0.00045J	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/26/21 17:38	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/26/21 17:38	7439-92-1	
Lithium	0.0040J	mg/L	0.030	0.00073	1	08/25/21 10:14	08/26/21 17:38	7439-93-2	
Molybdenum	0.035	mg/L	0.010	0.00074	1	08/25/21 10:14	08/26/21 17:38	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/26/21 17:38	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/26/21 17:38	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	704	mg/L	20.0	20.0	1		08/20/21 16:46		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	88.6	mg/L	1.0	0.60	1		08/25/21 05:09	16887-00-6	
Fluoride	0.095J	mg/L	0.10	0.050	1		08/25/21 05:09	16984-48-8	
Sulfate	207	mg/L	5.0	2.5	5		08/25/21 20:02	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1
Pace Project No.: 92555945

Sample: MW-26D		Lab ID: 92555945008		Collected: 08/17/21 11:05		Received: 08/18/21 14:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/18/21 16:35		
pH	7.14	Std. Units			1		08/18/21 16:35		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	177	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 17:26	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/26/21 17:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 17:44	7440-38-2	
Barium	0.072	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/26/21 17:44	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/26/21 17:44	7440-41-7	
Boron	2.2	mg/L	0.040	0.0086	1	08/25/21 10:14	08/26/21 17:44	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/26/21 17:44	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 17:44	7440-47-3	
Cobalt	0.00045J	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/26/21 17:44	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/26/21 17:44	7439-92-1	
Lithium	0.0036J	mg/L	0.030	0.00073	1	08/25/21 10:14	08/26/21 17:44	7439-93-2	
Molybdenum	0.024	mg/L	0.010	0.00074	1	08/25/21 10:14	08/26/21 17:44	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/26/21 17:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/26/21 17:44	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	746	mg/L	20.0	20.0	1		08/20/21 16:46		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	89.2	mg/L	1.0	0.60	1		08/25/21 05:26	16887-00-6	
Fluoride	0.075J	mg/L	0.10	0.050	1		08/25/21 05:26	16984-48-8	
Sulfate	194	mg/L	4.0	2.0	4		08/25/21 20:19	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1
Pace Project No.: 92555945

Sample: MW-6		Lab ID: 92555945009		Collected: 08/17/21 09:35		Received: 08/18/21 14:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/18/21 16:35		
pH	6.86	Std. Units			1		08/18/21 16:35		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	181	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 17:41	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/26/21 17:50	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 17:50	7440-38-2	
Barium	0.081	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/26/21 17:50	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/26/21 17:50	7440-41-7	
Boron	0.85	mg/L	0.040	0.0086	1	08/25/21 10:14	08/26/21 17:50	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/26/21 17:50	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 17:50	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/26/21 17:50	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/26/21 17:50	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/25/21 10:14	08/26/21 17:50	7439-93-2	
Molybdenum	0.0027J	mg/L	0.010	0.00074	1	08/25/21 10:14	08/26/21 17:50	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/26/21 17:50	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/26/21 17:50	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	656	mg/L	20.0	20.0	1		08/20/21 16:47		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	43.5	mg/L	1.0	0.60	1		08/25/21 05:43	16887-00-6	
Fluoride	0.055J	mg/L	0.10	0.050	1		08/25/21 05:43	16984-48-8	
Sulfate	194	mg/L	4.0	2.0	4		08/25/21 21:09	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1
Pace Project No.: 92555945

Sample: MW-27D		Lab ID: 92555945010		Collected: 08/17/21 16:07		Received: 08/18/21 14:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/18/21 16:35		
pH	7.75	Std. Units			1		08/18/21 16:35		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	28.5	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 17:46	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/26/21 17:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 17:56	7440-38-2	
Barium	1.1	mg/L	0.025	0.0034	5	08/25/21 10:14	08/26/21 18:02	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/26/21 17:56	7440-41-7	
Boron	0.14	mg/L	0.040	0.0086	1	08/25/21 10:14	08/26/21 17:56	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/26/21 17:56	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 17:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/26/21 17:56	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/26/21 17:56	7439-92-1	
Lithium	0.0079J	mg/L	0.030	0.00073	1	08/25/21 10:14	08/26/21 17:56	7439-93-2	
Molybdenum	0.0016J	mg/L	0.010	0.00074	1	08/25/21 10:14	08/26/21 17:56	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/26/21 17:56	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/26/21 17:56	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	239	mg/L	10.0	10.0	1		08/20/21 16:47		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	30.0	mg/L	1.0	0.60	1		08/25/21 06:00	16887-00-6	
Fluoride	0.24	mg/L	0.10	0.050	1		08/25/21 06:00	16984-48-8	
Sulfate	8.2	mg/L	1.0	0.50	1		08/25/21 06:00	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1

Pace Project No.: 92555945

Sample: MW-19		Lab ID: 92555945011		Collected: 08/18/21 15:10		Received: 08/19/21 12:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/19/21 17:04		
pH	6.28	Std. Units			1		08/19/21 17:04		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	125	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 17:51	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/26/21 18:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 18:08	7440-38-2	
Barium	0.045	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/26/21 18:08	7440-39-3	
Beryllium	0.000058J	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/26/21 18:08	7440-41-7	
Boron	0.55	mg/L	0.040	0.0086	1	08/25/21 10:14	08/26/21 18:08	7440-42-8	
Cadmium	0.00027J	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/26/21 18:08	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 18:08	7440-47-3	
Cobalt	0.039	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/26/21 18:08	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/26/21 18:08	7439-92-1	
Lithium	0.014J	mg/L	0.030	0.00073	1	08/25/21 10:14	08/26/21 18:08	7439-93-2	
Molybdenum	0.032	mg/L	0.010	0.00074	1	08/25/21 10:14	08/26/21 18:08	7439-98-7	
Selenium	0.0026J	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/26/21 18:08	7782-49-2	
Thallium	0.00023J	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/26/21 18:08	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	464	mg/L	20.0	20.0	1		08/25/21 19:26		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	14.3	mg/L	1.0	0.60	1		08/26/21 05:08	16887-00-6	
Fluoride	0.12	mg/L	0.10	0.050	1		08/26/21 05:08	16984-48-8	
Sulfate	219	mg/L	5.0	2.5	5		08/31/21 18:07	14808-79-8	M1,R1

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ANALYTICAL RESULTS

Project: HAMMOND AP-1
Pace Project No.: 92555945

Sample: HGWC-11		Lab ID: 92555945012		Collected: 08/18/21 16:58		Received: 08/19/21 12:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/19/21 17:05		
pH	6.10	Std. Units			1		08/19/21 17:05		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	128	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 17:56	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/26/21 18:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 18:14	7440-38-2	
Barium	0.040	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/26/21 18:14	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/26/21 18:14	7440-41-7	
Boron	0.91	mg/L	0.040	0.0086	1	08/25/21 10:14	08/26/21 18:14	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/26/21 18:14	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 18:14	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/26/21 18:14	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/26/21 18:14	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/25/21 10:14	08/26/21 18:14	7439-93-2	
Molybdenum	0.038	mg/L	0.010	0.00074	1	08/25/21 10:14	08/26/21 18:14	7439-98-7	
Selenium	0.0033J	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/26/21 18:14	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/26/21 18:14	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	566	mg/L	20.0	20.0	1		08/25/21 19:26		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	19.9	mg/L	1.0	0.60	1		08/26/21 05:56	16887-00-6	
Fluoride	0.21	mg/L	0.10	0.050	1		08/26/21 05:56	16984-48-8	
Sulfate	237	mg/L	5.0	2.5	5		08/31/21 18:23	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1
Pace Project No.: 92555945

Sample: HGWC-12 Lab ID: 92555945013 Collected: 08/18/21 15:07 Received: 08/19/21 12:40 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/19/21 17:05		
pH	6.89	Std. Units			1		08/19/21 17:05		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	163	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 18:00	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/26/21 18:20	7440-36-0	
Arsenic	0.0028J	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 18:20	7440-38-2	B
Barium	0.083	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/26/21 18:20	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/26/21 18:20	7440-41-7	
Boron	1.9	mg/L	0.040	0.0086	1	08/25/21 10:14	08/26/21 18:20	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/26/21 18:20	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 18:20	7440-47-3	
Cobalt	0.0012J	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/26/21 18:20	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/26/21 18:20	7439-92-1	
Lithium	0.0099J	mg/L	0.030	0.00073	1	08/25/21 10:14	08/26/21 18:20	7439-93-2	
Molybdenum	0.045	mg/L	0.010	0.00074	1	08/25/21 10:14	08/26/21 18:20	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/26/21 18:20	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/26/21 18:20	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	600	mg/L	20.0	20.0	1		08/25/21 19:26		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	47.3	mg/L	1.0	0.60	1		08/26/21 06:44	16887-00-6	
Fluoride	0.15	mg/L	0.10	0.050	1		08/26/21 06:44	16984-48-8	
Sulfate	226	mg/L	5.0	2.5	5		08/31/21 18:38	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1

Pace Project No.: 92555945

Sample: MW-28D		Lab ID: 92555945014		Collected: 08/18/21 13:30		Received: 08/19/21 12:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/19/21 17:05		
pH	7.16	Std. Units			1		08/19/21 17:05		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Calcium	82.8	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 18:05	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/26/21 18:26	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 18:26	7440-38-2	
Barium	0.53	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/26/21 18:26	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/26/21 18:26	7440-41-7	
Boron	0.72	mg/L	0.040	0.0086	1	08/25/21 10:14	08/26/21 18:26	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/26/21 18:26	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 18:26	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/26/21 18:26	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/26/21 18:26	7439-92-1	
Lithium	0.0086J	mg/L	0.030	0.00073	1	08/25/21 10:14	08/26/21 18:26	7439-93-2	
Molybdenum	0.022	mg/L	0.010	0.00074	1	08/25/21 10:14	08/26/21 18:26	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/26/21 18:26	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/26/21 18:26	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	396	mg/L	10.0	10.0	1		08/31/21 16:52		H1
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	33.7	mg/L	1.0	0.60	1		08/26/21 07:00	16887-00-6	
Fluoride	0.14	mg/L	0.10	0.050	1		08/26/21 07:00	16984-48-8	
Sulfate	82.1	mg/L	1.0	0.50	1		08/26/21 07:00	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1
Pace Project No.: 92555945

Sample: HGWC-8 Lab ID: 92555945015 Collected: 08/18/21 10:37 Received: 08/19/21 12:40 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/19/21 17:05		
pH	7.02	Std. Units			1		08/19/21 17:05		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	147	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 18:10	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/26/21 18:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 18:44	7440-38-2	
Barium	0.062	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/26/21 18:44	7440-39-3	
Beryllium	0.000087J	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/26/21 18:44	7440-41-7	
Boron	1.8	mg/L	0.040	0.0086	1	08/25/21 10:14	08/26/21 18:44	7440-42-8	
Cadmium	0.00020J	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/26/21 18:44	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 18:44	7440-47-3	
Cobalt	0.0020J	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/26/21 18:44	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/26/21 18:44	7439-92-1	
Lithium	0.0029J	mg/L	0.030	0.00073	1	08/25/21 10:14	08/26/21 18:44	7439-93-2	
Molybdenum	0.48	mg/L	0.010	0.00074	1	08/25/21 10:14	08/26/21 18:44	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/26/21 18:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/26/21 18:44	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	620	mg/L	20.0	20.0	1		08/25/21 19:26		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	50.9	mg/L	1.0	0.60	1		08/26/21 07:16	16887-00-6	
Fluoride	0.41	mg/L	0.10	0.050	1		08/26/21 07:16	16984-48-8	
Sulfate	245	mg/L	5.0	2.5	5		08/31/21 18:54	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1
Pace Project No.: 92555945

Sample: HGWC-13 Lab ID: 92555945016 Collected: 08/19/21 10:43 Received: 08/20/21 12:15 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/20/21 15:34		
pH	7.38	Std. Units			1		08/20/21 15:34		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	179	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 18:15	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/26/21 18:49	7440-36-0	
Arsenic	0.31	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 18:49	7440-38-2	
Barium	0.049	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/26/21 18:49	7440-39-3	
Beryllium	0.000073J	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/26/21 18:49	7440-41-7	
Boron	0.73	mg/L	0.040	0.0086	1	08/25/21 10:14	08/26/21 18:49	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/26/21 18:49	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 18:49	7440-47-3	
Cobalt	0.0024J	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/26/21 18:49	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/26/21 18:49	7439-92-1	
Lithium	0.028J	mg/L	0.030	0.00073	1	08/25/21 10:14	08/26/21 18:49	7439-93-2	
Molybdenum	0.032	mg/L	0.010	0.00074	1	08/25/21 10:14	08/26/21 18:49	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/26/21 18:49	7782-49-2	
Thallium	0.00020J	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/26/21 18:49	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	726	mg/L	20.0	20.0	1		08/26/21 18:47		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	24.4	mg/L	1.0	0.60	1		08/27/21 15:00	16887-00-6	
Fluoride	0.53	mg/L	0.10	0.050	1		08/27/21 15:00	16984-48-8	
Sulfate	339	mg/L	8.0	4.0	8		08/27/21 22:07	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1
Pace Project No.: 92555945

Sample: MW-25D		Lab ID: 92555945017		Collected: 08/19/21 14:44		Received: 08/20/21 12:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/20/21 15:34		
pH	7.69	Std. Units			1		08/20/21 15:34		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	23.8	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 18:20	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/26/21 18:55	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 18:55	7440-38-2	
Barium	0.58	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/26/21 18:55	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/26/21 18:55	7440-41-7	
Boron	0.40	mg/L	0.040	0.0086	1	08/25/21 10:14	08/26/21 18:55	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/26/21 18:55	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 18:55	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/26/21 18:55	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/26/21 18:55	7439-92-1	
Lithium	0.046	mg/L	0.030	0.00073	1	08/25/21 10:14	08/26/21 18:55	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/25/21 10:14	08/26/21 18:55	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/26/21 18:55	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/26/21 18:55	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	373	mg/L	10.0	10.0	1		08/26/21 18:47		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	30.8	mg/L	1.0	0.60	1		08/27/21 15:16	16887-00-6	
Fluoride	1.5	mg/L	0.10	0.050	1		08/27/21 15:16	16984-48-8	
Sulfate	4.1	mg/L	1.0	0.50	1		08/27/21 15:16	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1
Pace Project No.: 92555945

Sample: MW-24D		Lab ID: 92555945018		Collected: 08/19/21 12:37		Received: 08/20/21 12:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/20/21 15:34		
pH	7.61	Std. Units			1		08/20/21 15:34		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	99.5	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 18:35	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/26/21 19:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 19:01	7440-38-2	
Barium	0.048	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/26/21 19:01	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/26/21 19:01	7440-41-7	
Boron	0.52	mg/L	0.040	0.0086	1	08/25/21 10:14	08/26/21 19:01	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/26/21 19:01	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 19:01	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/26/21 19:01	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/26/21 19:01	7439-92-1	
Lithium	0.0027J	mg/L	0.030	0.00073	1	08/25/21 10:14	08/26/21 19:01	7439-93-2	
Molybdenum	0.00087J	mg/L	0.010	0.00074	1	08/25/21 10:14	08/26/21 19:01	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/26/21 19:01	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/26/21 19:01	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	420	mg/L	10.0	10.0	1		08/26/21 18:47		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	37.2	mg/L	1.0	0.60	1		08/27/21 15:31	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/27/21 15:31	16984-48-8	
Sulfate	130	mg/L	3.0	1.5	3		08/27/21 22:22	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1

Pace Project No.: 92555945

Sample: DUP-1 **Lab ID: 92555945019** Collected: 08/19/21 00:00 Received: 08/20/21 12:15 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	179	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 18:44	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/26/21 19:07	7440-36-0	
Arsenic	0.31	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 19:07	7440-38-2	
Barium	0.050	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/26/21 19:07	7440-39-3	
Beryllium	0.000071J	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/26/21 19:07	7440-41-7	
Boron	0.76	mg/L	0.040	0.0086	1	08/25/21 10:14	08/26/21 19:07	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/26/21 19:07	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 19:07	7440-47-3	
Cobalt	0.0024J	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/26/21 19:07	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/26/21 19:07	7439-92-1	
Lithium	0.029J	mg/L	0.030	0.00073	1	08/25/21 10:14	08/26/21 19:07	7439-93-2	
Molybdenum	0.031	mg/L	0.010	0.00074	1	08/25/21 10:14	08/26/21 19:07	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/26/21 19:07	7782-49-2	
Thallium	0.00021J	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/26/21 19:07	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	740	mg/L	20.0	20.0	1		08/26/21 18:48		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	24.4	mg/L	1.0	0.60	1		08/27/21 15:47	16887-00-6	
Fluoride	0.52	mg/L	0.10	0.050	1		08/27/21 15:47	16984-48-8	
Sulfate	346	mg/L	8.0	4.0	8		08/27/21 23:08	14808-79-8	

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ANALYTICAL RESULTS

Project: HAMMOND AP-1

Pace Project No.: 92555945

Sample: EB-1 **Lab ID: 92555945020** Collected: 08/19/21 12:55 Received: 08/20/21 12:15 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	0.18J	mg/L	1.0	0.12	1	08/25/21 10:15	08/25/21 18:49	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/25/21 10:14	08/26/21 19:13	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 19:13	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	08/25/21 10:14	08/26/21 19:13	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/25/21 10:14	08/26/21 19:13	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/25/21 10:14	08/26/21 19:13	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/25/21 10:14	08/26/21 19:13	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/25/21 10:14	08/26/21 19:13	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/25/21 10:14	08/26/21 19:13	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/25/21 10:14	08/26/21 19:13	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/25/21 10:14	08/26/21 19:13	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/25/21 10:14	08/26/21 19:13	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/25/21 10:14	08/26/21 19:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/25/21 10:14	08/26/21 19:13	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/26/21 18:48		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		08/27/21 16:02	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/27/21 16:02	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/27/21 16:02	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: HAMMOND AP-1

Pace Project No.: 92555945

Sample: FB-1 **Lab ID: 92555945021** Collected: 08/19/21 12:50 Received: 08/20/21 12:15 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Calcium	ND	mg/L	1.0	0.12	1	08/26/21 09:58	08/26/21 13:40	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/26/21 09:56	08/31/21 15:25	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	08/26/21 09:56	08/31/21 15:25	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	08/26/21 09:56	08/31/21 15:25	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/26/21 09:56	08/31/21 15:25	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/26/21 09:56	08/31/21 15:25	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/26/21 09:56	08/31/21 15:25	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/26/21 09:56	08/31/21 15:25	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/26/21 09:56	08/31/21 15:25	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	08/26/21 09:56	08/31/21 15:25	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	08/26/21 09:56	08/31/21 15:25	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	08/26/21 09:56	08/31/21 15:25	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	08/26/21 09:56	08/31/21 15:25	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	08/26/21 09:56	08/31/21 15:25	7440-28-0	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	11.0	mg/L	10.0	10.0	1		08/26/21 18:48		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		08/27/21 16:17	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/27/21 16:17	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/27/21 16:17	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1
Pace Project No.: 92555945

QC Batch: 642818 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92555945001, 92555945002, 92555945003, 92555945004, 92555945005, 92555945006, 92555945007, 92555945008, 92555945009, 92555945010, 92555945011, 92555945012, 92555945013, 92555945014, 92555945015, 92555945016, 92555945017, 92555945018, 92555945019, 92555945020

METHOD BLANK: 3373153 Matrix: Water
Associated Lab Samples: 92555945001, 92555945002, 92555945003, 92555945004, 92555945005, 92555945006, 92555945007, 92555945008, 92555945009, 92555945010, 92555945011, 92555945012, 92555945013, 92555945014, 92555945015, 92555945016, 92555945017, 92555945018, 92555945019, 92555945020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/25/21 16:04	

LABORATORY CONTROL SAMPLE: 3373154

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3373155 3373156

Parameter	Units	3373155		3373156		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92555945002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Calcium	mg/L	112	1	1	113	114	76	243	75-125	1	20 M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-1

Pace Project No.: 92555945

QC Batch: 643161

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010D ATL

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92555945021

METHOD BLANK: 3374851

Matrix: Water

Associated Lab Samples: 92555945021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/26/21 12:37	

LABORATORY CONTROL SAMPLE: 3374852

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3374853 3374854

Parameter	Units	92555938008		3374854		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	139	1	1	137	134	-232	-508	75-125	2	20 M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-1
Pace Project No.: 92555945

QC Batch: 642817 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92555945001, 92555945002, 92555945003, 92555945004, 92555945005, 92555945006, 92555945007, 92555945008, 92555945009, 92555945010, 92555945011, 92555945012, 92555945013, 92555945014, 92555945015, 92555945016, 92555945017, 92555945018, 92555945019, 92555945020

METHOD BLANK: 3373149 Matrix: Water
Associated Lab Samples: 92555945001, 92555945002, 92555945003, 92555945004, 92555945005, 92555945006, 92555945007, 92555945008, 92555945009, 92555945010, 92555945011, 92555945012, 92555945013, 92555945014, 92555945015, 92555945016, 92555945017, 92555945018, 92555945019, 92555945020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/25/21 17:28	
Arsenic	mg/L	0.0028J	0.0050	0.0011	08/25/21 17:28	
Barium	mg/L	ND	0.0050	0.00067	08/25/21 17:28	
Beryllium	mg/L	ND	0.00050	0.000054	08/25/21 17:28	
Boron	mg/L	ND	0.040	0.0086	08/25/21 17:28	
Cadmium	mg/L	ND	0.00050	0.00011	08/25/21 17:28	
Chromium	mg/L	ND	0.0050	0.0011	08/25/21 17:28	
Cobalt	mg/L	ND	0.0050	0.00039	08/25/21 17:28	
Lead	mg/L	ND	0.0010	0.00089	08/25/21 17:28	
Lithium	mg/L	ND	0.030	0.00073	08/25/21 17:28	
Molybdenum	mg/L	ND	0.010	0.00074	08/25/21 17:28	
Selenium	mg/L	ND	0.0050	0.0014	08/25/21 17:28	
Thallium	mg/L	ND	0.0010	0.00018	08/25/21 17:28	

LABORATORY CONTROL SAMPLE: 3373150

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	101	80-120	
Arsenic	mg/L	0.1	0.10	102	80-120	
Barium	mg/L	0.1	0.094	94	80-120	
Beryllium	mg/L	0.1	0.10	101	80-120	
Boron	mg/L	1	1.0	103	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.10	104	80-120	
Cobalt	mg/L	0.1	0.10	102	80-120	
Lead	mg/L	0.1	0.096	96	80-120	
Lithium	mg/L	0.1	0.099	99	80-120	
Molybdenum	mg/L	0.1	0.099	99	80-120	
Selenium	mg/L	0.1	0.10	101	80-120	
Thallium	mg/L	0.1	0.097	97	80-120	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1

Pace Project No.: 92555945

Parameter	Units	3373151		3373152		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		92555945001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	104	102	75-125	2	20		
Arsenic	mg/L	ND	0.1	0.1	0.097	0.097	97	97	75-125	0	20		
Barium	mg/L	0.074	0.1	0.1	0.18	0.18	110	111	75-125	1	20		
Beryllium	mg/L	ND	0.1	0.1	0.095	0.096	95	95	75-125	0	20		
Boron	mg/L	1.1	1	1	2.2	2.3	110	117	75-125	3	20		
Cadmium	mg/L	ND	0.1	0.1	0.095	0.099	95	99	75-125	4	20		
Chromium	mg/L	ND	0.1	0.1	0.099	0.10	98	101	75-125	3	20		
Cobalt	mg/L	0.0014J	0.1	0.1	0.097	0.099	96	97	75-125	2	20		
Lead	mg/L	ND	0.1	0.1	0.091	0.090	91	90	75-125	1	20		
Lithium	mg/L	0.0021J	0.1	0.1	0.10	0.099	97	97	75-125	0	20		
Molybdenum	mg/L	0.0027J	0.1	0.1	0.10	0.10	101	98	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20		
Thallium	mg/L	ND	0.1	0.1	0.093	0.092	93	92	75-125	1	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-1
Pace Project No.: 92555945

QC Batch: 643162 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92555945021

METHOD BLANK: 3374855 Matrix: Water
Associated Lab Samples: 92555945021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/31/21 14:14	
Arsenic	mg/L	ND	0.0050	0.0011	08/31/21 14:14	
Barium	mg/L	ND	0.0050	0.00067	08/31/21 14:14	
Beryllium	mg/L	ND	0.00050	0.000054	08/31/21 14:14	
Boron	mg/L	ND	0.040	0.0086	08/31/21 14:14	
Cadmium	mg/L	ND	0.00050	0.00011	08/31/21 14:14	
Chromium	mg/L	ND	0.0050	0.0011	08/31/21 14:14	
Cobalt	mg/L	ND	0.0050	0.00039	08/31/21 14:14	
Lead	mg/L	ND	0.0010	0.00089	08/31/21 14:14	
Lithium	mg/L	ND	0.030	0.00073	08/31/21 14:14	
Molybdenum	mg/L	ND	0.010	0.00074	08/31/21 14:14	
Selenium	mg/L	ND	0.0050	0.0014	08/31/21 14:14	
Thallium	mg/L	ND	0.0010	0.00018	08/31/21 14:14	

LABORATORY CONTROL SAMPLE: 3374856

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.097	97	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.095	95	80-120	
Beryllium	mg/L	0.1	0.096	96	80-120	
Boron	mg/L	1	0.96	96	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.10	102	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.10	101	80-120	
Molybdenum	mg/L	0.1	0.097	97	80-120	
Selenium	mg/L	0.1	0.099	99	80-120	
Thallium	mg/L	0.1	0.094	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3374857 3374858

Parameter	Units	92555938008 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.10	0.098	100	98	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.098	100	98	75-125	2	20	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1

Pace Project No.: 92555945

Parameter	Units	3374857		3374858		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92555938008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	0.27	0.1	0.1	0.36	0.35	89	86	75-125	1	20		
Beryllium	mg/L	ND	0.1	0.1	0.090	0.093	90	93	75-125	3	20		
Boron	mg/L	0.011J	1	1	0.90	0.92	89	91	75-125	2	20		
Cadmium	mg/L	ND	0.1	0.1	0.099	0.099	99	99	75-125	0	20		
Chromium	mg/L	ND	0.1	0.1	0.10	0.11	101	105	75-125	4	20		
Cobalt	mg/L	ND	0.1	0.1	0.10	0.10	100	101	75-125	1	20		
Lead	mg/L	ND	0.1	0.1	0.096	0.095	96	95	75-125	1	20		
Lithium	mg/L	0.0032J	0.1	0.1	0.096	0.099	93	96	75-125	3	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	101	103	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.099	0.098	98	97	75-125	1	20		
Thallium	mg/L	ND	0.1	0.1	0.095	0.095	95	95	75-125	0	20		

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QUALITY CONTROL DATA

Project: HAMMOND AP-1

Pace Project No.: 92555945

QC Batch: 642065

Analysis Method: SM 2540C-2011

QC Batch Method: SM 2540C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92555945001, 92555945002

METHOD BLANK: 3369958

Matrix: Water

Associated Lab Samples: 92555945001, 92555945002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/20/21 16:39	

LABORATORY CONTROL SAMPLE: 3369959

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	394	98	90-111	

SAMPLE DUPLICATE: 3369960

Parameter	Units	92555938001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	626	678	8	10	

SAMPLE DUPLICATE: 3369961

Parameter	Units	92555948005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	298	314	5	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1
Pace Project No.: 92555945

QC Batch: 642067 Analysis Method: SM 2540C-2011
QC Batch Method: SM 2540C-2011 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92555945003, 92555945004, 92555945005, 92555945006, 92555945007, 92555945008, 92555945009, 92555945010

METHOD BLANK: 3369965 Matrix: Water
Associated Lab Samples: 92555945003, 92555945004, 92555945005, 92555945006, 92555945007, 92555945008, 92555945009, 92555945010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/20/21 16:46	

LABORATORY CONTROL SAMPLE: 3369966

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	383	96	90-111	

SAMPLE DUPLICATE: 3369967

Parameter	Units	92555895001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	533	566	6	10	

SAMPLE DUPLICATE: 3369968

Parameter	Units	92556790001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	38.0	52.0	31	10 D6	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1
Pace Project No.: 92555945

QC Batch: 642673 Analysis Method: SM 2540C-2011
QC Batch Method: SM 2540C-2011 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92555945011, 92555945012, 92555945013, 92555945015

METHOD BLANK: 3372850 Matrix: Water
Associated Lab Samples: 92555945011, 92555945012, 92555945013, 92555945015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/25/21 19:25	

LABORATORY CONTROL SAMPLE: 3372851

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	392	98	90-111	

SAMPLE DUPLICATE: 3372852

Parameter	Units	92555504010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2390	2610	9	10	

SAMPLE DUPLICATE: 3372853

Parameter	Units	92555948008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	666	696	4	10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1
Pace Project No.: 92555945

QC Batch: 643140 Analysis Method: SM 2540C-2011
QC Batch Method: SM 2540C-2011 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92555945016, 92555945017, 92555945018, 92555945019, 92555945020, 92555945021

METHOD BLANK: 3374769 Matrix: Water
Associated Lab Samples: 92555945016, 92555945017, 92555945018, 92555945019, 92555945020, 92555945021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/26/21 18:46	

LABORATORY CONTROL SAMPLE: 3374770

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	409	102	90-111	

SAMPLE DUPLICATE: 3374771

Parameter	Units	92555504015 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	816	876	7	10	

SAMPLE DUPLICATE: 3374772

Parameter	Units	92555938012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		10	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1
Pace Project No.: 92555945

QC Batch: 644074	Analysis Method: SM 2540C-2011
QC Batch Method: SM 2540C-2011	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92555945014

METHOD BLANK: 3379370 Matrix: Water
Associated Lab Samples: 92555945014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/31/21 16:50	

LABORATORY CONTROL SAMPLE: 3379371

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	405	101	90-111	

SAMPLE DUPLICATE: 3379372

Parameter	Units	92558254005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	123	128	4	10	

SAMPLE DUPLICATE: 3379373

Parameter	Units	92558251001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	150	151	1	10	

SAMPLE DUPLICATE: 3380417

Parameter	Units	92555945014 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	396	414	4	10 H1	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: HAMMOND AP-1

Pace Project No.: 92555945

QC Batch: 642138	Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993	Analysis Description: 300.0 IC Anions
	Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92555945001, 92555945002

METHOD BLANK: 3370171 Matrix: Water

Associated Lab Samples: 92555945001, 92555945002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/22/21 20:47	
Fluoride	mg/L	ND	0.10	0.050	08/22/21 20:47	
Sulfate	mg/L	ND	1.0	0.50	08/22/21 20:47	

LABORATORY CONTROL SAMPLE: 3370172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.1	98	90-110	
Fluoride	mg/L	2.5	2.4	98	90-110	
Sulfate	mg/L	50	48.8	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3370173 3370174

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92555535001	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	14.0	50	50	65.0	66.6	102	105	90-110	2	10		
Fluoride	mg/L	0.19	2.5	2.5	2.7	2.8	102	104	90-110	2	10		
Sulfate	mg/L	35.2	50	50	84.4	85.9	98	101	90-110	2	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3370177 3370178

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92555938002	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	2.4	50	50	54.7	55.6	104	106	90-110	2	10		
Fluoride	mg/L	0.39	2.5	2.5	3.0	3.0	104	106	90-110	2	10		
Sulfate	mg/L	211	50	50	255	257	88	92	90-110	1	10 M1		

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QUALITY CONTROL DATA

Project: HAMMOND AP-1

Pace Project No.: 92555945

QC Batch: 642141 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: 92555945003, 92555945004, 92555945005

METHOD BLANK: 3370192 Matrix: Water
 Associated Lab Samples: 92555945003, 92555945004, 92555945005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/23/21 08:57	
Fluoride	mg/L	ND	0.10	0.050	08/23/21 08:57	
Sulfate	mg/L	ND	1.0	0.50	08/23/21 08:57	

LABORATORY CONTROL SAMPLE: 3370193

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	46.3	93	90-110	
Fluoride	mg/L	2.5	2.3	94	90-110	
Sulfate	mg/L	50	47.5	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3370194 3370195

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92554680004	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	1.3	50	50	50.4	51.2	98	100	90-110	2	10		
Fluoride	mg/L	0.28	2.5	2.5	2.8	2.8	100	102	90-110	2	10		
Sulfate	mg/L	19.7	50	50	70.7	71.7	102	104	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3370196 3370197

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92554680014	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	3.8	50	50	53.3	54.4	99	101	90-110	2	10		
Fluoride	mg/L	ND	2.5	2.5	2.5	2.6	99	101	90-110	2	10		
Sulfate	mg/L	1.8	50	50	52.5	53.8	101	104	90-110	2	10		

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QUALITY CONTROL DATA

Project: HAMMOND AP-1

Pace Project No.: 92555945

QC Batch: 642667 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: 92555945006, 92555945007, 92555945008, 92555945009, 92555945010

METHOD BLANK: 3372760 Matrix: Water
 Associated Lab Samples: 92555945006, 92555945007, 92555945008, 92555945009, 92555945010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/24/21 21:33	
Fluoride	mg/L	ND	0.10	0.050	08/24/21 21:33	
Sulfate	mg/L	ND	1.0	0.50	08/24/21 21:33	

LABORATORY CONTROL SAMPLE: 3372761

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.4	97	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	50.1	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3372762 3372763

Parameter	Units	92557183003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	18300	50	50	9240	18400	-18100	132	90-110	66	10	M1, R1
Fluoride	mg/L	ND	2.5	2.5	5.5J	11.0J	-132	88	90-110		10	M1
Sulfate	mg/L	1050	50	50	554	1100	-999	100	90-110	66	10	M1, R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3372764 3372765

Parameter	Units	92556844010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	214	50	50	255	257	81	86	90-110	1	10	M1
Fluoride	mg/L	3.8	2.5	2.5	4.1	4.4	11	20	90-110	5	10	M1
Sulfate	mg/L	98.0	50	50	141	143	86	90	90-110	1	10	M1

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QUALITY CONTROL DATA

Project: HAMMOND AP-1
Pace Project No.: 92555945

QC Batch: 642990 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92555945011, 92555945012, 92555945013, 92555945014, 92555945015

METHOD BLANK: 3374032 Matrix: Water
Associated Lab Samples: 92555945011, 92555945012, 92555945013, 92555945014, 92555945015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/26/21 00:53	
Fluoride	mg/L	ND	0.10	0.050	08/26/21 00:53	
Sulfate	mg/L	ND	1.0	0.50	08/26/21 00:53	

LABORATORY CONTROL SAMPLE: 3374033

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.8	98	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	48.4	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3374034 3374035

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92557349005	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	248	50	50	144	155	-207	-187	90-110	7	10	M1	
Fluoride	mg/L	8.9	2.5	2.5	5.4	5.7	-139	-128	90-110	5	10	M1	
Sulfate	mg/L	1040	50	50	1040	1090	-16	89	90-110	5	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3374036 3374037

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92555945011	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	14.3	50	50	65.1	67.7	101	107	90-110	4	10		
Fluoride	mg/L	0.12	2.5	2.5	2.4	2.5	91	97	90-110	6	10		
Sulfate	mg/L	219	50	50	321	254	204	68	90-110	24	10	M1,R1	

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QUALITY CONTROL DATA

Project: HAMMOND AP-1
Pace Project No.: 92555945

QC Batch: 643306 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92555945016, 92555945017, 92555945018, 92555945019, 92555945020, 92555945021

METHOD BLANK: 3375691 Matrix: Water
Associated Lab Samples: 92555945016, 92555945017, 92555945018, 92555945019, 92555945020, 92555945021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/27/21 07:35	
Fluoride	mg/L	ND	0.10	0.050	08/27/21 07:35	
Sulfate	mg/L	ND	1.0	0.50	08/27/21 07:35	

LABORATORY CONTROL SAMPLE: 3375692

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	47.1	94	90-110	
Fluoride	mg/L	2.5	2.4	95	90-110	
Sulfate	mg/L	50	47.6	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3375693 3375694

Parameter	Units	92555504012		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Chloride	mg/L	118	50	50	160	160	84	85	90-110	0	10	M1	
Fluoride	mg/L	ND	2.5	2.5	2.3	2.4	92	94	90-110	2	10		
Sulfate	mg/L	412	50	50	453	454	84	85	90-110	0	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3375695 3375696

Parameter	Units	92555938009		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Chloride	mg/L	4.5	50	50	52.3	52.6	96	96	90-110	1	10		
Fluoride	mg/L	0.17	2.5	2.5	2.5	2.6	95	96	90-110	1	10		
Sulfate	mg/L	264	50	50	305	306	82	83	90-110	0	10	M1	

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QUALIFIERS

Project: HAMMOND AP-1

Pace Project No.: 92555945

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

H1 Analysis conducted outside the EPA method holding time.

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

R1 RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1
Pace Project No.: 92555945

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555945001	MW-29				
92555945002	HGWC-7				
92555945003	MW-7				
92555945004	MW-20				
92555945005	MW-5				
92555945006	HGWC-10				
92555945007	HGWC-9				
92555945008	MW-26D				
92555945009	MW-6				
92555945010	MW-27D				
92555945011	MW-19				
92555945012	HGWC-11				
92555945013	HGWC-12				
92555945014	MW-28D				
92555945015	HGWC-8				
92555945016	HGWC-13				
92555945017	MW-25D				
92555945018	MW-24D				
92555945001	MW-29	EPA 3010A	642818	EPA 6010D	642904
92555945002	HGWC-7	EPA 3010A	642818	EPA 6010D	642904
92555945003	MW-7	EPA 3010A	642818	EPA 6010D	642904
92555945004	MW-20	EPA 3010A	642818	EPA 6010D	642904
92555945005	MW-5	EPA 3010A	642818	EPA 6010D	642904
92555945006	HGWC-10	EPA 3010A	642818	EPA 6010D	642904
92555945007	HGWC-9	EPA 3010A	642818	EPA 6010D	642904
92555945008	MW-26D	EPA 3010A	642818	EPA 6010D	642904
92555945009	MW-6	EPA 3010A	642818	EPA 6010D	642904
92555945010	MW-27D	EPA 3010A	642818	EPA 6010D	642904
92555945011	MW-19	EPA 3010A	642818	EPA 6010D	642904
92555945012	HGWC-11	EPA 3010A	642818	EPA 6010D	642904
92555945013	HGWC-12	EPA 3010A	642818	EPA 6010D	642904
92555945014	MW-28D	EPA 3010A	642818	EPA 6010D	642904
92555945015	HGWC-8	EPA 3010A	642818	EPA 6010D	642904
92555945016	HGWC-13	EPA 3010A	642818	EPA 6010D	642904
92555945017	MW-25D	EPA 3010A	642818	EPA 6010D	642904
92555945018	MW-24D	EPA 3010A	642818	EPA 6010D	642904
92555945019	DUP-1	EPA 3010A	642818	EPA 6010D	642904
92555945020	EB-1	EPA 3010A	642818	EPA 6010D	642904
92555945021	FB-1	EPA 3010A	643161	EPA 6010D	643227
92555945001	MW-29	EPA 3005A	642817	EPA 6020B	642932
92555945002	HGWC-7	EPA 3005A	642817	EPA 6020B	642932
92555945003	MW-7	EPA 3005A	642817	EPA 6020B	642932
92555945004	MW-20	EPA 3005A	642817	EPA 6020B	642932
92555945005	MW-5	EPA 3005A	642817	EPA 6020B	642932
92555945006	HGWC-10	EPA 3005A	642817	EPA 6020B	642932
92555945007	HGWC-9	EPA 3005A	642817	EPA 6020B	642932
92555945008	MW-26D	EPA 3005A	642817	EPA 6020B	642932

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1
Pace Project No.: 92555945

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555945009	MW-6	EPA 3005A	642817	EPA 6020B	642932
92555945010	MW-27D	EPA 3005A	642817	EPA 6020B	642932
92555945011	MW-19	EPA 3005A	642817	EPA 6020B	642932
92555945012	HGWC-11	EPA 3005A	642817	EPA 6020B	642932
92555945013	HGWC-12	EPA 3005A	642817	EPA 6020B	642932
92555945014	MW-28D	EPA 3005A	642817	EPA 6020B	642932
92555945015	HGWC-8	EPA 3005A	642817	EPA 6020B	642932
92555945016	HGWC-13	EPA 3005A	642817	EPA 6020B	642932
92555945017	MW-25D	EPA 3005A	642817	EPA 6020B	642932
92555945018	MW-24D	EPA 3005A	642817	EPA 6020B	642932
92555945019	DUP-1	EPA 3005A	642817	EPA 6020B	642932
92555945020	EB-1	EPA 3005A	642817	EPA 6020B	642932
92555945021	FB-1	EPA 3005A	643162	EPA 6020B	643244
92555945001	MW-29	SM 2540C-2011	642065		
92555945002	HGWC-7	SM 2540C-2011	642065		
92555945003	MW-7	SM 2540C-2011	642067		
92555945004	MW-20	SM 2540C-2011	642067		
92555945005	MW-5	SM 2540C-2011	642067		
92555945006	HGWC-10	SM 2540C-2011	642067		
92555945007	HGWC-9	SM 2540C-2011	642067		
92555945008	MW-26D	SM 2540C-2011	642067		
92555945009	MW-6	SM 2540C-2011	642067		
92555945010	MW-27D	SM 2540C-2011	642067		
92555945011	MW-19	SM 2540C-2011	642673		
92555945012	HGWC-11	SM 2540C-2011	642673		
92555945013	HGWC-12	SM 2540C-2011	642673		
92555945014	MW-28D	SM 2540C-2011	644074		
92555945015	HGWC-8	SM 2540C-2011	642673		
92555945016	HGWC-13	SM 2540C-2011	643140		
92555945017	MW-25D	SM 2540C-2011	643140		
92555945018	MW-24D	SM 2540C-2011	643140		
92555945019	DUP-1	SM 2540C-2011	643140		
92555945020	EB-1	SM 2540C-2011	643140		
92555945021	FB-1	SM 2540C-2011	643140		
92555945001	MW-29	EPA 300.0 Rev 2.1 1993	642138		
92555945002	HGWC-7	EPA 300.0 Rev 2.1 1993	642138		
92555945003	MW-7	EPA 300.0 Rev 2.1 1993	642141		
92555945004	MW-20	EPA 300.0 Rev 2.1 1993	642141		
92555945005	MW-5	EPA 300.0 Rev 2.1 1993	642141		
92555945006	HGWC-10	EPA 300.0 Rev 2.1 1993	642667		
92555945007	HGWC-9	EPA 300.0 Rev 2.1 1993	642667		
92555945008	MW-26D	EPA 300.0 Rev 2.1 1993	642667		
92555945009	MW-6	EPA 300.0 Rev 2.1 1993	642667		
92555945010	MW-27D	EPA 300.0 Rev 2.1 1993	642667		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1

Pace Project No.: 92555945

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555945011	MW-19	EPA 300.0 Rev 2.1 1993	642990		
92555945012	HGWC-11	EPA 300.0 Rev 2.1 1993	642990		
92555945013	HGWC-12	EPA 300.0 Rev 2.1 1993	642990		
92555945014	MW-28D	EPA 300.0 Rev 2.1 1993	642990		
92555945015	HGWC-8	EPA 300.0 Rev 2.1 1993	642990		
92555945016	HGWC-13	EPA 300.0 Rev 2.1 1993	643306		
92555945017	MW-25D	EPA 300.0 Rev 2.1 1993	643306		
92555945018	MW-24D	EPA 300.0 Rev 2.1 1993	643306		
92555945019	DUP-1	EPA 300.0 Rev 2.1 1993	643306		
92555945020	EB-1	EPA 300.0 Rev 2.1 1993	643306		
92555945021	FB-1	EPA 300.0 Rev 2.1 1993	643306		

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Document Name:
Sample Condition Upon Receipt(SCUR)

Document Revised: October 28, 2020
Page 1 of 2

Document No.:
F-CAR-CS-033-Rev.07

Issuing Authority:
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
Upon Receipt

Client Name:

Project #:

WO#: 92555945



Courier: Fed Ex UPS USPS Client
 Commercial Pace Other:

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 3/17/21 KAW

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer: IR-Gun ID: 7112230 Type of Ice: Wet Blue None

Cooler Temp: 1.7 Correction Factor: Add/Subtract (°C) +0.1

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 1.8

USDA Regulated Soil (N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



Document Name:
Sample Condition Upon Receipt(SCUR)

Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020

Page 2 of 2

Issuing Authority:
Pace Carolinas Quality Office

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

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

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

Project #

WO# : 92555945

PM: NMG

Due Date: 08/31/21

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-S035 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)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

pH Adjustment Log for Preserved Samples

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

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

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

Section A Required Client Information
 Company: GA Power
 Address: Atlanta, GA
 Email To: SCS Contacts
 Phone: _____
 Requested Due Date/TAT: to Day

Section B Required Project Information
 Report To: SCS Contacts
 Copy To: Geosyntec Contacts
 Purchase Order No.: _____
 Project Name: Hammond AP-1
 Project Number: _____

Section C Invoice Information
 Attention: Southern Co.
 Company Name: _____
 Address: _____
 Pace Custs Reference: _____
 Pace Project Manager: Kevin Herring
 Pace Order #: 10839

REGULATORY AGENCY
 NPDES GROUND WATER
 LIST RCRA
 OTHER CCR
 Site Location STATE: GA

Section D Valid Matrix Codes
 MATRIX CODE (see valid codes to left)
 SAMPLE TYPE (G=GRAB C=COMP)
 DATE TIME
 SAMPLE TEMP AT COLLECTION
 # OF CONTAINERS
 Unpreserved
 H₂SO₄
 HNO₃
 HCl
 NaOH
 Na₂S₂O₃
 Methanol
 Other
 Analysis Test
 Chloride, Fluoride, Sulfate
 Sb, As, Ba, Be, B, Cd, Ca
 Cr, Co, Pb, Li, Mo, Se, Ti
 RAD 226/228
 TDS
 Residual Chlorine (Y/N)
 Pace Project No./ Lab ID.

ITEM #	MATRIX CODE	SAMPLE TYPE	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	Temp in °C	Received on Ion (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1	MMW-29	WT G	8/16/21	17:06	21	5	2	3	8/17/21	11:25				
2	HGWC-7	WT G	8/16/21	17:20	21	5	2	3	8/17/21	15:00				
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														

ADDITIONAL COMMENTS
 REMUNISHED BY / AFFILIATION
 DATE
 TIME
 ACCEPTED BY / AFFILIATION
 DATE
 TIME
 SAMPLE CONDITIONS
 PH = 7.08
 PH = 7.12
 TJ
 8/16/2021

PRINT Name of SAMPLER: _____
 SIGNATURE of SAMPLER: _____
 DATE Signed (MANDATORY): 8/16/2021

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Project #: **WO# : 92555945**

PM: NMG Due Date: 08/31/21
CLIENT: GA-GA Power

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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 8/18/21 REC

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: In Gun ID: THPR2 Type of Ice: Wet Blue None

Cooler Temp: 2.6 | 3.8 Correction Factor: Add/Subtract (°C) -0.1

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

Cooler Temp Corrected (°C): 2.5 | 3.7

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No
Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	<u>10 Days</u>
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Disso ved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>			
Headspace in VOA Vials (>5.6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Document Name:
Sample Condition Upon Receipt(SCUR)

Document Revised: October 28, 2020
Page 2 of 2

Document No.:
F-CAR-CS-033-Rev.07

Issuing Authority:
Pace Carolinas Quality Office

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

Project

WO# : 92555945

PM: NMG

Due Date: 08/31/21

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

CLIENT: GA-GA Power

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

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFW-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG9U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

pH Adjustment Log for Preserved Samples

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: **1** of **1**

Section A

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

Section B

Required Project Information
 Report for: **SCS Contacts**
 Copy to: **Getronics Contacts**

Section C

Invoicing Information:
 Attention: **Southern Co.**

REGULATORY AGENCY
 NIDES GROUND WATER
 UST RCRA OTHER CUL

Requested Analysis Filtered (Y/N)
 STATE: **GA**

Requested Due Date (Y/M/D) **To Day** **Project Number**

Project Name: **Hirammond A.P.-1**
Project Manager: **Kevin Herring**
Phone: **478-281-1883**

Address:
Company Name:
Site Location:
Site Number:

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH
			COMPOSITE DATE TIME	COMPOSITE DATE TIME							
1	MW-7	WT G	8/17/21	14:59	20	5	2	3	X	X	X
2	MW-20	WT G	8/17/21	12:59	19	5	2	3	X	X	X
3	MW-5	WT G	8/17/21	9:50	19	5	2	3	X	X	X
4	HQWC-10	WT G	8/17/21	15:08	22	5	2	3	X	X	X
5	HQWC-9	WT G	8/17/21	12:15	20	5	2	3	X	X	X
6	MW-26D	WT G	8/17/21	11:05	20	5	2	3	X	X	X
7	MW-6	WT G	8/17/21	8:35	21	5	2	3	X	X	X
8	MW-27D	WT G	8/17/21	16:07	22	5	2	3	X	X	X
9											
10											
11											
12											

ADDITIONAL COMMENTS

Requisitioned by: **Yanner Hessler / GED**
 Date: **8/18/21** Time: **09:00**

Accepted by: **Kevin Herring / GED**
 Date: **8/18/21** Time: **14:00**

Signature of Sampler: **[Signature]**
 Date Signed: **8/17/2021**

PRINT Name of SAMPLER: **Yanner Hessler / GED**
 SIGNATURE of SAMPLER: **[Signature]**

PRINT Name of SAMPLER: **Kevin Herring / GED**
 SIGNATURE of SAMPLER: **[Signature]**

PRINT Name of SAMPLER: **Kevin Herring / GED**
 SIGNATURE of SAMPLER: **[Signature]**

Temp in °C _____
 Received on ice (Y/N) _____
 Custody Sealed/Color (Y/N) _____
 Samples Intact (Y/N) _____

*Important Note: By signing this form, you are accepting Pace's 16:1 20 day turnaround time and agreeing to the charges of 15% per month for the project not being active for 30 days.



Document Name:
Sample Condition Upon Receipt(SCUR)
 Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
 Page 1 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

GA Rivers

Project #:

Courier: Fed-Ex UPS USPS Client
 Commercial Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: *5/19/20 LSW*

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: *083* Type of Ice: Wet Blue None

Cooler Temp: *1.8* Correction Factor: Add/Subtract (°C) *0.0*

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

Cooler Temp Corrected (°C): *1.8*

USDA Regulated Soil (N/A, water sample)

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



Document Name:
Sample Condition Upon Receipt(SCUR)

Document Revised: October 28, 2020
Page 2 of 2

Document No.:
F-CAR-CS-033-Rev.07

Issuing Authority:
Pace Carolinas Quality Office

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

Project #

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

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

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP45-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGfU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

pH Adjustment Log for Preserved Samples

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

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

CHAIN-OF-CUSTODY / Analytical Request Document

Section A Required Client Information: Company: GA Power			Section B Required Project Information: Report To: SCS Contacts			Section C Project Information: Address: Atlanta, GA		
Company: Atlanta, GA			Report To: SCS Contacts			Address:		
Company Name: Georgia Electric Contacts			Report To: SCS Contacts			Company Name: Southern Co.		
Contact: Atlanta, GA			Project Name: Harrmond A5.1			Address:		
Email To: SCS Contacts			Project Number:			Address:		
Phone:			Project Name: Harrmond A5.1			Address:		
Requested Due Date/TAT: 10 day			Requested Analysis Filtered (Y/N):			Regulatory Agency:		
Requested Due Date/TAT: 10 day			Requested Analysis Filtered (Y/N):			Agency: SCS		
State: GA			Analysis Test:			Agency: SCS		

ITEM #	Valid Matrix Codes M=TEXT S=SOIL W=SLURRY WATER F=FACTORY W=WASTE WATER E=EGGPOLE S=SOILS O=OTHER A=AIR W=WINE U=URINE T=TITRANT	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analysis Test	Y/N	Request Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.						
										H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Chloride						Fluoride	Sulfate	Sb, As, Bi, Be, B, Cd, Ca	Cr, CO, Pb, Li, Mn, Se, Ti	RAD 226/228	TDS
1	MW-19	WT G	G	8/18/21	15:40			23	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X					
2	HGWC-11	WT G	G	8/18/21	16:58			22	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X					
3	HGWC-12	WT G	G	8/18/21	16:07			22	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X					
4	MW-28D	WT G	G	8/18/21	13:00			22	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X					
5	HGWC-8	WT G	G	8/18/21	10:07			22	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X					
6																												
7																												
8																												
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10																												
11																												
12																												

ADDITIONAL COMMENTS:			RELINQUISHED BY / AFFILIATION:			DATE:			TIME:			ACCEPTED BY / AFFILIATION:			DATE:			TIME:			SAMPLE CONDITIONS:		
Please note dry wells. Spike throughout any wells not sampled, and note when the last sample for this event has been taken.			Conner Cain/Ges			8/18/21			1200			Thomas Hessel/Ges			8/18/21			1200			T/J		
8/19/21			1200			Kevin Williams/Race			8/19/21			1200			PH = 6.10 PH = 0.89 PH = 7.16 PH = 7.02			TJ					
8/19/21			1600			Ryan Williams/Race			8/19/21			1600			PH = 7.02			PH = 7.02					

SAMPLER NAME AND SIGNATURE:		PRINT Name of SAMPLER:		SIGNATURE of SAMPLER:		DATE Signed (MM/DD/YYYY):	
Conner Cain		Conner Cain		Conner Cain		8/19/2021	
Thomas Hessel		Thomas Hessel		Thomas Hessel		8/19/2021	
Ryan Williams		Ryan Williams		Ryan Williams		8/19/2021	

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

FALL-0-020-W-07-15-FAC-2007

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: C.A. Powell

Project #:

Courier: Fed Ex UPS USPS Other
 Commercial Pace Other

Custody Seal Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer: IR Gun ID: 083 Type of Ice: Dry Ice Blue None

Cooler Temp: 4.4 Correction Factor: Add/Subtract (°C) ±0

Cooler Temp Corrected (°C): 4.4

USDA Regulated Soil (N/A, water sample)

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

Biological Tissue Frozen? Yes No N/A

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

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

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Document Name:
Sample Condition Upon Receipt(SCUR)

Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
Page 2 of 2

Issuing Authority:
Pace Carolinas Quality Office

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

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

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

Project #

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2SO3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

pH Adjustment Log for Preserved Samples

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

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

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

Section A Required Client Information: Company: GA Power Address: Atlanta, GA		Section B Required Project Information: Report To: SCS Contacts Corp To: Geosynthetic Contacts		Section C Practice Information: Attention: Southern Co. Company Name: Address: City/State: Project Name: Hammond A.P.1 Project Number: Requested Due Date/TAT: 10 Day	
Email To: SCS Contacts Phone: For Requested Due Date/TAT: 10 Day		Purchase Order No.: Project Name: Hammond A.P.1 Project Number:		Address: City/State: Project Name: Kevin Herring Project Number: 10839	
State: _____		Regulatory Agency:		N/DES GROUND WATER DRINKING WATER UST RCRA OTHER CCL	

ITEM #	Valid Matrix Codes EAVSIX	Matrix Code	Sample Type	Date	Time	Sample Temp at Collection	# of Containers	Preservatives										Analysis Test	Requested Analysis Filtered (Y/N)	Temp in °C	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.											
								UNPRESERVED	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol	Other	Chloride	Fluoride						Sulfate	Sb, As, Ba, Be, B, Cd, Ca	Cr, CO, Pb, Li, Mo, Se, Ti	RAD 226/228	TDS						
1	HGWC-13	WT G	G	8/19/21	10:43	21	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X	X											
2	MMW-25D	WT G	G	8/19/21	14:44	22	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X	X											
3	MMW-24D	WT G	G	8/19/21	13:37	22	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X												
4	DUP-1	WT G	G	8/19/21	0:00	22	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X												
5	EB-1	WT G	G	8/19/21	12:55	22	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X												
6	FB-1	WT G	G	8/19/21	12:50	22	5	2	3	X	X	X	X	X	X	X	X	X	X	X	X												
7																																	
8																																	
9																																	
10																																	
11																																	
12																																	

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Conner Cain / Pace	8/19/21	14:00	Ryan Williams / Pace	8/19/21	14:00	
Ryan Williams / Pace	8/20/21	12:15	Ryan Williams / Pace	8/20/21	12:15	
Ryan Williams / Pace	8/21/21	13:50	Ryan Williams / Pace	8/20/21	13:50	
ADDITIONAL COMMENTS:						TJ
Date signed (MM/DD/YY):						8/19/2021
SIGNATURE OF SAMPLER:						
SIGNATURE OF ANALYST:						
DATE SIGNED (MM/DD/YY):						8/19/21
Temp in °C:						44
Received on ice (Y/N):						Y
Custody Sealed Cooler (Y/N):						N
Samples Intact (Y/N):						Y

* Pace Analytical, LLC is an Equal Opportunity Employer. Minor and/or physically handicapped individuals are encouraged to apply. Pace Analytical, LLC is an Equal Opportunity Employer.

September 27, 2021

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

RE: Project: HAMMOND AP-1 RADS
Pace Project No.: 92555928

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 17, 2021 and August 20, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

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



REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: HAMMOND AP-1 RADS
Pace Project No.: 92555928

Pace Analytical Services Pennsylvania

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

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92555928001	MW-29	Water	08/16/21 17:06	08/17/21 11:25
92555928002	HGWC-7	Water	08/16/21 17:20	08/17/21 11:25
92555928003	MW-7	Water	08/17/21 14:59	08/18/21 14:00
92555928004	MW-20	Water	08/17/21 12:58	08/18/21 14:00
92555928005	MW-5	Water	08/17/21 09:50	08/18/21 14:00
92555928006	HGWC-10	Water	08/17/21 15:08	08/18/21 14:00
92555928007	HGWC-9	Water	08/17/21 12:15	08/18/21 14:00
92555928008	MW-26D	Water	08/17/21 11:05	08/18/21 14:00
92555928009	MW-6	Water	08/17/21 09:35	08/18/21 14:00
92555928010	MW-27D	Water	08/17/21 16:07	08/18/21 14:00
92555928011	MW-19	Water	08/18/21 15:10	08/19/21 12:40
92555928012	HGWC-11	Water	08/18/21 16:58	08/19/21 12:40
92555928013	HGWC-12	Water	08/18/21 15:07	08/19/21 12:40
92555928014	MW-28D	Water	08/18/21 13:30	08/19/21 12:40
92555928015	HGWC-8	Water	08/18/21 10:37	08/19/21 12:40
92555928016	HGWC-13	Water	08/19/21 10:43	08/20/21 12:15
92555928017	MW-25D	Water	08/19/21 14:44	08/20/21 12:15
92555928018	MW-24D	Water	08/19/21 12:37	08/20/21 12:15
92555928019	DUP-1	Water	08/19/21 00:00	08/20/21 12:15
92555928020	EB-1	Water	08/19/21 12:55	08/20/21 12:15
92555928021	FB-1	Water	08/19/21 12:50	08/20/21 12:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 RADS
Pace Project No.: 92555928

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92555928001	MW-29	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555928002	HGWC-7	EPA 9315	CLA	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92555928003	MW-7	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555928004	MW-20	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555928005	MW-5	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555928006	HGWC-10	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555928007	HGWC-9	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555928008	MW-26D	EPA 9315	LAL	1	PASI-PA
		EPA 9320	JC2	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555928009	MW-6	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555928010	MW-27D	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555928011	MW-19	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555928012	HGWC-11	EPA 9315	CLA	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
92555928013	HGWC-12	EPA 9315	CLA	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92555928014	MW-28D	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92555928015	HGWC-8	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92555928016	HGWC-13	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92555928017	MW-25D	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92555928018	MW-24D	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92555928019	DUP-1	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92555928020	EB-1	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA
92555928021	FB-1	EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		EPA 9315	CLA	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 RADS
Pace Project No.: 92555928

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555928001	MW-29					
EPA 9315	Radium-226	0.0478 ± 0.100 (0.224) C:99% T:NA	pCi/L		09/15/21 09:13	
EPA 9320	Radium-228	0.160 ± 0.401 (0.896) C:67% T:76%	pCi/L		09/03/21 14:25	
Total Radium Calculation	Total Radium	0.208 ± 0.501 (1.12)	pCi/L		09/17/21 16:27	
92555928002	HGWC-7					
EPA 9315	Radium-226	0.0705 ± 0.122 (0.274) C:93% T:NA	pCi/L		09/16/21 08:30	
EPA 9320	Radium-228	0.0729 ± 0.473 (1.09) C:65% T:88%	pCi/L		09/03/21 16:29	
Total Radium Calculation	Total Radium	0.143 ± 0.595 (1.36)	pCi/L		09/17/21 16:27	
92555928003	MW-7					
EPA 9315	Radium-226	0.151 ± 0.125 (0.211) C:95% T:NA	pCi/L		09/20/21 07:39	
EPA 9320	Radium-228	0.0318 ± 0.334 (0.773) C:70% T:92%	pCi/L		09/16/21 14:11	
Total Radium Calculation	Total Radium	0.183 ± 0.459 (0.984)	pCi/L		09/21/21 16:13	
92555928004	MW-20					
EPA 9315	Radium-226	0.223 ± 0.147 (0.228) C:93% T:NA	pCi/L		09/20/21 07:24	
EPA 9320	Radium-228	0.486 ± 0.343 (0.653) C:67% T:92%	pCi/L		09/16/21 14:09	
Total Radium Calculation	Total Radium	0.709 ± 0.490 (0.881)	pCi/L		09/21/21 16:13	

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555928005	MW-5					
EPA 9315	Radium-226	0.0796 ± 0.104 (0.217)	pCi/L		09/20/21 07:24	
EPA 9320	Radium-228	C:91% T:NA 0.224 ± 0.339 (0.732)	pCi/L		09/16/21 14:10	
Total Radium Calculation	Total Radium	C:69% T:89% 0.304 ± 0.443 (0.949)	pCi/L		09/21/21 16:13	
92555928006	HGWC-10					
EPA 9315	Radium-226	0.0939 ± 0.166 (0.378)	pCi/L		09/20/21 07:32	
EPA 9320	Radium-228	C:96% T:NA 0.501 ± 0.414 (0.825)	pCi/L		09/16/21 14:10	
Total Radium Calculation	Total Radium	C:68% T:85% 0.595 ± 0.580 (1.20)	pCi/L		09/21/21 16:13	
92555928007	HGWC-9					
EPA 9315	Radium-226	0.184 ± 0.145 (0.255)	pCi/L		09/20/21 07:27	
EPA 9320	Radium-228	C:92% T:NA 0.587 ± 0.392 (0.743)	pCi/L		09/16/21 14:10	
Total Radium Calculation	Total Radium	C:68% T:90% 0.771 ± 0.537 (0.998)	pCi/L		09/21/21 16:13	
92555928008	MW-26D					
EPA 9315	Radium-226	0.0468 ± 0.161 (0.388)	pCi/L		09/20/21 07:25	
EPA 9320	Radium-228	C:95% T:NA -0.0130 ± 0.315 (0.745)	pCi/L		09/16/21 14:11	
Total Radium Calculation	Total Radium	C:66% T:87% 0.0468 ± 0.476 (1.13)	pCi/L		09/21/21 16:13	

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555928009	MW-6					
EPA 9315	Radium-226	0.158 ± 0.120 (0.186)	pCi/L		09/20/21 07:19	
EPA 9320	Radium-228	C:94% T:NA 0.399 ± 0.364 (0.729)	pCi/L		09/16/21 14:10	
Total Radium Calculation	Total Radium	C:63% T:85% 0.557 ± 0.484 (0.915)	pCi/L		09/21/21 16:13	
92555928010	MW-27D					
EPA 9315	Radium-226	0.500 ± 0.218 (0.290)	pCi/L		09/20/21 07:19	
EPA 9320	Radium-228	C:99% T:NA 0.558 ± 0.482 (0.966)	pCi/L		09/16/21 14:10	
Total Radium Calculation	Total Radium	C:61% T:77% 1.06 ± 0.700 (1.26)	pCi/L		09/21/21 16:13	
92555928011	MW-19					
EPA 9315	Radium-226	0.0454 ± 0.0987 (0.232)	pCi/L		09/20/21 07:19	
EPA 9320	Radium-228	C:95% T:NA 0.597 ± 0.501 (1.00)	pCi/L		09/16/21 14:11	
Total Radium Calculation	Total Radium	C:57% T:85% 0.642 ± 0.600 (1.23)	pCi/L		09/21/21 16:13	
92555928012	HGWC-11					
EPA 9315	Radium-226	0.248 ± 0.155 (0.238)	pCi/L		09/20/21 07:19	
EPA 9320	Radium-228	C:101% T:NA 0.671 ± 0.496 (0.971)	pCi/L		09/16/21 14:11	
Total Radium Calculation	Total Radium	C:59% T:88% 0.919 ± 0.651 (1.21)	pCi/L		09/21/21 16:13	

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 RADS
Pace Project No.: 92555928

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555928013	HGWC-12					
EPA 9315	Radium-226	0.195 ± 0.147 (0.247)	pCi/L		09/20/21 07:20	
EPA 9320	Radium-228	C:94% T:NA 0.724 ± 0.432 (0.783)	pCi/L		09/16/21 14:11	
Total Radium Calculation	Total Radium	C:60% T:89% 0.919 ± 0.579 (1.03)	pCi/L		09/21/21 16:13	
92555928014	MW-28D					
EPA 9315	Radium-226	0.223 ± 0.156 (0.264)	pCi/L		09/20/21 07:20	
EPA 9320	Radium-228	C:95% T:NA 0.653 ± 0.465 (0.895)	pCi/L		09/16/21 14:11	
Total Radium Calculation	Total Radium	C:58% T:87% 0.876 ± 0.621 (1.16)	pCi/L		09/21/21 16:13	
92555928015	HGWC-8					
EPA 9315	Radium-226	0.250 ± 0.156 (0.236)	pCi/L		09/20/21 07:20	
EPA 9320	Radium-228	C:95% T:NA 0.767 ± 0.520 (0.993)	pCi/L		09/16/21 14:11	
Total Radium Calculation	Total Radium	C:56% T:87% 1.02 ± 0.676 (1.23)	pCi/L		09/21/21 16:13	
92555928016	HGWC-13					
EPA 9315	Radium-226	0.477 ± 0.207 (0.253)	pCi/L		09/20/21 07:10	
EPA 9320	Radium-228	C:97% T:NA 0.287 ± 0.419 (0.901)	pCi/L		09/16/21 14:12	
Total Radium Calculation	Total Radium	C:56% T:93% 0.764 ± 0.626 (1.15)	pCi/L		09/21/21 16:29	

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 RADS
Pace Project No.: 92555928

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555928017	MW-25D					
EPA 9315	Radium-226	0.596 ± 0.242 (0.297) C:90% T:NA	pCi/L		09/20/21 07:10	
EPA 9320	Radium-228	0.339 ± 0.390 (0.814) C:63% T:87%	pCi/L		09/16/21 14:12	
Total Radium Calculation	Total Radium	0.935 ± 0.632 (1.11)	pCi/L		09/21/21 16:29	
92555928018	MW-24D					
EPA 9315	Radium-226	-0.0497 ± 0.127 (0.361) C:92% T:NA	pCi/L		09/20/21 07:11	
EPA 9320	Radium-228	0.227 ± 0.359 (0.778) C:65% T:89%	pCi/L		09/16/21 14:12	
Total Radium Calculation	Total Radium	0.227 ± 0.486 (1.14)	pCi/L		09/21/21 16:29	
92555928019	DUP-1					
EPA 9315	Radium-226	0.164 ± 0.148 (0.281) C:96% T:NA	pCi/L		09/20/21 07:11	
EPA 9320	Radium-228	0.214 ± 0.431 (0.952) C:59% T:86%	pCi/L		09/16/21 14:12	
Total Radium Calculation	Total Radium	0.378 ± 0.579 (1.23)	pCi/L		09/21/21 16:29	
92555928020	EB-1					
EPA 9315	Radium-226	0.0500 ± 0.124 (0.296) C:82% T:NA	pCi/L		09/20/21 09:10	
EPA 9320	Radium-228	0.297 ± 0.358 (0.755) C:67% T:92%	pCi/L		09/16/21 14:08	
Total Radium Calculation	Total Radium	0.347 ± 0.482 (1.05)	pCi/L		09/21/21 16:29	

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SUMMARY OF DETECTION

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92555928021	FB-1					
EPA 9315	Radium-226	0.163 ± 0.138 (0.249)	pCi/L		09/20/21 09:10	
EPA 9320	Radium-228	C:90% T:NA 0.00465 ± 0.399 (0.934)	pCi/L		09/16/21 14:08	
Total Radium Calculation	Total Radium	C:63% T:80% 0.168 ± 0.537 (1.18)	pCi/L		09/21/21 16:29	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Sample: MW-29 **Lab ID: 92555928001** Collected: 08/16/21 17:06 Received: 08/17/21 11:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0478 ± 0.100 (0.224) C:99% T:NA	pCi/L	09/15/21 09:13	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.160 ± 0.401 (0.896) C:67% T:76%	pCi/L	09/03/21 14:25	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.208 ± 0.501 (1.12)	pCi/L	09/17/21 16:27	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Sample: HGWC-7 **Lab ID: 92555928002** Collected: 08/16/21 17:20 Received: 08/17/21 11:25 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0705 ± 0.122 (0.274) C:93% T:NA	pCi/L	09/16/21 08:30	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.0729 ± 0.473 (1.09) C:65% T:88%	pCi/L	09/03/21 16:29	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.143 ± 0.595 (1.36)	pCi/L	09/17/21 16:27	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Sample: MW-7 **Lab ID: 92555928003** Collected: 08/17/21 14:59 Received: 08/18/21 14:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.151 ± 0.125 (0.211) C:95% T:NA	pCi/L	09/20/21 07:39	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.0318 ± 0.334 (0.773) C:70% T:92%	pCi/L	09/16/21 14:11	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.183 ± 0.459 (0.984)	pCi/L	09/21/21 16:13	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Sample: MW-20 **Lab ID: 92555928004** Collected: 08/17/21 12:58 Received: 08/18/21 14:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.223 ± 0.147 (0.228) C:93% T:NA	pCi/L	09/20/21 07:24	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.486 ± 0.343 (0.653) C:67% T:92%	pCi/L	09/16/21 14:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.709 ± 0.490 (0.881)	pCi/L	09/21/21 16:13	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-5 Lab ID: 92555928005 Collected: 08/17/21 09:50 Received: 08/18/21 14:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0796 ± 0.104 (0.217) C:91% T:NA	pCi/L	09/20/21 07:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.224 ± 0.339 (0.732) C:69% T:89%	pCi/L	09/16/21 14:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.304 ± 0.443 (0.949)	pCi/L	09/21/21 16:13	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Sample: HGWC-10 **Lab ID: 92555928006** Collected: 08/17/21 15:08 Received: 08/18/21 14:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0939 ± 0.166 (0.378) C:96% T:NA	pCi/L	09/20/21 07:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.501 ± 0.414 (0.825) C:68% T:85%	pCi/L	09/16/21 14:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.595 ± 0.580 (1.20)	pCi/L	09/21/21 16:13	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Sample: HGWC-9 **Lab ID: 92555928007** Collected: 08/17/21 12:15 Received: 08/18/21 14:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.184 ± 0.145 (0.255) C:92% T:NA	pCi/L	09/20/21 07:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.587 ± 0.392 (0.743) C:68% T:90%	pCi/L	09/16/21 14:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.771 ± 0.537 (0.998)	pCi/L	09/21/21 16:13	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Sample: MW-26D **Lab ID: 92555928008** Collected: 08/17/21 11:05 Received: 08/18/21 14:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0468 ± 0.161 (0.388) C:95% T:NA	pCi/L	09/20/21 07:25	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.0130 ± 0.315 (0.745) C:66% T:87%	pCi/L	09/16/21 14:11	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.0468 ± 0.476 (1.13)	pCi/L	09/21/21 16:13	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-6 Lab ID: 92555928009 Collected: 08/17/21 09:35 Received: 08/18/21 14:00 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.158 ± 0.120 (0.186) C:94% T:NA	pCi/L	09/20/21 07:19	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.399 ± 0.364 (0.729) C:63% T:85%	pCi/L	09/16/21 14:10	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.557 ± 0.484 (0.915)	pCi/L	09/21/21 16:13	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Sample: MW-27D **Lab ID: 92555928010** Collected: 08/17/21 16:07 Received: 08/18/21 14:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.500 ± 0.218 (0.290) C:99% T:NA	pCi/L	09/20/21 07:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.558 ± 0.482 (0.966) C:61% T:77%	pCi/L	09/16/21 14:10	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.06 ± 0.700 (1.26)	pCi/L	09/21/21 16:13	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Sample: MW-19 **Lab ID: 92555928011** Collected: 08/18/21 15:10 Received: 08/19/21 12:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0454 ± 0.0987 (0.232) C:95% T:NA	pCi/L	09/20/21 07:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.597 ± 0.501 (1.00) C:57% T:85%	pCi/L	09/16/21 14:11	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.642 ± 0.600 (1.23)	pCi/L	09/21/21 16:13	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-11 Lab ID: 92555928012 Collected: 08/18/21 16:58 Received: 08/19/21 12:40 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.248 ± 0.155 (0.238) C:101% T:NA	pCi/L	09/20/21 07:19	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.671 ± 0.496 (0.971) C:59% T:88%	pCi/L	09/16/21 14:11	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.919 ± 0.651 (1.21)	pCi/L	09/21/21 16:13	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-12 Lab ID: 92555928013 Collected: 08/18/21 15:07 Received: 08/19/21 12:40 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.195 ± 0.147 (0.247) C:94% T:NA	pCi/L	09/20/21 07:20	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.724 ± 0.432 (0.783) C:60% T:89%	pCi/L	09/16/21 14:11	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.919 ± 0.579 (1.03)	pCi/L	09/21/21 16:13	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Sample: MW-28D **Lab ID: 92555928014** Collected: 08/18/21 13:30 Received: 08/19/21 12:40 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.223 ± 0.156 (0.264) C:95% T:NA	pCi/L	09/20/21 07:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.653 ± 0.465 (0.895) C:58% T:87%	pCi/L	09/16/21 14:11	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.876 ± 0.621 (1.16)	pCi/L	09/21/21 16:13	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-8 Lab ID: 92555928015 Collected: 08/18/21 10:37 Received: 08/19/21 12:40 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.250 ± 0.156 (0.236) C:95% T:NA	pCi/L	09/20/21 07:20	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.767 ± 0.520 (0.993) C:56% T:87%	pCi/L	09/16/21 14:11	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	1.02 ± 0.676 (1.23)	pCi/L	09/21/21 16:13	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: HGWC-13 Lab ID: 92555928016 Collected: 08/19/21 10:43 Received: 08/20/21 12:15 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.477 ± 0.207 (0.253) C:97% T:NA	pCi/L	09/20/21 07:10	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.287 ± 0.419 (0.901) C:56% T:93%	pCi/L	09/16/21 14:12	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.764 ± 0.626 (1.15)	pCi/L	09/21/21 16:29	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Sample: MW-25D **Lab ID: 92555928017** Collected: 08/19/21 14:44 Received: 08/20/21 12:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.596 ± 0.242 (0.297) C:90% T:NA	pCi/L	09/20/21 07:10	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.339 ± 0.390 (0.814) C:63% T:87%	pCi/L	09/16/21 14:12	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.935 ± 0.632 (1.11)	pCi/L	09/21/21 16:29	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: MW-24D Lab ID: 92555928018 Collected: 08/19/21 12:37 Received: 08/20/21 12:15 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	-0.0497 ± 0.127 (0.361) C:92% T:NA	pCi/L	09/20/21 07:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.227 ± 0.359 (0.778) C:65% T:89%	pCi/L	09/16/21 14:12	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.227 ± 0.486 (1.14)	pCi/L	09/21/21 16:29	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: DUP-1 Lab ID: 92555928019 Collected: 08/19/21 00:00 Received: 08/20/21 12:15 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.164 ± 0.148 (0.281) C:96% T:NA	pCi/L	09/20/21 07:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.214 ± 0.431 (0.952) C:59% T:86%	pCi/L	09/16/21 14:12	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.378 ± 0.579 (1.23)	pCi/L	09/21/21 16:29	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EB-1 Lab ID: 92555928020 Collected: 08/19/21 12:55 Received: 08/20/21 12:15 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0500 ± 0.124 (0.296) C:82% T:NA	pCi/L	09/20/21 09:10	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.297 ± 0.358 (0.755) C:67% T:92%	pCi/L	09/16/21 14:08	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.347 ± 0.482 (1.05)	pCi/L	09/21/21 16:29	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: FB-1 Lab ID: 92555928021 Collected: 08/19/21 12:50 Received: 08/20/21 12:15 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.163 ± 0.138 (0.249) C:90% T:NA	pCi/L	09/20/21 09:10	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.00465 ± 0.399 (0.934) C:63% T:80%	pCi/L	09/16/21 14:08	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.168 ± 0.537 (1.18)	pCi/L	09/21/21 16:29	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

QC Batch: 463426

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92555928001, 92555928002

METHOD BLANK: 2237360

Matrix: Water

Associated Lab Samples: 92555928001, 92555928002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.250 ± 0.184 (0.307) C:77% T:NA	pCi/L	09/16/21 08:31	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

QC Batch: 463380

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92555928003, 92555928004, 92555928005, 92555928006, 92555928007, 92555928008

METHOD BLANK: 2237271

Matrix: Water

Associated Lab Samples: 92555928003, 92555928004, 92555928005, 92555928006, 92555928007, 92555928008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.141 ± 0.135 (0.261) C:99% T:NA	pCi/L	09/20/21 07:37	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

QC Batch: 461961

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92555928001, 92555928002

METHOD BLANK: 2230398

Matrix: Water

Associated Lab Samples: 92555928001, 92555928002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.353 ± 0.350 (0.718) C:73% T:86%	pCi/L	09/03/21 14:24	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

QC Batch: 463379

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92555928003, 92555928004, 92555928005, 92555928006, 92555928007, 92555928008

METHOD BLANK: 2237270

Matrix: Water

Associated Lab Samples: 92555928003, 92555928004, 92555928005, 92555928006, 92555928007, 92555928008

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.257 ± 0.278 (0.577) C:77% T:86%	pCi/L	09/16/21 11:10	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

QC Batch: 463382

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92555928009, 92555928010, 92555928011, 92555928012, 92555928013, 92555928014, 92555928015, 92555928016, 92555928017, 92555928018, 92555928019, 92555928020, 92555928021

METHOD BLANK: 2237273

Matrix: Water

Associated Lab Samples: 92555928009, 92555928010, 92555928011, 92555928012, 92555928013, 92555928014, 92555928015, 92555928016, 92555928017, 92555928018, 92555928019, 92555928020, 92555928021

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.118 ± 0.144 (0.302) C:85% T:NA	pCi/L	09/20/21 07:19	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: HAMMOND AP-1 RADS
Pace Project No.: 92555928

QC Batch:	463381	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92555928009, 92555928010, 92555928011, 92555928012, 92555928013, 92555928014, 92555928015, 92555928016, 92555928017, 92555928018, 92555928019, 92555928020, 92555928021

METHOD BLANK: 2237272 Matrix: Water

Associated Lab Samples: 92555928009, 92555928010, 92555928011, 92555928012, 92555928013, 92555928014, 92555928015, 92555928016, 92555928017, 92555928018, 92555928019, 92555928020, 92555928021

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.181 ± 0.348 (0.765) C:67% T:91%	pCi/L	09/16/21 14:11	

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QUALIFIERS

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 RADS
Pace Project No.: 92555928

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555928001	MW-29	EPA 9315	463426		
92555928002	HGWC-7	EPA 9315	463426		
92555928003	MW-7	EPA 9315	463380		
92555928004	MW-20	EPA 9315	463380		
92555928005	MW-5	EPA 9315	463380		
92555928006	HGWC-10	EPA 9315	463380		
92555928007	HGWC-9	EPA 9315	463380		
92555928008	MW-26D	EPA 9315	463380		
92555928009	MW-6	EPA 9315	463382		
92555928010	MW-27D	EPA 9315	463382		
92555928011	MW-19	EPA 9315	463382		
92555928012	HGWC-11	EPA 9315	463382		
92555928013	HGWC-12	EPA 9315	463382		
92555928014	MW-28D	EPA 9315	463382		
92555928015	HGWC-8	EPA 9315	463382		
92555928016	HGWC-13	EPA 9315	463382		
92555928017	MW-25D	EPA 9315	463382		
92555928018	MW-24D	EPA 9315	463382		
92555928019	DUP-1	EPA 9315	463382		
92555928020	EB-1	EPA 9315	463382		
92555928021	FB-1	EPA 9315	463382		
92555928001	MW-29	EPA 9320	461961		
92555928002	HGWC-7	EPA 9320	461961		
92555928003	MW-7	EPA 9320	463379		
92555928004	MW-20	EPA 9320	463379		
92555928005	MW-5	EPA 9320	463379		
92555928006	HGWC-10	EPA 9320	463379		
92555928007	HGWC-9	EPA 9320	463379		
92555928008	MW-26D	EPA 9320	463379		
92555928009	MW-6	EPA 9320	463381		
92555928010	MW-27D	EPA 9320	463381		
92555928011	MW-19	EPA 9320	463381		
92555928012	HGWC-11	EPA 9320	463381		
92555928013	HGWC-12	EPA 9320	463381		
92555928014	MW-28D	EPA 9320	463381		
92555928015	HGWC-8	EPA 9320	463381		
92555928016	HGWC-13	EPA 9320	463381		
92555928017	MW-25D	EPA 9320	463381		
92555928018	MW-24D	EPA 9320	463381		
92555928019	DUP-1	EPA 9320	463381		
92555928020	EB-1	EPA 9320	463381		
92555928021	FB-1	EPA 9320	463381		
92555928001	MW-29	Total Radium Calculation	464617		
92555928002	HGWC-7	Total Radium Calculation	464617		
92555928003	MW-7	Total Radium Calculation	464961		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: HAMMOND AP-1 RADS

Pace Project No.: 92555928

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92555928004	MW-20	Total Radium Calculation	464961		
92555928005	MW-5	Total Radium Calculation	464961		
92555928006	HGWC-10	Total Radium Calculation	464961		
92555928007	HGWC-9	Total Radium Calculation	464961		
92555928008	MW-26D	Total Radium Calculation	464961		
92555928009	MW-6	Total Radium Calculation	464961		
92555928010	MW-27D	Total Radium Calculation	464961		
92555928011	MW-19	Total Radium Calculation	464961		
92555928012	HGWC-11	Total Radium Calculation	464961		
92555928013	HGWC-12	Total Radium Calculation	464961		
92555928014	MW-28D	Total Radium Calculation	464961		
92555928015	HGWC-8	Total Radium Calculation	464961		
92555928016	HGWC-13	Total Radium Calculation	464972		
92555928017	MW-25D	Total Radium Calculation	464972		
92555928018	MW-24D	Total Radium Calculation	464972		
92555928019	DUP-1	Total Radium Calculation	464972		
92555928020	EB-1	Total Radium Calculation	464972		
92555928021	FB-1	Total Radium Calculation	464972		

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Document Name:
Sample Condition Upon Receipt(SCUR)
Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
Page 1 of 2
Issuing Authority:
Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
Upon Receipt

Client Name:

Project #:

WO#: 92555928

Courier: Fed Ex UPS USPS Client
 Commercial Pace Other:



92555928

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 3/17/21 KAW

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

IR-Grub ID:

TH1230

Type of Ice:

Wet Blue None

Cooler Temp: 1.7 Correction Factor: Add/Subtract (°C) +0.1

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 1.8

USDA Regulated Soil (N/A, water sample)

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

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

Yes No

Comments/Discrepancy:

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



Document Name:
Sample Condition Upon Receipt(SCUR)
Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
Page 2 of 2
Issuing Authority:
Pace Carolinas Quality Office

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

Project #

WO# : 92555928

PM: NMG

Due Date: 09/08/21

CLIENT: GA-GA Power

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

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

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A[DG3A]-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-S035 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)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG6U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

pH Adjustment Log for Preserved Samples

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

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

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

Section A Required Client Information
Company: GA Power
Address: Atlanta, GA
Section B Required Project Information
Report To: SCS Contacts
Copy To: Geosyntec Contacts
Section C Invoice Information
Attention: Southern Co.
Company Name:
Address:
Purchase Order No.:
Project Name: Hammond AP-1
Project Number:
Requested Due Date/AT: to Day
Requested Analysis Filtered (Y/N)
Site Location: GA
STATE: GA
Page: 1 of 1

Section A Required Client Information	Company: GA Power	Address: Atlanta, GA
Section B Required Project Information	Report To: SCS Contacts	Copy To: Geosyntec Contacts
Section C Invoice Information	Attention: Southern Co.	Company Name:
	Address:	
	Purchase Order No.:	
	Project Name: Hammond AP-1	
	Project Number:	
	Requested Due Date/AT: to Day	
	Requested Analysis Filtered (Y/N)	
	Site Location: GA	
	STATE: GA	
	REGULATORY AGENCY	
	NPDES	GROUND WATER
	UST	RCRA
		OTHER CCA

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Residual Chlorine (Y/N)	pH = 7.08 pH = 7.12
				DATE	TIME						
1	MW-29	WT G	G	8/16/21	17:06	21	5	2	3		
2	HGWC-7	WT G	G	8/16/21	17:20	21	5	2	3		
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											

Section D Required Client Information	Valid Matrix Codes MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Residual Chlorine (Y/N)	pH = 7.08 pH = 7.12		
Section E Additional Comments	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS	Temp in °C	Received on ion (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Thomas Hester Rice	8/17/21	11:55	Ryan Williams Rice	8/17/21	11:26					
	Ryan Williams Rice	8/17/21	15:00	Ryan Williams Rice	8/17/21	15:00					



Document Name:
Sample Condition Upon Receipt(SCUR)
 Document No.:
F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
 Page 1 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
 Upon Receipt

Client Name:

Project

WO# : 92555928

PM: NMG

Due Date: 09/08/21

CLIENT: GA-GA Power

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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 8/18/21 RMG

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

IR Gun ID: THR2 Type of Ice: Wet Blue None

Cooler Temp: 2.6 | 3.8 Correction Factor: Add/Subtract (°C) -0.1

Temp should be above freezing to 6°C

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

Cooler Temp Corrected (°C): 2.5 | 3.7

USDA Regulated Soil (N/A, water sample)

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

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

Yes No

Comments/Discrepancy:

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

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



Document Name:
 Sample Condition Upon Receipt(SCUR)
 Document No.:
 F-CAR-CS-033-Rev.07

Document Revised: October 28, 2020
 Page 2 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

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

Project

WO# : 92555928

PM: NMG

Due Date: 09/08/21

CLIENT: GA-GA Power

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

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

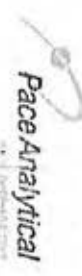
Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A[DG3A]-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-S035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG6U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1																													
2																													
3																													
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6																													
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BPIN
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 12

pH Adjustment Log for Preserved Samples

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

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information Company: GA Power Address: Atlanta, GA	Section B Required Project Information Project To: SCS Contacts Copy To: Geos/Info Contacts	Section C Invoice Information: Division: Southern Co. Company Name: Address: Phone: Fax: Billing Contact: Kevin Herring Billing Address: Billing Phone: 10839	Page: 1 of 1
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Section D Requested Client Name: Valid Matrix Codes: WATER WASTE WATER PRODUCT SLURRY DRAINAGE WASTE OTHER TIS	Section E Requested Due Date/TAT: 30 Day	Section F Requested Analysis Filtered (Y/N)	Section G REGULATORY AGENCY NPDES GROUND WATER UST RCRA OTHER CODE
---	--	---	---

ITEM #	MATRIX CODE	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES	ANALYSIS TEST	Y/N	RESIDUAL CHLORINE (Y/N)
			COMPOSITE	COMPOSITE								
1	MMW-7	WT G	8/17/21	14:59		20	5	2	3			
2	MMW-20	WT G	8/17/21	12:53		19	5	2	3			
3	MMW-5	WT G	8/17/21	9:50		19	5	2	3			
4	HGWC-10	WT G	8/17/21	15:08		22	5	2	3			
5	HGWC-9	WT G	8/17/21	12:15		20	5	2	3			
6	MMW-26D	WT G	8/17/21	11:05		20	5	2	3			
7	MMW-6	WT G	8/17/21	8:35		21	5	2	3			
8	MMW-27D	WT G	8/17/21	16:07		22	5	2	3			
9												
10												
11												
12												

Section H REQUISITIONED BY / AFFILIATION Yanner Hesser / Geo	Section I ACCEPTED BY / AFFILIATION Canner / Geo	Section J DATE	Section K TIME	Section L DATE	Section M TIME	Section N SAMPLE CONDITIONS
8/18/21	8/18/21	1349	1400	8/18/21	1350	
8/18/21	8/18/21	1548	1548	8/18/21	1548	

PRINT NAME OF SAMPLER: Yanner Hesser / Ashby Ransbury / Canner / Geo
SIGNATURE OF SAMPLER: [Signatures]

PRINT NAME OF SAMPLER: Ashby Ransbury / Geo
SIGNATURE OF SAMPLER: [Signatures]

DATE SIGNED: 8/17/2021

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

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: CLA
Date: 9/13/2021
Worklist: 625B1
Matrix: DW



Method Blank Assessment	
MB Sample ID:	2231213
MB Concentration:	0.118
MB Counting Uncertainty:	0.143
MB MDC:	0.302
MB Numerical Performance Indicator:	1.02
MB Status vs. MDC:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS (Y or N)?	
	Y	N
Count Date:	9/20/2021	9/20/2021
Spike I.D.:	19-033	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.034	24.034
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.506	0.503
Target Conc. (pCi/L, g, F):	4.750	4.787
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	5.145	4.973
LCS/LCSO Counting Uncertainty (pCi/L, g, F):	0.582	0.558
Numerical Performance Indicator:	1.32	0.67
Percent Recovery:	108.37%	103.98%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment	
Sample I.D.:	92555920009
Duplicate Sample ID:	82555920009DUP
Sample Result (pCi/L, g, F):	0.158
Sample Duplicate Result (pCi/L, g, F):	0.118
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.204
Sample Duplicate Result Uncertainty (pCi/L, g, F):	0.196
Also sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	-0.506
(Based on the LCS/LCSO Percent Recoveries) Duplicate RPC:	25.69%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPC:	Pass
% RPD Limit:	25%

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

Comments:

High precision due to unacceptable precision
N/A 20 Jan 9/20/21
LAW 9/20/21

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

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

19/20/21
LAW 9/20/21

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

1 est. Ra-228
 Analyst: JJC2
 Date: 9/1/2021
 Worksheet: 62391
 Matrix: WT

Method Blank Assessment	
MB Sample ID	2230398
MB Concentration	0.353
MB 2 Sigma CSU	0.350
MB MDX	0.718
MB Numerical Performance Indicator	1.97
MB Status vs Numerical Indicator	Pass
MB Status vs MDC	Pass

Laboratory Control Sample Assessment	
Count Date	9/1/2021
Spike ID	LCSD62391
Decay Corrected Spike Concentration (pCi/mL)	21.029
Volume Used (mL)	38.363
Aliquot Volume (L, B, F)	0.10
Target Conc (pCi/L, B, F)	0.609
Uncertainty (Calculated)	4.742
Result (pCi/L, B, F)	0.232
LCSD 2 Same CSU (pCi/L, B, F)	3.328
Numerical Performance Indicator	0.867
Status vs Numerical Indicator	Pass
Upper % Recovery Limits	135%
Lower % Recovery Limits	60%

Duplicate Sample Assessment	
Sample ID	LCSD62391
Duplicate Sample ID	LCSD62391
Sample Result 2 Sigma CSU (pCi/L, B, F)	3.364
Sample Duplicate Result (pCi/L, B, F)	0.857
Sample Duplicate Result 2 Sigma CSU (pCi/L, B, F)	3.328
Sample Duplicate Result 2 Sigma CSU (pCi/L, B, F)	0.867
Are Sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator	0.059
Duplicate Status vs Numerical Indicator	Pass
Duplicate Status vs RPD	Pass
% RPD Limit	36%

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

Comments:

FIELD NO

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample ID	
Sample MS ID	
Sample MSD ID	
Matrix Spike Result 2 Sigma CSU (pCi/L, B, F)	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, B, F)	
Duplicate Numerical Performance Indicator	
Duplicate Status vs Numerical Indicator	
Duplicate Status vs RPD	
% RPD Limit	

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: **R#-228**
Analyst: **JC2**
Date: **9/14/2021**
Worklist: **62578**
Matrix: **WT**



Method Blank Assessment	
MB Sample ID	2337270
MB Concentration	0.267
MB 2 Sigma CSU	0.218
MB MDCC	0.577
MB Numerical Performance Indicator	1.81
MB Status vs Numerical Indicator	Pass
MB Status vs MDCC	Pass

Laboratory Control Sample Assessment		LCSD (Y or N)?	Y
		LCSD62578	LCSD62578
		9/16/2021	9/16/2021
Decay Corrected Spike Concentration (pCi/ml):	Count Date:	21-029	21-029
Volume Used (ml):	Spike I.D.:	38.209	38.200
Aliquot Volume (l, g, F):	Volume Used (ml):	0.10	0.10
Target Conc. (pCi/L, g, F):	Aliquot Volume (l, g, F):	0.809	0.809
Uncertainty (calculated):	Target Conc. (pCi/L, g, F):	4.735	4.730
Result (pCi/L, g, F):	Uncertainty (calculated):	0.232	0.232
LCSD/CSU 2 Sigma CSU (pCi/L, g, F):	Result (pCi/L, g, F):	6.192	5.055
Numerical Performance Indicator:	LCSD/CSU 2 Sigma CSU (pCi/L, g, F):	1.333	1.121
Percent Recovery:	Numerical Performance Indicator:	2.11	0.56
Status vs Numerical Indicator:	Percent Recovery:	130.77%	106.87%
Upper % Recovery Limit:	Status vs Numerical Indicator:	N/A	N/A
Lower % Recovery Limit:	Upper % Recovery Limit:	Pass	Pass
	Lower % Recovery Limit:	135%	135%
		60%	60%

Duplicate Sample Assessment		LCSD (Y or N)?	Y
		LCSD62578	LCSD62578
		9/16/2021	9/16/2021
Sample I.D.:	Sample I.D.:	21-029	21-029
Duplicate Sample I.D.:	Duplicate Sample I.D.:	38.209	38.200
Sample Result (pCi/L, g, F):	Sample Result (pCi/L, g, F):	0.10	0.10
Sample Result 2 Sigma CSU (pCi/L, g, F):	Sample Result 2 Sigma CSU (pCi/L, g, F):	0.809	0.809
Sample Duplicate Result (pCi/L, g, F):	Sample Duplicate Result (pCi/L, g, F):	4.735	4.730
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.232	0.232
Are sample and/or duplicate results below RL?	Are sample and/or duplicate results below RL?	6.192	5.055
Duplicate Numerical Performance Indicator	Duplicate Numerical Performance Indicator	1.333	1.121
(Based on the LCSD/CSU Percent Recoveries)	(Based on the LCSD/CSU Percent Recoveries)	2.11	0.56
Duplicate Status vs Numerical Indicator	Duplicate Status vs Numerical Indicator	130.77%	106.87%
Duplicate Status vs RPD:	Duplicate Status vs RPD:	N/A	N/A
% RPD Limit:	% RPD Limit:	Pass	Pass
		135%	135%
		60%	60%

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

Comments:

Handwritten signature/initials

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment
<p>Sample I.D.</p> <p>Sample MS I.D.</p> <p>Sample MSD I.D.</p> <p>Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):</p> <p>Duplicate Numerical Performance Indicator:</p> <p>(Based on the Percent Recoveries)</p> <p>MS/MSD Duplicate RPD:</p> <p>MS/MSD Duplicate Status vs Numerical Indicator:</p> <p>MS/MSD Duplicate Status vs RPD:</p> <p>% RPD Limit:</p>

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-226
 Analyst: LAL
 Date: 9/10/2021
 Worklist: 62579
 Matrix: DW

Method Blank Assessment

MB Sample ID	2237271
MB Concentration:	0.141
MB Counting Uncertainty:	0.134
MB MDC:	0.261
MB Numerical Performance Indicator:	2.07
MB Status vs Numerical Indicator:	N/A
MB Status vs MDC:	Pass

Laboratory Control Sample Assessment

LCSD (Y or N)?	Y
LCSD62579	92207031
Count Date:	92207031
Spike ID:	19-033
Decay Corrected Spike Concentration (pCi/ml):	24.034
Volume Used (ml):	0.10
Aliquot Volume (l, g, F):	0.503
Target Conc. (pCi/L, g, F):	4.776
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	4.408
LCSD Counting Uncertainty (pCi/L, g, F):	0.532
Numerical Performance Indicator:	1.34
Status vs Numerical Indicator:	92.32%
Status vs Recovery:	N/A
Upper % Recovery Limit:	Pass
Lower % Recovery Limit:	125%
	75%

Duplicate Sample Assessment

Sample ID:	9255497012
Duplicate Sample ID:	925549701201P
Sample Result Counting Uncertainty (pCi/L, g, F):	0.159
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.133
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.093
Are sample and/or duplicate results below RL?	0.105
Duplicate Numerical Performance Indicator:	See Below #
Duplicate Status vs Numerical Indicator:	0.762
Duplicate Status vs RPD:	52.40%
% RPD Limit:	N/A
	Pass
	75%

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

Comments:

** Duplicate results are reported only for non-comparable precisions

N/A
 LAM 9/20/21

Sample Matrix Spike Control Assessment

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment

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

19/09/20
 MR

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.



Test: Ra-226
Analyst: CLA
Date: 1/07/2021
Worksheet: 62605
Matrix: DW

Method Blank Assessment	
MB Sample ID	2337390
MB Concentration	0.250
MB Counting Uncertainty	0.160
MB MDC	0.307
MB Numerical Performance Indicator	3.72
MB Status vs Numerical Indicator	N/A
MB Status vs MDC	Pass

Laboratory Control Sample Assessment	LCS (Y or N) P		Y
	LCS#	Y or N	
Decay Corrected Spike Concentration (pCi/mL)	9152021	9152021	9152021
	19-033	19-033	19-033
	24.034	24.034	24.034
	0.10	0.10	0.10
Volume Used (mL)	0.503	0.503	0.503
	4.775	4.775	4.759
	0.057	0.057	0.057
	4.197	4.197	3.605
Aliquot Volume (L, g, F)	0.691	0.691	0.617
	-1.66	-1.66	-3.68
	67.89%	67.89%	75.74%
	N/A	N/A	N/A
LCS1 CSO Counting Uncertainty (pCi/L, g, F)	Pass	Pass	Pass
	125%	125%	125%
	75%	75%	73%
	75%	75%	73%

Duplicate Sample Assessment	LCS (Y or N) P		Y
	LCS#	Y or N	
Sample ID	9255928001	9255928001	9255928001
	9255928005	9255928005	9255928001
	0.048	0.048	0.048
	0.190	0.190	0.190
Sample Result Counting Uncertainty (pCi/L, g, F)	0.190	0.190	0.190
	0.106	0.106	0.106
	-1.509	-1.509	See Below #
	108.01%	108.01%	108.01%
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F)	N/A	N/A	N/A
	Pass	Pass	Fail**
	29%	29%	25%
	25%	25%	25%

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

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

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

Comments:

** Batch must be re-prepped due to unacceptable precision

VALIDATION REPORTS

December 2020

Memorandum

Date: February 8, 2021
To: Whitney Law
From: Kristoffer Henderson
CC: J. Caprio
Subject: **Stage 2A Data Validation - Level II Data Deliverables – Pace Analytical Services, LLC Project Numbers 92512535 and 92512572**

SITE: Plant Hammond AP-1

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

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
92512535001	HGWA-43D
92512535002	HGWA-44D
92512535003	EB-01

Laboratory ID	Client ID
92512572001	HGWA-43D
92512572002	HGWA-44D
92512572003	EB-01

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

The following issues were noted with the chain of custody (COC) forms:

- The year was not documented for the *relinquished by* date for the first sample transfer.
- The year was not documented for the collection times of the samples. The samples were logged in with the collection year of 2020.

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

1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and USEPA methods 3005A/6020B. (Mercury was evaluated separately in Section 2.0, below).

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

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

1.1 Overall Assessment

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

1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 589396 and 589337). Metals were not detected in the method blanks above the method detection limits (MDLs).

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

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported for calcium using sample HGWA-44D. Since the calcium concentration in sample HGWA-44D was greater than four times the spiked concentration, no qualifications were applied based on the MS/MSD results.

One batch MS/MSD pair was also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 Laboratory Control Sample (LCS)

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

1.6 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Metals were not detected in the equipment blank above the MDLs, with the following exception.

Calcium was detected in EB-01 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Since calcium was detected in the associated samples at concentration greater than the RL, no qualifications were applied to the data.

1.7 Field Blank

A field blank was not collected with the sample set.

1.8 Field Duplicate

A field duplicate was not collected with the sample set.

1.9 Sensitivity

The samples were reported to the MDLs. Elevated non-detect results were not reported.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

2.0 MERCURY

The samples were analyzed for mercury by USEPA method 7470A.

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

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

2.1 Overall Assessment

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

2.2 Holding Time

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 587972). Mercury was not detected in the method blank above the MDL.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One batch MS/MSD pair was reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.5 Laboratory Control Sample

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

2.6 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Mercury was not detected in the equipment blank above the MDL.

2.7 Field Blank

A field blank was not collected with the sample set.

2.8 Field Duplicate

A field duplicate was not collected with the sample set.

2.9 Sensitivity

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

2.10 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

3.0 WET CHEMISTRY

The samples were analyzed for TDS by Standard method 2540C and anions by USEPA method 300.0.

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

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity

- ✓ Electronic Data Deliverables Review

3.1 Overall Assessment

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

3.2 Holding Times

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride, and sulfate) analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported for TDS (batch 588373) and one method blank was reported for the anions (batch 589104). The wet chemistry parameters were not detected in the method blanks above the MDLs.

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two batch MS/MSD pairs were reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.5 Laboratory Control Sample

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

3.6 Laboratory Duplicate

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 non-detect results were reported.

3.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

4.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA method 9320 and total radium by calculation.

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

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate

- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

4.1 Overall Assessment

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

4.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported for the radium-228 data (batch 428750). One method blank was reported for the radium-226 data (batch 429175). Radium-226 was not detected in the method blank above the minimum detectable concentrations (MDCs).

Radium-228 (0.694 pCi/L) was detected in the method blank in batch 428750 at a concentration greater than the MDC. Since radium-228 was not detected at concentrations greater than the MDCs in the associated samples, no qualifications were applied to the data.

4.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

4.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS/LCS duplicate (LCSD) pair was reported for radium-226. One LCS/LCSD pair was reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma (1σ)] results were within the laboratory specified acceptance criteria.

4.6 Laboratory Duplicate

One batch laboratory duplicate was reported for radium-226. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

4.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

4.8 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Radium-226 and Radium-228 were not detected in the equipment blank above the MDCs.

4.9 Field Blank

A field blank was not collected with the sample set.

4.10 Field Duplicate

A field duplicate was not collected with the sample set.

4.11 Sensitivity

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

4.12 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

* * * * *

ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

January 2021

Memorandum

Date: April 5, 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 92517856 and 92517888**

SITE: Plant Hammond AP-1

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

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
92517856001	HGWA-43D
92517856002	HGWA-44D
92517856003	EB-01

Laboratory ID	Client ID
92517888001	HGWA-43D
92517888002	HGWA-44D
92517888003	EB-01

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The field pH data included in the laboratory report were not validated.

1.0 METALS

The samples were analyzed for metals by USEPA methods 3010A/6010D and USEPA methods 3005A/6020B. (Mercury was evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ⊗ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate

- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (batches 596653 and 596887). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exception.

Antimony was detected in the method blank in batch 596887 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated antimony concentrations in the associated samples were U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HGWA-43D	Antimony	0.00029	J B	0.003	U	3
HGWA-44D	Antimony	0.00067	J B	0.003	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

B-laboratory indicating the analyte was detected in both the method blank and sample

* Validation qualifiers are defined in Attachment 1 at the end of this report

**Reason codes are defined in Attachment 2 at the end of this report

1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three batch MS/MSD pairs were reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

1.6 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Metals were not detected in the equipment blank above the MDLs.

1.7 Field Blank

A field blank was not collected with the sample set.

1.8 Field Duplicate

A field duplicate was not collected with the sample set.

1.9 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

2.0 MERCURY

The samples were analyzed for mercury by USEPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues

were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

2.1 Overall Assessment

The mercury data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

2.2 Holding Time

The holding time for mercury analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 594784). Mercury was not detected in the method blank above the MDL.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One batch MS/MSD pair was reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS was reported. The recovery result was within the laboratory specified acceptance criteria.

2.6 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Mercury was not detected in the equipment blank above the MDL.

2.7 Field Blank

A field blank was not collected with the sample set.

2.8 Field Duplicate

A field duplicate was not collected with the sample set.

2.9 Sensitivity

The samples were reported to the MDL. No elevated non-detect results were reported.

2.10 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

3.0 WET CHEMISTRY

The samples were analyzed for TDS by Standard method 2540C and anions by USEPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate

- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The wet chemistry data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

3.2 Holding Times

The holding time for the TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions (chloride, fluoride, and sulfate) analysis of a water sample is 28 days from sample collection to analysis. The holding times were met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported for TDS (batches 594633 and 594779) and one method blank was reported for the anions (batch 594878). The wet chemistry parameters were not detected in the method blanks above the MDLs.

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two batch MS/MSD pairs were reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCSs were 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

Four batch laboratory duplicates were reported for TDS. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.7 Equipment Blank

One equipment blank was collected with the sample set, EB-01. The wet chemistry parameters were not detected in the equipment blank above the MDL.

3.8 Field Blank

A field blank was not collected with the sample set.

3.9 Field Duplicate

A field duplicate was not collected with the sample set.

3.10 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

3.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

4.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ⊗ Laboratory Control Sample

- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

4.1 Overall Assessment

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

4.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

4.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported for the radium-228 data (batch 432561). One method blank was reported for the radium-226 data (batch 433326). Radium-226 and radium-228 were not detected in the method blank 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 (1σ)] results were within the laboratory specified acceptance criteria, with the following exception.

The recovery of radium-228 in the LCS in batch 432561 was low and outside of the laboratory specified acceptance criteria. Therefore, the radium-228 and total radium concentrations less than the MDCs in the associated samples were UJ qualified as estimated less than the MDCs.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
HGWA-43D	Radium-228	0.482	U	0.482	UJ	5
HGWA-43D	Combined Radium 226 + 228	0.685	U	0.685	UJ	5
HGWA-44D	Radium-228	0.531	U	0.531	UJ	5
HGWA-44D	Combined Radium 226 + 228	0.790	U	0.790	UJ	5
EB-01	Radium-228	0.365	U	0.365	UJ	5
EB-01	Combined Radium 226 + 228	0.404	U	0.404	UJ	5

pCi/L-picocuries per liter

U-not detected at or above the MDC

4.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for radium-226 using sample HGWA-43D.

The RER result was high and outside of the laboratory specified acceptance criteria. Since the radium-226 concentration in sample HGWA-43D was less than the MDC, no qualifications were applied to the data.

4.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

4.8 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Radium-226 and Radium-228 were not detected in the equipment blank above the MDCs.

4.9 Field Blank

A field blank was not collected with the sample set.

4.10 Field Duplicate

A field duplicate was not collected with the sample set.

4.11 Sensitivity

The samples were reported to the MDCs. No elevated non-detect results were reported.

4.12 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec’s Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

LCS - Laboratory Control Sample
 LCSD - Laboratory Control Sample duplicate
 RPD - Relative percent difference

February 2021

Memorandum

Date: April 23, 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 92521131 and 92521151**

SITE: Plant Hammond AP-1

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twenty-three aqueous samples, two filtered aqueous samples, one field duplicate, one field blank and one equipment blank, collected 8/22 February 2021, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Metals by United States (US) Environmental Protection Agency (EPA) USEPA Methods 3005A/6020B
- Mercury by USEPA Method 7470A

The samples were analyzed at Pace Analytical Services Asheville, North Carolina, for the following analytical test:

- Fluoride by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total Radium by Calculation

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment, and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 542-R-20-006); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
92521131001	HGWA-1
92521131002	HGWA-2
92521131003	HGWA-3
92521131004	HGWA-43D
92521131005	HGWA-44D
92521131006	HGWC-7
92521131007	MW-28D
92521131008	MW-28D FILTERED
92521131009	MW-20
92521131010	HGWC-11
92521131011	HGWC-12
92521131012	MW-19
92521131013	DUP-1
92521131014	MW-25D
92521131015	FB-1
92521131016	EB-1
92521131017	HGWC-10
92521131018	MW-7
92521131019	MW-29
92521131020	HGWC-8
92521131021	HGWC-9
92521131022	MW-5
92521131023	MW-6

Laboratory ID	Client ID
92521131024	MW-24D
92521131025	MW-26D
92521131026	MW-27D
92521131027	MW-27D FILTERED
92521131028	HGWC-13
92521151001	HGWA-1
92521151002	HGWA-2
92521151003	HGWA-3
92521151004	HGWA-43D
92521151005	HGWA-44D
92521151006	HGWC-7
92521151007	MW-28D
92521151008	MW-28D FILTERED
92521151009	MW-20
92521151010	HGWC-11
92521151011	HGWC-12
92521151012	MW-19
92521151013	DUP-1
92521151014	MW-25D
92521151015	FB-1
92521151016	EB-1
92521151017	HGWC-10
92521151018	MW-7

Laboratory ID	Client ID
92521151019	MW-29
92521151020	HGWC-8
92521151021	HGWC-9
92521151022	MW-5
92521151023	MW-6

Laboratory ID	Client ID
92521151024	MW-24D
92521151025	MW-26D
92521151026	MW-27D
92521151027	MW-27D FILTERED
92521151028	HGWC-13

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The following issues were noted on the chain of custody (COC). No qualifications were applied based on these issues.

- A collection time was not listed on the COC for the field duplicate, DUP-1. The field duplicate was logged in with the collection time of 00:00.
- The relinquished by signature, date and time were missing for the final sample transfer on page 2 of the COC.
- The received by signature, date and time were missing for the final sample transfer on pages 4 and 5 of the COC.
- There were time discrepancies for sample transfers on pages 2-3 of the COC. The relinquished by time was documented as 2/10/21 0933 and the received by time was documented as 2/11/21 0936.
- There were time discrepancies for sample transfers on pages 4-5 of the COC. The relinquished by time was documented as 2/11/21 0915 and the received by time was documented as 2/11/21 0919.
- There were time discrepancies for a sample transfer on page 14 of the COC. The relinquished by time was documented as 2/17/21 1055 and the received by time was documented as 2/17/21 1154.

The field pH data included in the laboratory report were not validated.

1.0 METALS

The samples were analyzed for metals by USEPA methods USEPA methods 3005A/6020B. (Mercury was evaluated separately in Section 2.0, below).

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ⊗ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ⊗ Field Duplicate
- ✓ Sensitivity
- ⊗ Total vs Dissolved Metals Assessment
- ✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported (batches 601892, 601924 and 603830). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exceptions.

Antimony and arsenic were detected in the method blank in batch 601892 at estimated concentrations greater than the MDLs and less than the reporting limits (RLs). Therefore, the estimated antimony and arsenic concentrations in the associated samples were U qualified as not detected at the RLs.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HGWA-2	Antimony	0.00062	J B	0.0030	U	3
HGWA-3	Antimony	0.00031	J B	0.0030	U	3

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HGWA-43D	Antimony	0.00037	J B	0.0030	U	3
HGWA-43D	Arsenic	0.0017	J B	0.0050	U	3
HGWA-44D	Antimony	0.00042	J B	0.0030	U	3
HGWA-44D	Arsenic	0.00083	J B	0.0050	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

B-laboratory indicating the analyte was detected in both the method blank and sample

* Validation qualifiers are defined in Attachment 1 at the end of this report

**Reason codes are defined in Attachment 2 at the end of this report

1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific MS/MSD pairs were reported using samples HGWC-7 and HGWC-10. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

One batch MS/MSD pair was also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three 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

One field blank was collected with the sample set, FB-01. Metals were not detected in the field blank above the MDLs.

1.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-01. Acceptable precision (RPD \leq 20% or the difference between the concentrations $<$ RL) was demonstrated between the field duplicate and the original sample, MW-19, with the following exception.

Chromium was detected in MW-19 at an estimated concentration greater than the MDL and less than the RL and was not detected in DUP-1, resulting in a noncalculable RPD. Therefore, the chromium concentration in MW-19 was J qualified as estimated and the non-detect chromium result in DUP-1 was UJ qualified as estimated less than the MDL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD	Validation Result (mg/L)	Validation Qualifier	Reason Code
MW-19	Chromium	0.00059	J	NC	0.00059	J	7
DUP-1	Chromium	0.00055	U		0.00055	UJ	7

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

U-not detected at or above the MDL

NC-not calculable

1.9 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

1.10 Total vs Dissolved Metals Assessment

Two samples were reported for total and dissolved metals (MW-27D and MW-28D). The total metals concentrations were greater than or equal to the dissolved metals concentrations or the RPD was less than 30%, with the following exceptions.

Total cadmium was not detected in sample MW-28D and dissolved cadmium was detected MW-28D FILTERED at an estimated concentration greater than the MDL and less than the RL. Therefore, based on professional and technical judgment, the non-detect total cadmium result in sample MW-28D was UJ qualified as estimated less than the MDL and the dissolved cadmium concentration in sample MW-28D FILTERED was J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
MW-28D	Cadmium	0.00012	U	0.00012	UJ	13
MW-28D FILTERED	Cadmium	0.00021	J	0.00021	J	13

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

U-not detected at or above the MDL

1.11 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

2.0 MERCURY

The samples were analyzed for mercury by USEPA method 7470A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Total vs Dissolved Metals 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). Five method blanks were reported (batches 600377, 601295, 601590, 601883 and 602268). Mercury was not detected in the method blanks above the MDL.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported using sample HGWC-9. The recovery and RPD results were within the laboratory specified acceptance criteria.

Four batch MS/MSD pairs were also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

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). Five LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

2.6 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Mercury was not detected in the equipment blank above the MDL.

2.7 Field Blank

One field blank was collected with the sample set, FB-01. Mercury was not detected in the field blank above the MDL.

2.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-01. Acceptable precision (RPD \leq 20% or the difference between the concentrations $<$ RL) was demonstrated between the field duplicate and the original sample, MW-19.

2.9 Sensitivity

The samples were reported to the MDL. No elevated non-detect results were reported.

2.10 Total vs Dissolved Mercury Assessment

Two samples were reported for total and dissolved mercury (MW-27D and MW-28D). The total mercury concentrations were greater than or equal to the dissolved metals concentrations or the RPD was less than 30%.

2.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

3.0 FLUORIDE

The samples were analyzed for fluoride by USEPA method 300.0.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Total vs Dissolved Fluoride Assessment
- ✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The fluoride data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

3.2 Holding Times

The holding time for the fluoride analysis of a water sample is 28 days from sample collection to analysis. The holding time was met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Seven method blanks were reported (batches 598903, 599257, 599863, 600235, 600783, 601397 and 604773). Fluoride was not detected in the method blanks above the MDL.

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three sample set specific MS/MSD pairs were reported using samples MW-28D FILTERED, FB-1 and MW-26D. The recovery and RPD results were within the laboratory specified acceptance criteria.

Eleven batch MS/MSD pairs were also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Seven LCSs were reported. The recovery results were within the laboratory specified acceptance criteria.

3.6 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Fluoride was not detected in the equipment blank above the MDL.

3.7 Field Blank

One field blank was collected with the sample set, FB-01. Fluoride was not detected in the field blank above the MDL.

3.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-01. Acceptable precision (RPD \leq 20% or the difference between the concentrations $<$ RL) was demonstrated between the field duplicate and the original sample, MW-19.

3.9 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

3.10 Total vs Dissolved Fluoride Assessment

The samples were reported for total and dissolved fluoride. The total fluoride concentrations were greater than or equal to the dissolved fluoride concentrations or the RPD was less than 30%.

3.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

4.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ⊗ Equipment Blank
- ⊗ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ 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). Five method blanks were reported for the radium-228 data (batches 435116, 435836, 435838, 437641 and 435787). Five method blanks were reported for the radium-226 data (batches 435459, 435786, 437599, 435837 and 435835). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exceptions.

Radium-226 (0.276 pCi/L) was detected in the method blank in batch 435459 at a concentration greater than the MDC. Since radium-226 was not detected at a concentration greater than the MDC in the associated sample, no qualifications were applied to the data.

4.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

4.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Five LCS/LCS duplicate (LCSD) pairs were reported for radium-226. Five LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma (1σ)] results were within the laboratory specified acceptance criteria.

4.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for radium-226 using sample MW-19. The RER result was 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 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 was not detected in the equipment blank above the MDC.

Radium-228 (2.12 pCi/L) was detected in EB-01 at a concentration greater than the MDC. Therefore, the radium-228 concentrations greater than the MDCs and less than the equipment blank concentration were U qualified as not detected at the reported concentrations, and based on professional and technical judgment the total radium concentrations in samples HGWC-11 and MW-27D FILTERED were J+ qualified as estimated with high biases, and the total radium concentrations in samples DUP-1, HGWC-10 and HGWC-13 were U qualified as not detected at the reported concentrations.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
HGWC-11	Radium-228	0.829	NA	0.829	U	3
HGWC-11	Combined Radium 226 + 228	1.10	NA	1.10	J+	3
DUP-1	Radium-228	0.618	NA	0.618	U	3
DUP-1	Combined Radium 226 + 228	0.760	NA	0.760	U	3
HGWC-10	Radium-228	1.85	NA	1.85	U	3
HGWC-10	Combined Radium 226 + 228	1.91	NA	1.91	U	3
MW-27D FILTERED	Radium-228	0.877	NA	0.877	U	3
MW-27D FILTERED	Combined Radium 226 + 228	1.39	NA	1.39	J+	3
HGWC-13	Radium-228	0.857	NA	0.857	U	3
HGWC-13	Combined Radium 226 + 228	1.02	NA	1.02	U	3

pCi/L-picocuries per liter

NA-not applicable

4.9 Field Blank

One field blank was collected with the sample set, FB-01. Radium-228 was not detected in the field blank above the MDC.

Radium-226 (0.209 pCi/L) was detected in FB-01 at a concentration greater than the MDC. Therefore, the radim-226 concentrations greater than the field blank concentration in the associated samples were J+ qualified as estimated with high biases, and based on professional and technical judgment the total radium concentrations in samples MW-25D, MW-27D and MW-27D FILTERED were J+ qualified as estimated with high biases.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
HGWA-2	Radium-226	0.465	NA	0.465	J+	3
HGWC-7	Radium-226	0.255	NA	0.255	J+	3
HGWC-11	Radium-226	0.273	NA	0.273	J+	3
MW-25D	Radium-226	0.601	NA	0.601	J+	3
MW-25D	Combined Radium 226 + 228	1.17	NA	1.17	J+	3
MW-7	Radium-226	0.237	NA	0.237	J+	3
MW-29	Radium-226	0.280	NA	0.280	J+	3
HGWC-8	Radium-226	0.270	NA	0.270	J+	3
MW-27D	Radium-226	0.552	NA	0.552	J+	3
MW-27D	Combined Radium 226 + 228	1.21	NA	1.21	J+	3
MW-27D FILTERED	Radium-226	0.512	NA	0.512	J+	3
MW-27D FILTERED	Combined Radium 226 + 228	1.39	NA	1.39	J+	3

pCi/L-picocuries per liter

NA-not applicable

4.10 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-01. Acceptable precision (RER (1σ) < 3) was demonstrated between the field duplicate and the original sample, MW-19.

4.11 Sensitivity

The samples were reported to the MDCs. No elevated non-detect results were reported.

4.12 Total vs Dissolved Radiochemistry Assessment

The samples were reported for total and dissolved radiochemistry. The total radiochemistry concentrations were greater than or equal to the dissolved radiochemistry concentrations or the RER was less than 3.

4.13 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

* * * * *

ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

March 2021

Memorandum

Date: April 26, 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 92527268 and 92527270**

SITE: Plant Hammond AP-1

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of twenty-three aqueous samples, one filtered aqueous sample, one field duplicate, one field blank and one equipment blank, collected 10-17 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 (US) Environmental Protection Agency (EPA) Method
- Metals by USEPA Methods 3005A/6020B
- Total Dissolved Solids (TDS) by Standard Method 2450C

The samples were analyzed at Pace Analytical Services Asheville, North Carolina, for the following analytical test:

- Anions (Chloride, Fluoride and Sulfate) by USEPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by USEPA Method 9315
- Radium-228 by USEPA Method 9320
- Total Radium by Calculation

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment, and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 542-R-20-006); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

The following samples were analyzed and reported in the laboratory reports:

Client ID	Laboratory ID
92527268001	HGWA-1
92527268002	HGWA-44D
92527268003	HGWA-2
92527268004	HGWA-3
92527268005	HGWA-43D
92527268006	HGWC-10
92527268007	MW-27D
92527268008	HGWC-7 FILTERED
92527268009	HGWC-7
92527268010	HGWC-8
92527268011	MW-7
92527268012	MW-20
92527268013	MW-28D
92527268014	MW-29
92527268015	HGWC-9
92527268016	HGWC-11
92527268017	HGWC-12
92527268018	MW-5
92527268019	MW-6
92527268020	MW-25D
92527268021	DUP-1
92527268022	EB-1
92527268023	FB-1
92527268024	HGWC-13
92527268025	MW-19

Client ID	Laboratory ID
92527268026	MW-24D
92527268027	MW-26D
92527270001	HGWA-1
92527270002	HGWA-44D
92527270003	HGWA-2
92527270004	HGWA-3
92527270005	HGWA-43D
92527270006	HGWC-10
92527270007	MW-27D
92527270008	HGWC-7 FILTERED
92527270009	HGWC-7
92527270010	HGWC-8
92527270011	MW-7
92527270012	MW-20
92527270013	MW-28D
92527270014	MW-29
92527270015	HGWC-9
92527270016	HGWC-11
92527270017	HGWC-12
92527270018	MW-5
92527270019	MW-6
92527270020	MW-25D
92527270021	DUP-1
92527270022	EB-1
92527270023	FB-1

Client ID	Laboratory ID
92527270024	HGWC-13
92527270025	MW-19

Client ID	Laboratory ID
92527270026	MW-24D
92527270027	MW-26D

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The field pH data included in the laboratory report were not validated.

1.0 METALS

The samples were analyzed for metals by USEPA methods USEPA methods 3005A/6020B.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ⊗ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ⊗ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ⊗ Total vs Dissolved Metals Assessment
- ✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times for the dissolved metals analysis of a water sample is 15 minutes from sample collection to filtration and 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Nine method blanks were reported (batches 606634, 608195, 609342, 609345, 606644, 607964, 609688, 609689 and 609693). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exceptions.

Antimony was detected in the method blank in batch 606644 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Therefore, the estimated antimony concentration in the associated sample was U qualified as not detected at the RL.

Chromium was detected in the method blank in batch 609689 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated chromium concentration in the associated sample was U qualified as not detected at the RL.

Boron was detected in the method blank in batch 609693 at an estimated concentration greater than the MDL and less than the RL. Since boron was either not detected or detected above the RL in the associated samples, no qualifications were applied to the data.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HGWA-44D	Antimony	0.00037	J B	0.0030	U	3
MW-5	Chromium	0.0024	J B	0.0050	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

B-laboratory indicating the analyte was detected in both the method blank and sample

* Validation qualifiers are defined in Attachment 1 at the end of this report

**Reason codes are defined in Attachment 2 at the end of this report

1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three sample set specific MS/MSD pairs were reported using samples HGWC-10, HGWC-7 and HGWC-13. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

Six batch MS/MSD pairs were also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

For sample concentrations greater than four times the spiked concentration the MS/MSD recovery results were not considered for validation and no qualifications were applied based on the MS/MSD recovery results.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Nine 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

One field blank was collected with the sample set, FB-01. Metals were not detected in the field blank above the MDLs. with the following exception.

Antimony was detected in FB-01 at an estimated concentration greater than the MDL and less than the RL. Therefore, the estimated antimony concentrations in the associated samples were U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWA-44D	Antimony	0.00037	J B	0.0030	U	3
HGWA-43D	Antimony	0.00057	J	0.0030	U	3
HGWC-13	Antimony	0.00049	J	0.0030	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

B-laboratory indicating the analyte was detected in both the method blank and sample

1.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-01. Acceptable precision (RPD \leq 20% or the difference between the concentrations $<$ RL) was demonstrated between the field duplicate and the original sample, MW-25D.

1.9 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

1.10 Total vs Dissolved Metals Assessment

One sample was reported for total and dissolved metals (HGWC-7). The total metals concentrations were greater than or equal to the dissolved metals concentrations or the RPD was less than 30%, with the following exceptions.

Total cadmium was not detected in sample HGWC-7 and dissolved cadmium was detected in HGWC-7 FILTERED at an estimated concentration greater than the MDL and less than the RL. Therefore, based on professional and technical judgment, the non-detect total cadmium result in sample HGWC-7 was UJ qualified as estimated less than the MDL and the dissolved cadmium concentration in sample HGWC-7 FILTERED was J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	RPD	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWC-7 FILTERED	Cadmium	0.00021	J	NC	0.00021	J	13
HGWC-7	Cadmium	0.00012	U		0.00012	U	13

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

U-not detected at or above the MDL

NC-not calculable

1.11 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

2.0 WET CHEMISTRY

The samples were analyzed for anions (chloride, fluoride and sulfate) by USEPA method 300.0 and TDS by Standard Method 2540C.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ⊗ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample

- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Total vs Dissolved Wet Chemistry Assessment
- ✓ Electronic Data Deliverables Review

2.1 Overall Assessment

The wet chemistry data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

2.2 Holding Times

The holding time for TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions analysis of a water sample is 28 days from sample collection to analysis. The holding time was met for the sample analyses, with the following exceptions.

The TDS analyses for samples HGWC-10 and MW-27D were performed outside of the holding time. Therefore, the TDS concentrations in samples HGWC-10 and MW-27D were J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
HGWC-10	TDS	490	H1	490	J	2
MW-27D	TDS	215	H1	215	J	2

mg/L-milligrams per liter

H1-laboratory flag indicating the analysis was performed outside the holding time

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Six method blanks were reported (batches 606587, 607345, 608133, 608136, 608146 and 608443) for TDS. Eight method blanks were reported (batches 607170, 607751, 607758, 607981, 607982, 607984, 608283 and 608285) for anions. The wet chemistry parameters were not detected in the method blanks above the MDL.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Batch MS/MSD pairs were reported for the anions. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). LCSs were reported for each analysis and batch. The recovery results were within the laboratory specified acceptance criteria.

2.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported using sample HGWC-10. The RPD result was within the laboratory specified acceptance criteria.

Batch laboratory duplicate were also reported for TDS. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.7 Equipment Blank

One equipment blank was collected with the sample set, EB-01. The wet chemistry parameters were not detected in the equipment blank above the MDL, with the following exception.

TDS (10.0 mg/L) was detected in EB-1 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.

2.8 Field Blank

One field blank was collected with the sample set, FB-01. The wet chemistry parameters were not detected in the field blank above the MDL.

2.9 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-01. Acceptable precision (RPD \leq 20% or the difference between the concentrations $<$ RL) was demonstrated between the field duplicate and the original sample, MW-25D.

2.10 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

2.11 Total vs Dissolved Wet Chemistry Assessment

One sample was reported for total and dissolved wet chemistry parameters (HGWC-7). The total wet chemistry concentrations were greater than or equal to the dissolved wet chemistry concentrations or the RPD was less than 30%.

2.12 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

3.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by USEPA method 9315, radium-228 by USEPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ⊗ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Total vs Dissolved Radiochemistry Assessment
- ✓ 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 440197, 443103, 440490 and 440491). Four method blanks were reported for the radium-226 data (batches 440498, 440499, 443236 and 439773). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs), with the following exceptions.

Radium-228 (0.738 pCi/L) was detected in the method blanks in batches 440490 (0.738 pCi/L) and 440491 (0.826 pCi/L) at concentrations greater than the MDCs. Therefore, based on professional and technical judgment the radium-228 and total radium concentrations in the associated samples greater than the MDCs were J+ qualified as estimated with high biases.

Sample	Analyte	Laboratory Result (pCi/L)	Laboratory Flag	Validation Result (pCi/L)	Validation Qualifier	Reason Code
HGWC-11	Radium-228	1.57	NA	1.57	J+	3
HGWC-11	Combined Radium 226 + 228	1.71	NA	1.71	J+	3
MW-5	Radium-228	1.14	NA	1.14	J+	3
MW-5	Combined Radium 226 + 228	1.22	NA	1.22	J+	3

pCi/L-picocuries per liter

NA-not applicable

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four LCS/LCS duplicate (LCSD) pairs were reported for radium-226. Four LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma (1σ)] results were within the laboratory specified acceptance criteria.

3.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for radium-226 using sample HGWC-13. The RER result was 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.

3.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

3.8 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Radium-226 and radium-228 were not detected in the equipment blank above the MDCs.

3.9 Field Blank

One field blank was collected with the sample set, FB-01. Radium-226 and radium-228 were not detected in the field blank above the MDCs.

3.10 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-01. Acceptable precision (RER (1σ) < 3) was demonstrated between the field duplicate and the original sample, MW-25D.

3.11 Sensitivity

The samples were reported to the MDCs. No elevated non-detect results were reported.

3.12 Total vs Dissolved Radiochemistry Assessment

One sample was reported for total and dissolved radiochemistry parameters (HGWC-7). The total radiochemistry concentrations were greater than or equal to the dissolved radiochemistry concentrations or the RER was less than 3.

3.13 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

* * * * *

ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

August 2021

Memorandum

Date: November 18, 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 92555928 and 92555945**

SITE: Plant Hammond AP-1

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of eighteen aqueous samples, one field duplicate, one field blank and one equipment blank, collected 16-19 August 2021, as part of the Plant Hammond AP on-site sampling event.

The samples were analyzed at Pace Analytical Services Atlanta, Peachtree Corners, Georgia, for the following analytical tests:

- Calcium by United States (US) Environmental Protection Agency (EPA) Methods 3010A/6010D
- Metals by US EPA Methods 3005A/6020B
- Total Dissolved Solids (TDS) by Standard Method 2450C

The samples were analyzed at Pace Analytical Services Asheville, North Carolina, for the following analytical test:

- Anions (Chloride, Fluoride and Sulfate) by US EPA Method 300.0

The samples were analyzed at Pace Analytical Services, LLC, Greensburg, Pennsylvania, for the following analytical tests:

- Radium-226 by US EPA Method 9315
- Radium-228 by US EPA Method 9320
- Total Radium by Calculation

EXECUTIVE SUMMARY

Based on the Stage 2A data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitation of the qualification.

The data were reviewed based on the pertinent methods referenced in the laboratory reports, professional and technical judgment, and the following documents:

- US EPA Region IV Data Validation Standard Operating Procedures (US EPA Region IV, September 2011);
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review, November 2020 (EPA 542-R-20-006); and
- American National Standard, Verification and Validation of Radiological Data for use in Waste Management and Environmental Remediation, February 15, 2012 (ANSI/ANS-41.5-2012).

The following samples were analyzed and reported in the laboratory reports:

Laboratory ID	Client ID
92555928001	MW-29
92555928002	HGWC-7
92555928003	MW-7
92555928004	MW-20
92555928005	MW-5
92555928006	HGWC-10
92555928007	HGWC-9
92555928008	MW-26D
92555928009	MW-6
92555928010	MW-27D
92555928011	MW-19
92555928012	HGWC-11
92555928013	HGWC-12
92555928014	MW-28D
92555928015	HGWC-8
92555928016	HGWC-13
92555928017	MW-25D
92555928018	MW-24D
92555928019	DUP-1
92555928020	EB-1
92555928021	FB-1

Laboratory ID	Client ID
92555945001	MW-29
92555945002	HGWC-7
92555945003	MW-7
92555945004	MW-20
92555945005	MW-5
92555945006	HGWC-10
92555945007	HGWC-9
92555945008	MW-26D
92555945009	MW-6
92555945010	MW-27D
92555945011	MW-19
92555945012	HGWC-11
92555945013	HGWC-12
92555945014	MW-28D
92555945015	HGWC-8
92555945016	HGWC-13
92555945017	MW-25D
92555945018	MW-24D
92555945019	DUP-1
92555945020	EB-1
92555945021	FB-1

The samples were received within 0-6 degrees Celsius (°C). No sample preservation issues were noted by the laboratory.

The field pH data included in the laboratory report were not validated.

The following issues were noted on the chain of custody (COC). No qualifications were applied based on these issues.

- A collection time was not listed on the COC for the field duplicate, DUP-1. The field duplicate was logged in with the collection time of 00:00.
- For page one of the COC for the first sample transfer, the *relinquished by* time was documented as 8/17/21 1125 and the *received by* time was documented as 8/17/21 1126.
- For page two of the COC for the second sample transfer, the *relinquished by* time was documented as 8/18/21 1349 and the *received by* time was documented as 8/18/21 1350.

1.0 METALS

The samples were analyzed for metals by US EPA methods 3010A/6010D and US EPA methods 3005A/6020B.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ⊗ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

1.1 Overall Assessment

The metals data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

1.2 Holding Time

The holding time for the metals analysis of a water sample is 180 days from sample collection to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Four method blanks were reported (batches 642818, 643161, 642817 and 643162). Metals were not detected in the method blanks above the method detection limits (MDLs), with the following exceptions.

Arsenic was detected in the method blank in batch 642817 at an estimated concentration greater than the MDL and less than the reporting limit (RL). Therefore, the estimated arsenic concentration in the associated sample was U qualified as not detected at the RL.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier*	Reason Code**
HGWC-12	Arsenic	0.0028	J B	0.0050	U	3

mg/L-milligrams per liter

J-estimated concentration greater than the MDL and less than the RL

B-laboratory indicating the analyte was detected in both the method blank and sample

* Validation qualifiers are defined in Attachment 1 at the end of this report

**Reason codes are defined in Attachment 2 at the end of this report

1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two sample set specific MS/MSD pairs were reported using samples HGWC-7 and MW-29. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

Two batch MS/MSD pairs were also reported. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

For sample concentrations greater than four times the spiked concentration the MS/MSD recovery results were not considered for validation and no qualifications were applied based on the MS/MSD recovery results.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). 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, with the following exception.

Calcium was detected in EB-01 at an estimated concentration greater than the MDL and less than the 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

One field blank was collected with the sample set, FB-01. Metals were not detected in the field blank above the MDLs.

1.8 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-01. Acceptable precision (RPD $\leq 20\%$ or the difference between the concentrations $< RL$) was demonstrated between the field duplicate and the original sample, HGWC-13.

1.9 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

1.10 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

2.0 WET CHEMISTRY

The samples were analyzed for anions (chloride, fluoride and sulfate) by US EPA method 300.0 and TDS by Standard Method 2540C.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues

were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ⊗ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Equipment Blank
- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

2.1 Overall Assessment

The wet chemistry data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this data set is 100%.

2.2 Holding Times

The holding time for TDS analysis of a water sample is 7 days from sample collection to analysis. The holding time for the anions analysis of a water sample is 28 days from sample collection to analysis. The holding time was met for the sample analyses, with the following exception.

The TDS analysis for sample MW-28D was performed outside of the holding time. Therefore, the TDS concentration in sample MW-28D was J qualified as estimated.

Sample	Analyte	Laboratory Result (mg/L)	Laboratory Flag	Validation Result (mg/L)	Validation Qualifier	Reason Code
MW-28D	TDS	396	H1	396	J	2

mg/L-milligrams per liter

H1-laboratory flag indicating the analysis was performed outside the holding time

2.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Five method blanks were reported (batches 642065, 642067, 642673, 643140 and 644074) for TDS. Five method blanks were reported (batches 642138, 642141, 642667, 642990 and 643306) for anions. The wet chemistry parameters were not detected in the method blanks above the MDL.

2.4 Matrix Spike/Matrix Spike Duplicate

MS/MSDs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One sample set specific MS/MSD pair was reported using sample MW-19. The recovery and RPD results were within the laboratory specified acceptance criteria, with the following exception.

The RPD of sulfate in the MS/MSD pair was high and outside of the laboratory specified acceptance criteria. Since the sulfate concentration in sample MW-19 was greater than four times the spiked concentration, no qualifications were applied to the data, based on the MS/MSD pair RPD and recovery results.

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.

2.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). LCSs were reported for each analysis and batch. The recovery results were within the laboratory specified acceptance criteria.

2.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported using sample MW-28D. The RPD result was within the laboratory specified acceptance criteria.

Batch laboratory duplicates were also reported for TDS. Since these were batch QC, the results do not affect the samples in this data set and qualifications were not applied to the data.

2.7 Equipment Blank

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.

2.8 Field Blank

One field blank was collected with the sample set, FB-01. The wet chemistry parameters were not detected in the field blank above the MDL, with the following exception.

TDS (11.0 mg/L) was detected in FB-1 at a concentration greater than the RL. Since TDS was detected in the associated samples at concentrations greater than ten times the field blank concentration, no qualifications were applied to the data.

2.9 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-01. Acceptable precision (RPD \leq 20% or the difference between the concentrations $<$ RL) was demonstrated between the field duplicate and the original sample, HGWC-13.

2.10 Sensitivity

The samples were reported to the MDLs. No elevated non-detect results were reported.

2.11 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

3.0 RADIOCHEMISTRY

The samples were analyzed for radium-226 by US EPA method 9315, radium-228 by US EPA method 9320 and total radium by calculation.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Method Blank
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Tracers and Carriers
- ✓ Equipment Blank

- ✓ Field Blank
- ✓ Field Duplicate
- ✓ Sensitivity
- ✓ Electronic Data Deliverables Review

3.1 Overall Assessment

The radium-226 and radium-228 data reported in this data set are considered usable for meeting project objectives. The results are considered valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for this analysis, for this data set is 100%.

3.2 Holding Times

The holding times for the radium-226 and radium-228 analyses of a water sample are 180 days from sample collection to analysis. The holding times were met for the sample analyses.

3.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three method blanks were reported for the radium-228 data (batches 461961, 463379 and 463381). Three method blanks were reported for the radium-226 data (batches 463426, 463380 and 463382). Radium-226 and radium-228 were not detected in the method blanks above the minimum detectable concentrations (MDCs).

3.4 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were not reported with the data.

3.5 Laboratory Control Sample

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Three LCS/LCS duplicate (LCSD) pairs were reported for radium-226. Three LCS/LCSD pairs were reported for radium-228. The recovery and replicate error ratio (RER) [1 sigma (1σ)] results were within the laboratory specified acceptance criteria.

3.6 Laboratory Duplicate

One sample set specific laboratory duplicate was reported for radium-226 using sample MW-29 MW-6. The RER result was within the laboratory specified acceptance criteria.

Two 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.

3.7 Tracers and Carriers

Carriers were reported for the radium-226 and radium-228 analyses and a tracer was reported for the radium-228 analyses. The recovery results were within the laboratory specified acceptance criteria.

3.8 Equipment Blank

One equipment blank was collected with the sample set, EB-01. Radium-226 and radium-228 were not detected in the equipment blank above the MDCs.

3.9 Field Blank

One field blank was collected with the sample set, FB-01. Radium-226 and radium-228 were not detected in the field blank above the MDCs.

3.10 Field Duplicate

One field duplicate sample was collected with the sample set, DUP-01. Acceptable precision ($RER(1\sigma) < 3$) was demonstrated between the field duplicate and the original sample, HGWC-13.

3.11 Sensitivity

The samples were reported to the MDCs. No elevated non-detect results were reported.

3.12 Electronic Data Deliverable Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level II report and the EDD.

* * * * *

ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for but was not detected above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec’s Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS or RPD recovery outside limits (LCS/LCSD)
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Lab flag removed or modified: no validation qualification required

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample duplicate

RPD - Relative percent difference

FIELD SAMPLING REPORTS

December 2020

Low-Flow Test Report:

Test Date / Time: 12/15/2020 9:50:43 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

<p>Location Name: HGWA-43D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 52.55 ft Initial Depth to Water: 14.51 ft</p>	<p>Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 57.55 ft Estimated Total Volume Pumped: 9 liters Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 1.6 ft</p>	<p>Instrument Used: Aqua TROLL 400 Serial Number: 728634</p>
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Test Notes:

Five bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO₄ (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 61.80 ft.

Weather Conditions:

Sunny, cold

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
12/15/2020 9:50 AM	00:00	7.34 pH	14.21 °C	526.82 µS/cm	1.46 mg/L	29.90 NTU	-59.7 mV	14.51 ft	100.00 ml/min
12/15/2020 9:55 AM	05:00	7.30 pH	15.61 °C	517.14 µS/cm	0.70 mg/L	37.61 NTU	-60.6 mV	15.00 ft	100.00 ml/min
12/15/2020 10:00 AM	10:00	7.31 pH	16.28 °C	515.08 µS/cm	0.96 mg/L	33.61 NTU	-108.1 mV	15.34 ft	100.00 ml/min
12/15/2020 10:05 AM	15:00	7.32 pH	16.55 °C	508.92 µS/cm	0.89 mg/L	24.82 NTU	-115.1 mV	15.61 ft	100.00 ml/min
12/15/2020 10:10 AM	20:00	7.34 pH	16.75 °C	498.96 µS/cm	0.60 mg/L	21.50 NTU	-69.4 mV	15.75 ft	100.00 ml/min
12/15/2020 10:15 AM	25:00	7.35 pH	16.80 °C	484.29 µS/cm	0.48 mg/L	19.06 NTU	-67.3 mV	15.85 ft	100.00 ml/min
12/15/2020 10:20 AM	30:00	7.35 pH	16.93 °C	475.04 µS/cm	0.57 mg/L	15.28 NTU	-65.8 mV	15.92 ft	100.00 ml/min
12/15/2020 10:25 AM	35:00	7.36 pH	17.09 °C	465.50 µS/cm	0.45 mg/L	14.47 NTU	-110.0 mV	15.97 ft	100.00 ml/min
12/15/2020 10:30 AM	40:00	7.36 pH	17.08 °C	459.56 µS/cm	0.35 mg/L	14.03 NTU	-108.6 mV	16.02 ft	100.00 ml/min
12/15/2020 10:35 AM	45:00	7.37 pH	17.28 °C	453.06 µS/cm	0.42 mg/L	12.14 NTU	-110.5 mV	16.05 ft	100.00 ml/min
12/15/2020 10:40 AM	50:00	7.37 pH	17.31 °C	447.42 µS/cm	0.32 mg/L	11.04 NTU	-61.9 mV	16.08 ft	100.00 ml/min

12/15/2020 10:45 AM	55:00	7.37 pH	17.26 °C	447.49 µS/cm	0.82 mg/L	10.63 NTU	-60.8 mV	16.10 ft	100.00 ml/min
12/15/2020 10:50 AM	01:00:00	7.38 pH	17.18 °C	447.76 µS/cm	0.74 mg/L	9.65 NTU	-58.5 mV	16.11 ft	100.00 ml/min
12/15/2020 10:55 AM	01:05:00	7.38 pH	16.87 °C	454.65 µS/cm	0.71 mg/L	8.89 NTU	-104.5 mV	16.11 ft	100.00 ml/min
12/15/2020 11:00 AM	01:10:00	7.39 pH	16.77 °C	455.20 µS/cm	0.44 mg/L	7.34 NTU	-101.8 mV	16.11 ft	100.00 ml/min
12/15/2020 11:05 AM	01:15:00	7.39 pH	17.04 °C	451.13 µS/cm	0.31 mg/L	6.63 NTU	-58.6 mV	16.11 ft	100.00 ml/min
12/15/2020 11:10 AM	01:20:00	7.40 pH	17.26 °C	448.17 µS/cm	0.31 mg/L	6.43 NTU	-56.8 mV	16.11 ft	100.00 ml/min
12/15/2020 11:15 AM	01:25:00	7.40 pH	17.20 °C	452.85 µS/cm	0.27 mg/L	5.33 NTU	-56.6 mV	16.11 ft	100.00 ml/min
12/15/2020 11:20 AM	01:30:00	7.39 pH	17.11 °C	453.03 µS/cm	0.22 mg/L	4.88 NTU	-55.8 mV	16.11 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-43D	Grab Sample

Low-Flow Test Report:

Test Date / Time: 12/15/2020 1:09:32 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWA-44D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 103.25 ft Initial Depth to Water: 14.4 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 108 ft Estimated Total Volume Pumped: 18.5 liters Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 2.33 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Five bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 500-mL plastic bottle for TDS (EPA 2540C); one 250-mL plastic bottle for Cl, F, SO₄ (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. III and IV metals (EPA 6010D/6020B/7470A). Total depth = 111.3 ft.

Weather Conditions:

Sunny, cold

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
12/15/2020 1:09 PM	00:00	7.90 pH	15.77 °C	484.96 µS/cm	1.80 mg/L	63.27 NTU	-106.7 mV	14.40 ft	100.00 ml/min
12/15/2020 1:14 PM	05:00	7.90 pH	16.46 °C	498.20 µS/cm	1.07 mg/L	98.00 NTU	-105.8 mV	14.55 ft	100.00 ml/min
12/15/2020 1:19 PM	10:00	7.90 pH	16.38 °C	499.17 µS/cm	0.74 mg/L	114.00 NTU	-182.1 mV	14.70 ft	100.00 ml/min
12/15/2020 1:24 PM	15:00	7.90 pH	16.30 °C	497.96 µS/cm	0.64 mg/L	112.00 NTU	-186.3 mV	14.93 ft	100.00 ml/min
12/15/2020 1:29 PM	20:00	7.90 pH	16.37 °C	496.40 µS/cm	0.57 mg/L	139.00 NTU	-114.7 mV	15.13 ft	100.00 ml/min
12/15/2020 1:34 PM	25:00	7.90 pH	16.26 °C	494.15 µS/cm	0.52 mg/L	128.00 NTU	-191.2 mV	15.28 ft	100.00 ml/min
12/15/2020 1:39 PM	30:00	7.90 pH	16.24 °C	491.16 µS/cm	0.48 mg/L	92.00 NTU	-194.6 mV	15.45 ft	100.00 ml/min
12/15/2020 1:44 PM	35:00	7.90 pH	16.52 °C	488.12 µS/cm	0.43 mg/L	50.00 NTU	-119.5 mV	15.60 ft	100.00 ml/min
12/15/2020 1:49 PM	40:00	7.90 pH	16.59 °C	483.68 µS/cm	0.40 mg/L	61.95 NTU	-200.0 mV	15.65 ft	100.00 ml/min
12/15/2020 1:54 PM	45:00	7.90 pH	16.81 °C	479.85 µS/cm	0.37 mg/L	49.82 NTU	-123.8 mV	15.77 ft	100.00 ml/min
12/15/2020 1:59 PM	50:00	7.90 pH	16.55 °C	493.05 µS/cm	0.35 mg/L	58.41 NTU	-124.2 mV	15.82 ft	100.00 ml/min
12/15/2020 2:04 PM	55:00	7.90 pH	16.64 °C	494.17 µS/cm	0.35 mg/L	38.92 NTU	-126.4 mV	15.90 ft	100.00 ml/min

12/15/2020 2:09 PM	01:00:00	7.90 pH	16.69 °C	492.65 µS/cm	0.32 mg/L	28.72 NTU	-207.7 mV	15.90 ft	100.00 ml/min
12/15/2020 2:14 PM	01:05:00	7.89 pH	16.55 °C	490.67 µS/cm	0.30 mg/L	23.69 NTU	-126.3 mV	15.91 ft	100.00 ml/min
12/15/2020 2:19 PM	01:10:00	7.88 pH	16.37 °C	492.49 µS/cm	0.29 mg/L	21.04 NTU	-124.5 mV	15.95 ft	100.00 ml/min
12/15/2020 2:24 PM	01:15:00	7.89 pH	16.26 °C	489.74 µS/cm	0.28 mg/L	18.27 NTU	-124.8 mV	15.95 ft	100.00 ml/min
12/15/2020 2:29 PM	01:20:00	7.88 pH	16.10 °C	488.48 µS/cm	0.28 mg/L	17.32 NTU	-207.2 mV	16.00 ft	100.00 ml/min
12/15/2020 2:34 PM	01:25:00	7.88 pH	15.93 °C	489.52 µS/cm	0.27 mg/L	15.96 NTU	-126.3 mV	16.05 ft	100.00 ml/min
12/15/2020 2:39 PM	01:30:00	7.88 pH	15.96 °C	489.65 µS/cm	0.26 mg/L	18.00 NTU	-126.0 mV	16.00 ft	100.00 ml/min
12/15/2020 2:44 PM	01:35:00	7.88 pH	15.96 °C	486.86 µS/cm	0.26 mg/L	16.95 NTU	-206.9 mV	16.00 ft	100.00 ml/min
12/15/2020 2:49 PM	01:40:00	7.88 pH	16.15 °C	485.86 µS/cm	0.25 mg/L	16.43 NTU	-207.8 mV	16.05 ft	100.00 ml/min
12/15/2020 2:54 PM	01:45:00	7.88 pH	16.01 °C	489.56 µS/cm	0.24 mg/L	16.22 NTU	-125.5 mV	16.05 ft	100.00 ml/min
12/15/2020 2:59 PM	01:50:00	7.88 pH	15.89 °C	489.90 µS/cm	0.24 mg/L	16.47 NTU	-124.1 mV	16.05 ft	100.00 ml/min
12/15/2020 3:04 PM	01:55:00	7.88 pH	15.74 °C	490.53 µS/cm	0.25 mg/L	13.59 NTU	-204.7 mV	16.05 ft	100.00 ml/min
12/15/2020 3:09 PM	02:00:00	7.87 pH	15.83 °C	489.04 µS/cm	0.25 mg/L	14.49 NTU	-206.8 mV	16.05 ft	100.00 ml/min
12/15/2020 3:14 PM	02:05:00	7.87 pH	16.38 °C	488.60 µS/cm	0.22 mg/L	14.19 NTU	-126.3 mV	16.20 ft	100.00 ml/min
12/15/2020 3:19 PM	02:10:00	7.87 pH	16.44 °C	486.41 µS/cm	0.19 mg/L	13.34 NTU	-209.6 mV	16.30 ft	100.00 ml/min
12/15/2020 3:24 PM	02:15:00	7.86 pH	16.46 °C	487.69 µS/cm	0.17 mg/L	13.09 NTU	-127.4 mV	16.35 ft	100.00 ml/min
12/15/2020 3:29 PM	02:20:00	7.88 pH	16.38 °C	491.48 µS/cm	0.16 mg/L	13.05 NTU	-126.5 mV	16.43 ft	100.00 ml/min
12/15/2020 3:34 PM	02:25:00	7.88 pH	16.35 °C	491.38 µS/cm	0.15 mg/L	12.11 NTU	-125.1 mV	16.50 ft	100.00 ml/min
12/15/2020 3:39 PM	02:30:00	7.88 pH	16.30 °C	489.46 µS/cm	0.15 mg/L	12.06 NTU	-207.6 mV	16.50 ft	100.00 ml/min
12/15/2020 3:44 PM	02:35:00	7.88 pH	16.30 °C	488.61 µS/cm	0.14 mg/L	11.87 NTU	-208.3 mV	16.60 ft	100.00 ml/min
12/15/2020 3:49 PM	02:40:00	7.87 pH	16.28 °C	488.02 µS/cm	0.13 mg/L	11.04 NTU	-124.4 mV	16.62 ft	100.00 ml/min
12/15/2020 3:54 PM	02:45:00	7.88 pH	16.30 °C	487.19 µS/cm	0.13 mg/L	11.03 NTU	-206.7 mV	16.65 ft	100.00 ml/min
12/15/2020 3:59 PM	02:50:00	7.88 pH	16.30 °C	487.66 µS/cm	0.13 mg/L	10.78 NTU	-122.7 mV	16.67 ft	100.00 ml/min
12/15/2020 4:04 PM	02:55:00	7.88 pH	16.28 °C	486.45 µS/cm	0.12 mg/L	8.75 NTU	-204.0 mV	16.70 ft	100.00 ml/min
12/15/2020 4:09 PM	03:00:00	7.86 pH	16.28 °C	486.14 µS/cm	0.12 mg/L	9.69 NTU	-203.7 mV	16.69 ft	100.00 ml/min
12/15/2020 4:14 PM	03:05:00	7.87 pH	16.32 °C	488.28 µS/cm	0.12 mg/L	9.00 NTU	-203.5 mV	16.73 ft	100.00 ml/min

Samples

Sample ID:	Description:
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HGWA-44D	Grab Sample
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Created using VuSitu from In-Situ, Inc.

January 2021

Low-Flow Test Report:

Test Date / Time: 1/19/2021 2:58:28 PM

Project: GP-Plant Hammond (4)

Operator Name: Connor Cain

Location Name: HGWA-43D Well Diameter: 2 in Casing Type: PVC Initial Depth to Water: 16.76 ft	Pump Type: QED Tubing Type: polyethylene Tubing Inner Diameter: 0.17 in Estimated Total Volume Pumped: 13500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 3.94 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728638
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Test Notes:

Total Depth: 61.71 ft

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- .3	
1/19/2021 2:58 PM	00:00	7.49 pH	15.85 °C	0.53 µS/cm	7.61 mg/L	38.60 NTU	-69.0 mV	18.84 ft	200.00 ml/min
1/19/2021 3:03 PM	05:00	7.44 pH	15.96 °C	0.53 µS/cm	5.84 mg/L	30.20 NTU	-66.7 mV	19.43 ft	200.00 ml/min
1/19/2021 3:08 PM	10:00	7.42 pH	15.97 °C	0.53 µS/cm	4.66 mg/L	25.00 NTU	-122.3 mV	19.86 ft	200.00 ml/min
1/19/2021 3:13 PM	15:00	7.40 pH	15.98 °C	0.53 µS/cm	3.85 mg/L	14.00 NTU	-62.8 mV	20.32 ft	200.00 ml/min
1/19/2021 3:18 PM	20:00	7.40 pH	15.87 °C	0.52 µS/cm	2.77 mg/L	11.60 NTU	-116.6 mV	20.44 ft	200.00 ml/min
1/19/2021 3:23 PM	25:00	7.39 pH	15.84 °C	0.52 µS/cm	2.30 mg/L	10.68 NTU	-56.1 mV	20.49 ft	200.00 ml/min
1/19/2021 3:28 PM	30:00	7.39 pH	15.74 °C	0.51 µS/cm	2.20 mg/L	8.80 NTU	-106.6 mV	20.66 ft	200.00 ml/min
1/19/2021 3:33 PM	35:00	7.39 pH	15.75 °C	0.51 µS/cm	2.01 mg/L	8.22 NTU	-49.7 mV	20.74 ft	200.00 ml/min
1/19/2021 3:38 PM	40:00	7.39 pH	15.60 °C	0.51 µS/cm	1.54 mg/L	6.60 NTU	-99.3 mV	20.76 ft	200.00 ml/min
1/19/2021 3:43 PM	45:00	7.39 pH	15.83 °C	0.50 µS/cm	1.76 mg/L	6.79 NTU	-96.2 mV	20.78 ft	100.00 ml/min
1/19/2021 3:48 PM	50:00	7.40 pH	15.43 °C	0.50 µS/cm	1.81 mg/L	7.01 NTU	-90.9 mV	20.79 ft	100.00 ml/min
1/19/2021 3:53 PM	55:00	7.38 pH	15.16 °C	0.50 µS/cm	0.90 mg/L	4.52 NTU	-91.3 mV	20.72 ft	100.00 ml/min
1/19/2021 3:58 PM	01:00:00	7.39 pH	15.14 °C	0.49 µS/cm	1.30 mg/L	4.32 NTU	-87.6 mV	20.69 ft	100.00 ml/min
1/19/2021 4:03 PM	01:05:00	7.37 pH	15.65 °C	0.50 µS/cm	1.15 mg/L	4.04 NTU	-87.6 mV	20.68 ft	100.00 ml/min
1/19/2021 4:08 PM	01:10:00	7.39 pH	15.74 °C	0.49 µS/cm	1.59 mg/L	6.02 NTU	-82.9 mV	20.68 ft	100.00 ml/min

1/19/2021 4:13 PM	01:15:00	7.39 pH	15.88 °C	0.49 µS/cm	1.41 mg/L	4.49 NTU	-37.4 mV	20.71 ft	100.00 ml/min
1/19/2021 4:18 PM	01:20:00	7.39 pH	15.46 °C	0.49 µS/cm	1.11 mg/L	4.23 NTU	-80.1 mV	20.70 ft	100.00 ml/min
1/19/2021 4:23 PM	01:25:00	7.38 pH	15.21 °C	0.49 µS/cm	1.02 mg/L	3.20 NTU	-36.1 mV	20.74 ft	100.00 ml/min
1/19/2021 4:28 PM	01:30:00	7.39 pH	14.79 °C	0.49 µS/cm	0.98 mg/L	3.88 NTU	-78.1 mV	20.70 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-43D	Grab sample

Low-Flow Test Report:

Test Date / Time: 1/19/2021 2:36:54 PM

Project: GP-Plant Hammond (3)

Operator Name: Chad Russo

Location Name: HGWA-44D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 103 ft Initial Depth to Water: 16.28 ft	Pump Type: Alexis Tubing Type: polyethylene Tubing Inner Diameter: 0.17 in Estimated Total Volume Pumped: 20500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 2.32 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Total Depth: 111.53 ft

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
1/19/2021 2:36 PM	00:00	7.83 pH	15.29 °C	506.34 µS/cm	1.46 mg/L		-91.3 mV	16.28 ft	200.00 ml/min
1/19/2021 2:41 PM	05:00	7.84 pH	16.03 °C	500.24 µS/cm	0.44 mg/L	82.00 NTU	-97.3 mV	17.19 ft	200.00 ml/min
1/19/2021 2:46 PM	10:00	7.85 pH	16.14 °C	495.76 µS/cm	0.31 mg/L	98.00 NTU	-98.2 mV	17.51 ft	200.00 ml/min
1/19/2021 2:51 PM	15:00	7.86 pH	16.16 °C	491.34 µS/cm	0.26 mg/L	77.00 NTU	-99.1 mV	18.04 ft	200.00 ml/min
1/19/2021 2:56 PM	20:00	7.85 pH	16.14 °C	489.93 µS/cm	0.22 mg/L	22.00 NTU	-100.6 mV	18.40 ft	200.00 ml/min
1/19/2021 3:01 PM	25:00	7.84 pH	15.74 °C	485.07 µS/cm	0.22 mg/L	44.40 NTU	-98.0 mV	18.35 ft	100.00 ml/min
1/19/2021 3:06 PM	30:00	7.84 pH	15.57 °C	484.09 µS/cm	0.24 mg/L	34.10 NTU	-98.8 mV	18.35 ft	100.00 ml/min
1/19/2021 3:11 PM	35:00	7.84 pH	15.58 °C	481.64 µS/cm	0.25 mg/L	33.00 NTU	-99.5 mV	18.45 ft	100.00 ml/min
1/19/2021 3:16 PM	40:00	7.84 pH	15.59 °C	479.88 µS/cm	0.24 mg/L	25.90 NTU	-99.5 mV	18.50 ft	100.00 ml/min
1/19/2021 3:21 PM	45:00	7.83 pH	15.59 °C	483.16 µS/cm	0.22 mg/L	18.50 NTU	-96.8 mV	18.55 ft	100.00 ml/min
1/19/2021 3:26 PM	50:00	7.83 pH	15.56 °C	482.00 µS/cm	0.20 mg/L	19.20 NTU	-96.5 mV	18.60 ft	100.00 ml/min
1/19/2021 3:31 PM	55:00	7.82 pH	15.40 °C	479.95 µS/cm	0.20 mg/L	16.50 NTU	-95.5 mV	18.60 ft	100.00 ml/min
1/19/2021 3:36 PM	01:00:00	7.83 pH	15.25 °C	482.48 µS/cm	0.20 mg/L	14.60 NTU	-95.8 mV	18.55 ft	100.00 ml/min
1/19/2021 3:41 PM	01:05:00	7.83 pH	15.24 °C	482.12 µS/cm	0.20 mg/L	14.60 NTU	-94.8 mV	18.55 ft	100.00 ml/min
1/19/2021 3:46 PM	01:10:00	7.83 pH	15.29 °C	481.12 µS/cm	0.19 mg/L	14.50 NTU	-95.1 mV	18.50 ft	100.00 ml/min

1/19/2021 3:51 PM	01:15:00	7.83 pH	15.29 °C	480.83 µS/cm	0.19 mg/L	12.90 NTU	-94.8 mV	18.55 ft	100.00 ml/min
1/19/2021 3:56 PM	01:20:00	7.83 pH	15.29 °C	479.33 µS/cm	0.18 mg/L	12.80 NTU	-94.6 mV	18.55 ft	100.00 ml/min
1/19/2021 4:01 PM	01:25:00	7.84 pH	15.29 °C	481.00 µS/cm	0.18 mg/L	11.40 NTU	-94.2 mV	18.55 ft	100.00 ml/min
1/19/2021 4:06 PM	01:30:00	7.84 pH	15.16 °C	479.47 µS/cm	0.18 mg/L	10.15 NTU	-93.1 mV	18.40 ft	100.00 ml/min
1/19/2021 4:11 PM	01:35:00	7.84 pH	15.03 °C	481.23 µS/cm	0.18 mg/L	13.40 NTU	-92.7 mV	18.50 ft	100.00 ml/min
1/19/2021 4:16 PM	01:40:00	7.84 pH	15.25 °C	478.27 µS/cm	0.18 mg/L	22.80 NTU	-93.1 mV	18.50 ft	100.00 ml/min
1/19/2021 4:21 PM	01:45:00	7.84 pH	15.14 °C	477.80 µS/cm	0.18 mg/L	20.30 NTU	-91.5 mV	18.50 ft	100.00 ml/min
1/19/2021 4:26 PM	01:50:00	7.84 pH	15.02 °C	475.66 µS/cm	0.18 mg/L	16.10 NTU	-90.8 mV	18.50 ft	100.00 ml/min
1/19/2021 4:31 PM	01:55:00	7.85 pH	14.91 °C	478.31 µS/cm	0.16 mg/L	12.39 NTU	-90.1 mV	18.60 ft	100.00 ml/min
1/19/2021 4:36 PM	02:00:00	7.84 pH	14.59 °C	482.53 µS/cm	0.15 mg/L	11.95 NTU	-88.5 mV	18.60 ft	100.00 ml/min
1/19/2021 4:41 PM	02:05:00	7.85 pH	14.52 °C	486.75 µS/cm	0.15 mg/L	12.84 NTU	-88.6 mV	18.60 ft	100.00 ml/min
1/19/2021 4:46 PM	02:10:00	7.86 pH	14.42 °C	483.95 µS/cm	0.15 mg/L	11.56 NTU	-87.4 mV	18.60 ft	100.00 ml/min
1/19/2021 4:51 PM	02:15:00	7.85 pH	14.41 °C	484.00 µS/cm	0.14 mg/L	11.67 NTU	-87.0 mV	18.60 ft	100.00 ml/min
1/19/2021 4:56 PM	02:20:00	7.86 pH	14.30 °C	483.23 µS/cm	0.15 mg/L	12.43 NTU	-158.9 mV	18.60 ft	100.00 ml/min
1/19/2021 5:01 PM	02:25:00	7.85 pH	14.34 °C	485.05 µS/cm	0.15 mg/L	12.12 NTU	-87.2 mV	18.60 ft	100.00 ml/min
1/19/2021 5:06 PM	02:30:00	7.87 pH	14.39 °C	484.74 µS/cm	0.14 mg/L	10.12 NTU	-159.9 mV	18.60 ft	100.00 ml/min
1/19/2021 5:11 PM	02:35:00	7.87 pH	14.34 °C	484.08 µS/cm	0.15 mg/L	10.94 NTU	-86.3 mV	18.60 ft	100.00 ml/min
1/19/2021 5:16 PM	02:40:00	7.87 pH	14.24 °C	489.94 µS/cm	0.15 mg/L	11.81 NTU	-158.9 mV	18.60 ft	100.00 ml/min
1/19/2021 5:21 PM	02:45:00	7.86 pH	14.25 °C	491.19 µS/cm	0.15 mg/L	11.14 NTU	-87.4 mV	18.60 ft	100.00 ml/min
1/19/2021 5:26 PM	02:50:00	7.85 pH	14.21 °C	497.24 µS/cm	0.16 mg/L	10.54 NTU	-84.7 mV	18.60 ft	100.00 ml/min
1/19/2021 5:31 PM	02:55:00	7.85 pH	14.41 °C	494.66 µS/cm	0.16 mg/L	10.42 NTU	-157.5 mV	18.60 ft	100.00 ml/min
1/19/2021 5:36 PM	03:00:00	7.86 pH	14.48 °C	493.23 µS/cm	0.16 mg/L	9.73 NTU	-158.4 mV	18.60 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-44D	Grab

February 2021

Low-Flow Test Report:

Test Date / Time: 2/8/2021 3:34:14 PM

Project: GP-Plant Hammond

Operator Name: Chad Russo

Location Name: HGWA-1 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 22.5 ft Total Depth: 32.5 ft Initial Depth to Water: 13.59 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 28 ft Estimated Total Volume Pumped: 6680 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.66 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Cloudy, 45 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/8/2021 3:34 PM	00:00	7.14 pH	17.08 °C	579.20 µS/cm	2.07 mg/L		70.9 mV	13.59 ft	200.00 ml/min
2/8/2021 3:39 PM	05:00	7.15 pH	17.13 °C	583.74 µS/cm	1.41 mg/L		47.2 mV	14.15 ft	200.00 ml/min
2/8/2021 3:40 PM	06:44	7.14 pH	17.19 °C	567.43 µS/cm	1.19 mg/L	8.62 NTU	46.0 mV	14.15 ft	200.00 ml/min
2/8/2021 3:45 PM	11:44	7.13 pH	17.27 °C	584.98 µS/cm	0.83 mg/L	4.92 NTU	53.6 mV	14.20 ft	200.00 ml/min
2/8/2021 3:50 PM	16:44	7.13 pH	17.34 °C	584.50 µS/cm	0.68 mg/L	3.22 NTU	35.0 mV	14.20 ft	200.00 ml/min
2/8/2021 3:55 PM	21:44	7.12 pH	17.40 °C	580.08 µS/cm	0.60 mg/L	2.44 NTU	31.9 mV	14.25 ft	200.00 ml/min
2/8/2021 3:57 PM	23:24	7.12 pH	17.43 °C	558.18 µS/cm	0.56 mg/L	2.44 NTU	31.9 mV	14.25 ft	200.00 ml/min
2/8/2021 4:02 PM	28:24	7.12 pH	17.43 °C	582.77 µS/cm	0.46 mg/L	2.08 NTU	34.2 mV	14.25 ft	200.00 ml/min
2/8/2021 4:07 PM	33:24	7.11 pH	17.39 °C	587.09 µS/cm	0.40 mg/L	1.74 NTU	29.3 mV	14.25 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-1	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/9/2021 9:46:32 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWA-2 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 17.95 ft Total Depth: 28.45 ft Initial Depth to Water: 8.1 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 22.95 ft Estimated Total Volume Pumped: 9.8 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.05 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Cloudy, 45 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/9/2021 9:46 AM	00:00	5.84 pH	14.99 °C	229.06 µS/cm	6.18 mg/L	26.90 NTU	101.0 mV	8.10 ft	200.00 ml/min
2/9/2021 9:49 AM	03:18	5.68 pH	16.11 °C	249.70 µS/cm	3.22 mg/L	24.00 NTU	103.9 mV	8.14 ft	200.00 ml/min
2/9/2021 9:50 AM	04:09	5.66 pH	16.20 °C	246.42 µS/cm	2.98 mg/L	24.00 NTU	94.6 mV	8.14 ft	200.00 ml/min
2/9/2021 9:56 AM	09:45	5.50 pH	16.47 °C	218.63 µS/cm	1.47 mg/L	17.60 NTU	108.7 mV	8.14 ft	200.00 ml/min
2/9/2021 10:01 AM	14:45	5.49 pH	16.52 °C	220.74 µS/cm	1.55 mg/L	12.50 NTU	97.9 mV	8.14 ft	200.00 ml/min
2/9/2021 10:06 AM	19:45	5.47 pH	16.56 °C	220.10 µS/cm	1.91 mg/L	12.30 NTU	99.6 mV	8.14 ft	200.00 ml/min
2/9/2021 10:11 AM	24:45	5.44 pH	16.62 °C	217.52 µS/cm	1.55 mg/L	8.22 NTU	97.3 mV	8.14 ft	200.00 ml/min
2/9/2021 10:16 AM	29:45	5.43 pH	16.64 °C	216.58 µS/cm	1.07 mg/L	7.46 NTU	103.0 mV	8.15 ft	200.00 ml/min
2/9/2021 10:21 AM	34:45	5.44 pH	16.69 °C	216.07 µS/cm	0.54 mg/L	6.90 NTU	104.8 mV	8.15 ft	200.00 ml/min
2/9/2021 10:26 AM	39:45	5.42 pH	16.56 °C	213.99 µS/cm	0.27 mg/L	4.67 NTU	103.4 mV	8.15 ft	200.00 ml/min
2/9/2021 10:31 AM	44:45	5.42 pH	16.53 °C	212.92 µS/cm	0.27 mg/L	4.71 NTU	105.1 mV	8.15 ft	200.00 ml/min
2/9/2021 10:36 AM	49:45	5.42 pH	16.48 °C	214.52 µS/cm	0.24 mg/L		105.5 mV	8.15 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-2	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/9/2021 11:22:55 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWA-3 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 34.87 ft Total Depth: 45.4 ft Initial Depth to Water: 7.7 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 39.87 ft Estimated Total Volume Pumped: 6 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Sunny, 46 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/9/2021 11:22 AM	00:00	7.01 pH	17.95 °C	451.18 µS/cm	1.75 mg/L	4.20 NTU	-33.3 mV	7.70 ft	200.00 ml/min
2/9/2021 11:27 AM	05:00	7.11 pH	17.08 °C	461.05 µS/cm	0.44 mg/L	2.49 NTU	-48.0 mV	7.70 ft	200.00 ml/min
2/9/2021 11:32 AM	10:00	7.15 pH	17.23 °C	457.34 µS/cm	0.33 mg/L	1.24 NTU	-53.3 mV	7.70 ft	200.00 ml/min
2/9/2021 11:37 AM	15:00	7.17 pH	17.28 °C	455.26 µS/cm	0.27 mg/L	1.54 NTU	-92.6 mV	7.70 ft	200.00 ml/min
2/9/2021 11:42 AM	20:00	7.20 pH	17.28 °C	455.00 µS/cm	0.27 mg/L	1.52 NTU	-95.6 mV	7.70 ft	200.00 ml/min
2/9/2021 11:47 AM	25:00	7.22 pH	17.40 °C	453.59 µS/cm	0.23 mg/L	1.39 NTU	-97.9 mV	7.70 ft	200.00 ml/min
2/9/2021 11:52 AM	30:00	7.23 pH	17.54 °C	451.62 µS/cm	0.22 mg/L	0.86 NTU	-99.4 mV	7.70 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-3	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/9/2021 2:33:12 PM

Project: GP-Plant Hammond

Operator Name: Chad Russo

Location Name: HGWA-43D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 51.25 ft Total Depth: 61.25 ft Initial Depth to Water: 13.39 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 56 ft Estimated Total Volume Pumped: 20000 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 1.18 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Sunny, 46 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/9/2021 2:33 PM	00:00	7.48 pH	20.47 °C	499.44 µS/cm	2.96 mg/L		-41.6 mV	13.39 ft	100.00 ml/min
2/9/2021 2:38 PM	05:00	7.44 pH	18.98 °C	502.27 µS/cm	1.31 mg/L	84.70 NTU	-44.5 mV	14.49 ft	100.00 ml/min
2/9/2021 2:43 PM	10:00	7.43 pH	19.03 °C	500.77 µS/cm	0.88 mg/L	97.20 NTU	-98.8 mV	14.56 ft	100.00 ml/min
2/9/2021 2:48 PM	15:00	7.44 pH	19.04 °C	497.98 µS/cm	0.75 mg/L	101.90 NTU	-50.5 mV	14.56 ft	100.00 ml/min
2/9/2021 2:53 PM	20:00	7.44 pH	18.91 °C	492.45 µS/cm	0.66 mg/L	92.80 NTU	-48.1 mV	14.60 ft	100.00 ml/min
2/9/2021 2:58 PM	25:00	7.45 pH	19.05 °C	485.46 µS/cm	0.60 mg/L	91.20 NTU	-47.6 mV	14.51 ft	100.00 ml/min
2/9/2021 3:03 PM	30:00	7.45 pH	18.73 °C	482.58 µS/cm	0.55 mg/L	96.10 NTU	-97.3 mV	14.56 ft	100.00 ml/min
2/9/2021 3:08 PM	35:00	7.44 pH	18.06 °C	483.81 µS/cm	0.46 mg/L	89.20 NTU	-43.3 mV	14.56 ft	100.00 ml/min
2/9/2021 3:13 PM	40:00	7.45 pH	17.89 °C	491.52 µS/cm	0.57 mg/L	89.20 NTU	-91.6 mV	14.56 ft	100.00 ml/min
2/9/2021 3:18 PM	45:00	7.44 pH	17.67 °C	491.90 µS/cm	0.37 mg/L	97.50 NTU	-91.6 mV	14.66 ft	100.00 ml/min
2/9/2021 3:23 PM	50:00	7.45 pH	17.57 °C	488.23 µS/cm	0.26 mg/L	73.40 NTU	-91.0 mV	14.85 ft	100.00 ml/min
2/9/2021 3:28 PM	55:00	7.44 pH	17.44 °C	484.07 µS/cm	0.22 mg/L	63.20 NTU	-39.5 mV	15.00 ft	100.00 ml/min

2/9/2021 3:33 PM	01:00:00	7.45 pH	17.35 °C	482.96 µS/cm	0.21 mg/L	58.60 NTU	-38.3 mV	15.11 ft	100.00 ml/min
2/9/2021 3:38 PM	01:05:00	7.46 pH	17.33 °C	479.44 µS/cm	0.19 mg/L	49.80 NTU	-37.3 mV	14.96 ft	100.00 ml/min
2/9/2021 3:43 PM	01:10:00	7.45 pH	17.17 °C	477.67 µS/cm	0.24 mg/L	48.90 NTU	-81.5 mV	14.90 ft	100.00 ml/min
2/9/2021 3:48 PM	01:15:00	7.44 pH	17.10 °C	472.09 µS/cm	0.23 mg/L	38.70 NTU	-33.1 mV	14.80 ft	100.00 ml/min
2/9/2021 3:53 PM	01:20:00	7.45 pH	17.09 °C	470.08 µS/cm	0.20 mg/L	30.30 NTU	-76.8 mV	14.77 ft	100.00 ml/min
2/9/2021 3:58 PM	01:25:00	7.44 pH	17.08 °C	469.73 µS/cm	0.20 mg/L	28.50 NTU	-30.1 mV	14.69 ft	100.00 ml/min
2/9/2021 4:03 PM	01:30:00	7.44 pH	17.04 °C	468.72 µS/cm	0.19 mg/L	28.80 NTU	-30.4 mV	14.62 ft	100.00 ml/min
2/9/2021 4:08 PM	01:35:00	7.45 pH	17.06 °C	469.22 µS/cm	0.19 mg/L	29.10 NTU	-30.0 mV	14.62 ft	100.00 ml/min
2/9/2021 4:13 PM	01:40:00	7.45 pH	17.09 °C	469.93 µS/cm	0.18 mg/L	28.70 NTU	-73.5 mV	14.62 ft	100.00 ml/min
2/9/2021 4:18 PM	01:45:00	7.44 pH	17.22 °C	470.76 µS/cm	0.18 mg/L	26.40 NTU	-29.8 mV	14.62 ft	100.00 ml/min
2/9/2021 4:23 PM	01:50:00	7.44 pH	17.22 °C	469.98 µS/cm	0.17 mg/L	24.80 NTU	-28.7 mV	14.62 ft	100.00 ml/min
2/9/2021 4:28 PM	01:55:00	7.45 pH	17.16 °C	469.46 µS/cm	0.17 mg/L	22.50 NTU	-29.0 mV	14.62 ft	100.00 ml/min
2/9/2021 4:33 PM	02:00:00	7.44 pH	16.95 °C	470.80 µS/cm	0.16 mg/L	23.80 NTU	-27.6 mV	14.57 ft	100.00 ml/min
2/9/2021 4:38 PM	02:05:00	7.44 pH	16.86 °C	472.08 µS/cm	0.16 mg/L	22.80 NTU	-27.7 mV	14.57 ft	100.00 ml/min
2/9/2021 4:43 PM	02:10:00	7.45 pH	16.86 °C	471.18 µS/cm	0.15 mg/L	21.60 NTU	-27.6 mV	14.57 ft	100.00 ml/min
2/9/2021 4:48 PM	02:15:00	7.44 pH	16.81 °C	472.85 µS/cm	0.14 mg/L	20.80 NTU	-27.1 mV	14.57 ft	100.00 ml/min
2/9/2021 4:53 PM	02:20:00	7.45 pH	16.73 °C	481.44 µS/cm	0.31 mg/L	28.40 NTU	-66.8 mV	14.57 ft	100.00 ml/min
2/9/2021 4:58 PM	02:25:00	7.45 pH	16.64 °C	479.86 µS/cm	0.28 mg/L	20.10 NTU	-25.7 mV	14.57 ft	100.00 ml/min
2/9/2021 5:03 PM	02:30:00	7.44 pH	16.64 °C	477.43 µS/cm	0.25 mg/L	16.70 NTU	-24.9 mV	14.57 ft	100.00 ml/min
2/9/2021 5:08 PM	02:35:00	7.44 pH	16.60 °C	476.94 µS/cm	0.23 mg/L	15.80 NTU	-25.0 mV	14.57 ft	100.00 ml/min
2/9/2021 5:13 PM	02:40:00	7.45 pH	16.59 °C	478.67 µS/cm	0.20 mg/L	14.20 NTU	-24.5 mV	14.57 ft	100.00 ml/min
2/9/2021 5:18 PM	02:45:00	7.44 pH	16.55 °C	475.63 µS/cm	0.17 mg/L	13.90 NTU	-24.0 mV	14.57 ft	100.00 ml/min
2/9/2021 5:23 PM	02:50:00	7.44 pH	16.57 °C	475.73 µS/cm	0.16 mg/L	13.60 NTU	-24.4 mV	14.57 ft	100.00 ml/min
2/9/2021 5:28 PM	02:55:00	7.44 pH	16.55 °C	472.82 µS/cm	0.15 mg/L	12.60 NTU	-24.2 mV	14.57 ft	100.00 ml/min
2/9/2021 5:33 PM	03:00:00	7.44 pH	16.55 °C	473.54 µS/cm	0.14 mg/L	11.30 NTU	-23.9 mV	14.57 ft	100.00 ml/min
2/9/2021 5:38 PM	03:05:00	7.44 pH	16.50 °C	471.84 µS/cm	0.13 mg/L	11.00 NTU	-23.7 mV	14.57 ft	100.00 ml/min

2/9/2021 5:43 PM	03:10:00	7.45 pH	16.46 °C	470.56 µS/cm	0.12 mg/L	11.97 NTU	-23.7 mV	14.57 ft	100.00 ml/min
2/9/2021 5:48 PM	03:15:00	7.45 pH	16.41 °C	470.42 µS/cm	0.12 mg/L	11.00 NTU	-23.4 mV	14.57 ft	100.00 ml/min
2/9/2021 5:53 PM	03:20:00	7.44 pH	16.37 °C	471.57 µS/cm	0.11 mg/L	9.22 NTU	-23.2 mV	14.57 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-43D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/9/2021 10:04:37 AM

Project: GP-Plant Hammond

Operator Name: Chad Russo

Location Name: HGWA-44D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 103.28 ft Total Depth: 113.28 ft Initial Depth to Water: 12.11 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 108 ft Estimated Total Volume Pumped: 18000 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 3.35 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Sunny, 46 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/9/2021 10:04 AM	00:00	7.71 pH	15.52 °C	501.55 µS/cm	1.51 mg/L		-68.7 mV	12.11 ft	100.00 ml/min
2/9/2021 10:09 AM	05:00	7.79 pH	15.93 °C	498.49 µS/cm	0.84 mg/L	25.00 NTU	-76.9 mV	13.61 ft	100.00 ml/min
2/9/2021 10:14 AM	10:00	7.82 pH	15.58 °C	495.77 µS/cm	0.64 mg/L	19.90 NTU	-147.0 mV	13.85 ft	100.00 ml/min
2/9/2021 10:19 AM	15:00	7.83 pH	15.48 °C	494.19 µS/cm	0.56 mg/L	16.90 NTU	-80.8 mV	14.08 ft	100.00 ml/min
2/9/2021 10:24 AM	20:00	7.83 pH	15.42 °C	492.43 µS/cm	0.52 mg/L	13.30 NTU	-83.2 mV	14.26 ft	100.00 ml/min
2/9/2021 10:29 AM	25:00	7.84 pH	15.41 °C	490.58 µS/cm	0.50 mg/L	11.80 NTU	-84.5 mV	14.41 ft	100.00 ml/min
2/9/2021 10:34 AM	30:00	7.84 pH	15.41 °C	489.95 µS/cm	0.47 mg/L	12.48 NTU	-84.8 mV	14.56 ft	100.00 ml/min
2/9/2021 10:39 AM	35:00	7.83 pH	15.47 °C	486.80 µS/cm	0.45 mg/L	11.22 NTU	-153.6 mV	14.64 ft	100.00 ml/min
2/9/2021 10:44 AM	40:00	7.83 pH	15.49 °C	486.36 µS/cm	0.44 mg/L	9.71 NTU	-82.8 mV	14.76 ft	100.00 ml/min
2/9/2021 10:49 AM	45:00	7.82 pH	15.70 °C	484.60 µS/cm	0.40 mg/L	9.43 NTU	-82.1 mV	14.83 ft	100.00 ml/min
2/9/2021 10:54 AM	50:00	7.82 pH	15.94 °C	483.12 µS/cm	0.35 mg/L	9.21 NTU	-80.8 mV	14.91 ft	100.00 ml/min
2/9/2021 10:59 AM	55:00	7.81 pH	16.28 °C	485.63 µS/cm	0.32 mg/L	9.30 NTU	-79.5 mV	14.98 ft	100.00 ml/min

2/9/2021 11:04 AM	01:00:00	7.82 pH	16.19 °C	484.56 µS/cm	0.30 mg/L	7.57 NTU	-78.1 mV	15.05 ft	100.00 ml/min
2/9/2021 11:09 AM	01:05:00	7.82 pH	16.59 °C	486.83 µS/cm	0.29 mg/L	7.49 NTU	-77.0 mV	15.11 ft	100.00 ml/min
2/9/2021 11:14 AM	01:10:00	7.81 pH	16.83 °C	483.83 µS/cm	0.26 mg/L	6.32 NTU	-142.7 mV	15.17 ft	100.00 ml/min
2/9/2021 11:19 AM	01:15:00	7.81 pH	16.73 °C	483.69 µS/cm	0.25 mg/L	6.87 NTU	-75.3 mV	15.22 ft	100.00 ml/min
2/9/2021 11:24 AM	01:20:00	7.82 pH	16.59 °C	485.43 µS/cm	0.24 mg/L	7.87 NTU	-73.7 mV	15.28 ft	100.00 ml/min
2/9/2021 11:29 AM	01:25:00	7.81 pH	16.48 °C	488.10 µS/cm	0.24 mg/L	7.50 NTU	-72.8 mV	15.30 ft	100.00 ml/min
2/9/2021 11:34 AM	01:30:00	7.82 pH	16.47 °C	487.19 µS/cm	0.23 mg/L	7.69 NTU	-73.4 mV	15.35 ft	100.00 ml/min
2/9/2021 11:39 AM	01:35:00	7.81 pH	16.55 °C	488.27 µS/cm	0.21 mg/L	8.18 NTU	-72.7 mV	15.40 ft	100.00 ml/min
2/9/2021 11:44 AM	01:40:00	7.81 pH	16.46 °C	488.63 µS/cm	0.21 mg/L	8.76 NTU	-71.5 mV	15.42 ft	100.00 ml/min
2/9/2021 11:49 AM	01:45:00	7.81 pH	16.36 °C	489.31 µS/cm	0.21 mg/L	8.26 NTU	-136.4 mV	15.45 ft	100.00 ml/min
2/9/2021 11:54 AM	01:50:00	7.83 pH	16.33 °C	493.57 µS/cm	0.19 mg/L	7.30 NTU	-70.1 mV	15.50 ft	100.00 ml/min
2/9/2021 11:59 AM	01:55:00	7.81 pH	16.41 °C	502.52 µS/cm	0.20 mg/L	8.80 NTU	-69.3 mV	15.51 ft	100.00 ml/min
2/9/2021 12:04 PM	02:00:00	7.82 pH	16.41 °C	502.73 µS/cm	0.20 mg/L	9.03 NTU	-67.4 mV	15.53 ft	100.00 ml/min
2/9/2021 12:09 PM	02:05:00	7.82 pH	16.33 °C	503.19 µS/cm	0.20 mg/L	9.59 NTU	-68.4 mV	15.56 ft	100.00 ml/min
2/9/2021 12:14 PM	02:10:00	7.83 pH	16.37 °C	502.88 µS/cm	0.18 mg/L	9.27 NTU	-68.8 mV	15.56 ft	100.00 ml/min
2/9/2021 12:19 PM	02:15:00	7.82 pH	16.41 °C	504.39 µS/cm	0.17 mg/L	9.58 NTU	-67.8 mV	15.60 ft	100.00 ml/min
2/9/2021 12:24 PM	02:20:00	7.83 pH	16.45 °C	504.74 µS/cm	0.17 mg/L	8.78 NTU	-67.3 mV	15.60 ft	100.00 ml/min
2/9/2021 12:29 PM	02:25:00	7.83 pH	16.52 °C	505.67 µS/cm	0.19 mg/L	8.60 NTU	-66.6 mV	15.60 ft	100.00 ml/min
2/9/2021 12:34 PM	02:30:00	7.83 pH	16.91 °C	505.02 µS/cm	0.18 mg/L	9.45 NTU	-69.1 mV	15.52 ft	100.00 ml/min
2/9/2021 12:39 PM	02:35:00	7.83 pH	17.15 °C	506.24 µS/cm	0.18 mg/L	8.90 NTU	-69.1 mV	15.50 ft	100.00 ml/min
2/9/2021 12:44 PM	02:40:00	7.83 pH	17.31 °C	505.12 µS/cm	0.18 mg/L	8.78 NTU	-68.6 mV	15.48 ft	100.00 ml/min
2/9/2021 12:49 PM	02:45:00	7.83 pH	17.22 °C	507.67 µS/cm	0.19 mg/L	8.84 NTU	-68.7 mV	15.46 ft	100.00 ml/min
2/9/2021 12:54 PM	02:50:00	7.84 pH	17.05 °C	509.41 µS/cm	0.18 mg/L	8.37 NTU	-68.6 mV	15.46 ft	100.00 ml/min
2/9/2021 12:59 PM	02:55:00	7.84 pH	16.89 °C	508.68 µS/cm	0.17 mg/L	8.21 NTU	-69.0 mV	15.46 ft	100.00 ml/min
2/9/2021 1:04 PM	03:00:00	7.84 pH	16.84 °C	507.84 µS/cm	0.17 mg/L	7.69 NTU	-133.0 mV	15.46 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-44D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/10/2021 9:38:50 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWC-7 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 18.17 ft Total Depth: 30.4 ft Initial Depth to Water: 4.82 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 22.95 ft Estimated Total Volume Pumped: 36.5 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.08 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Sunny, 43 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/10/2021 9:38 AM	00:00	7.44 pH	14.13 °C	681.87 µS/cm	4.22 mg/L	72.00 NTU	-21.3 mV	4.82 ft	200.00 ml/min
2/10/2021 9:43 AM	05:00	7.32 pH	16.39 °C	671.05 µS/cm	0.71 mg/L	77.50 NTU	5.5 mV	4.82 ft	200.00 ml/min
2/10/2021 9:48 AM	10:00	7.30 pH	16.83 °C	662.91 µS/cm	0.66 mg/L	56.00 NTU	9.6 mV	4.82 ft	200.00 ml/min
2/10/2021 9:53 AM	15:00	7.29 pH	17.00 °C	661.15 µS/cm	0.31 mg/L	921.00 NTU	10.7 mV	4.82 ft	200.00 ml/min
2/10/2021 9:58 AM	20:00	7.28 pH	17.09 °C	664.55 µS/cm	0.19 mg/L	1,024.0 NTU	9.0 mV	4.90 ft	200.00 ml/min
2/10/2021 10:03 AM	25:00	7.28 pH	17.19 °C	660.96 µS/cm	0.15 mg/L	1,002.0 NTU	10.1 mV	4.90 ft	200.00 ml/min
2/10/2021 10:08 AM	30:00	7.28 pH	17.27 °C	660.76 µS/cm	0.12 mg/L	926.00 NTU	9.9 mV	4.90 ft	200.00 ml/min
2/10/2021 10:13 AM	35:00	7.28 pH	17.36 °C	660.63 µS/cm	0.12 mg/L	769.00 NTU	9.6 mV	4.90 ft	200.00 ml/min
2/10/2021 10:18 AM	40:00	7.28 pH	17.41 °C	660.75 µS/cm	0.11 mg/L	643.00 NTU	9.5 mV	4.90 ft	200.00 ml/min
2/10/2021 10:23 AM	45:00	7.28 pH	17.52 °C	660.77 µS/cm	0.11 mg/L	129.00 NTU	9.4 mV	4.90 ft	200.00 ml/min
2/10/2021 10:28 AM	50:00	7.28 pH	17.60 °C	660.65 µS/cm	0.12 mg/L	160.00 NTU	9.5 mV	4.90 ft	200.00 ml/min
2/10/2021 10:33 AM	55:00	7.29 pH	17.63 °C	659.43 µS/cm	0.11 mg/L	84.00 NTU	9.7 mV	4.90 ft	200.00 ml/min
2/10/2021 10:38 AM	01:00:00	7.29 pH	17.68 °C	664.09 µS/cm	0.12 mg/L	100.90 NTU	8.1 mV	4.90 ft	200.00 ml/min

2/10/2021 10:43 AM	01:05:00	7.29 pH	17.77 °C	666.59 µS/cm	0.11 mg/L	98.10 NTU	8.3 mV	4.90 ft	200.00 ml/min
2/10/2021 10:48 AM	01:10:00	7.29 pH	17.73 °C	658.09 µS/cm	0.11 mg/L	79.40 NTU	9.1 mV	4.90 ft	200.00 ml/min
2/10/2021 10:53 AM	01:15:00	7.29 pH	17.82 °C	660.47 µS/cm	0.11 mg/L	70.30 NTU	9.1 mV	4.90 ft	200.00 ml/min
2/10/2021 11:00 AM	01:21:23	7.29 pH	17.89 °C	671.55 µS/cm	0.13 mg/L	73.90 NTU	11.8 mV	4.90 ft	200.00 ml/min
2/10/2021 11:05 AM	01:26:23	7.29 pH	17.61 °C	663.37 µS/cm	0.09 mg/L	54.50 NTU	7.7 mV	4.90 ft	200.00 ml/min
2/10/2021 11:10 AM	01:31:23	7.29 pH	17.72 °C	660.58 µS/cm	0.10 mg/L	50.80 NTU	8.8 mV	4.90 ft	200.00 ml/min
2/10/2021 11:15 AM	01:36:23	7.29 pH	17.65 °C	659.95 µS/cm	0.10 mg/L	40.60 NTU	9.0 mV	4.90 ft	200.00 ml/min
2/10/2021 11:20 AM	01:41:23	7.29 pH	17.74 °C	659.68 µS/cm	0.11 mg/L	35.60 NTU	8.9 mV	4.90 ft	200.00 ml/min
2/10/2021 11:25 AM	01:46:23	7.29 pH	17.79 °C	659.85 µS/cm	0.11 mg/L	35.70 NTU	8.8 mV	4.90 ft	200.00 ml/min
2/10/2021 11:30 AM	01:51:23	7.29 pH	17.79 °C	659.71 µS/cm	0.11 mg/L	28.80 NTU	8.9 mV	4.90 ft	200.00 ml/min
2/10/2021 11:32 AM	01:53:11	7.29 pH	17.86 °C	674.81 µS/cm	0.11 mg/L	28.20 NTU	11.1 mV	4.90 ft	200.00 ml/min
2/10/2021 11:37 AM	01:58:11	7.29 pH	17.94 °C	663.44 µS/cm	0.10 mg/L	25.00 NTU	7.4 mV	4.90 ft	200.00 ml/min
2/10/2021 11:42 AM	02:03:11	7.29 pH	17.90 °C	659.57 µS/cm	0.10 mg/L	23.20 NTU	8.4 mV	4.90 ft	200.00 ml/min
2/10/2021 11:47 AM	02:08:11	7.29 pH	17.93 °C	662.25 µS/cm	0.12 mg/L	23.00 NTU	8.0 mV	4.90 ft	200.00 ml/min
2/10/2021 11:52 AM	02:13:11	7.29 pH	17.97 °C	659.57 µS/cm	0.11 mg/L	20.20 NTU	8.8 mV	4.90 ft	200.00 ml/min
2/10/2021 11:57 AM	02:18:11	7.29 pH	17.99 °C	658.47 µS/cm	0.13 mg/L	18.20 NTU	9.2 mV	4.90 ft	200.00 ml/min
2/10/2021 12:02 PM	02:23:11	7.29 pH	18.03 °C	663.13 µS/cm	0.13 mg/L	17.90 NTU	7.9 mV	4.90 ft	200.00 ml/min
2/10/2021 12:07 PM	02:28:11	7.29 pH	18.00 °C	664.87 µS/cm	0.16 mg/L	16.70 NTU	8.1 mV	4.90 ft	200.00 ml/min
2/10/2021 12:12 PM	02:33:11	7.29 pH	18.02 °C	657.04 µS/cm	0.19 mg/L	15.00 NTU	9.3 mV	4.90 ft	200.00 ml/min
2/10/2021 12:17 PM	02:38:11	7.29 pH	18.04 °C	658.48 µS/cm	0.21 mg/L	13.80 NTU	9.6 mV	4.90 ft	200.00 ml/min
2/10/2021 12:22 PM	02:43:11	7.29 pH	18.04 °C	657.97 µS/cm	0.21 mg/L	12.00 NTU	9.6 mV	4.90 ft	200.00 ml/min
2/10/2021 12:27 PM	02:48:11	7.29 pH	18.09 °C	660.58 µS/cm	0.19 mg/L	11.00 NTU	7.7 mV	4.90 ft	200.00 ml/min
2/10/2021 12:32 PM	02:53:11	7.29 pH	18.10 °C	657.92 µS/cm	0.19 mg/L	10.00 NTU	9.5 mV	4.90 ft	200.00 ml/min
2/10/2021 12:37 PM	02:58:11	7.29 pH	18.17 °C	660.82 µS/cm	0.20 mg/L	9.35 NTU	8.0 mV	4.90 ft	200.00 ml/min
2/10/2021 12:42 PM	03:03:49	7.29 pH	18.19 °C	671.68 µS/cm	0.19 mg/L	8.30 NTU	10.9 mV	4.90 ft	200.00 ml/min
2/10/2021 12:43 PM	03:04:25	7.29 pH	18.21 °C	668.42 µS/cm	0.19 mg/L		8.6 mV	4.90 ft	200.00 ml/min

Samples

Sample ID:	Description:
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HGWC-7

Grab Sample.

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 2/16/2021 1:05:57 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWC-8 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 16.65 ft Total Depth: 25.07 Initial Depth to Water: 5.23 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 21.65 ft Estimated Total Volume Pumped: 23.4 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Cloudy, 20 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/16/2021 1:05 PM	00:00	7.27 pH	11.04 °C	870.86 µS/cm	6.57 mg/L	9.69 NTU	27.1 mV	5.23 ft	200.00 ml/min
2/16/2021 1:10 PM	05:00	7.19 pH	12.62 °C	959.79 µS/cm	0.42 mg/L	27.60 NTU	10.3 mV	5.23 ft	200.00 ml/min
2/16/2021 1:15 PM	10:00	7.17 pH	13.13 °C	950.59 µS/cm	0.32 mg/L	28.40 NTU	16.8 mV	5.24 ft	200.00 ml/min
2/16/2021 1:20 PM	15:00	7.16 pH	13.09 °C	960.29 µS/cm	0.24 mg/L	28.30 NTU	15.1 mV	5.24 ft	200.00 ml/min
2/16/2021 1:25 PM	20:00	7.16 pH	13.18 °C	964.66 µS/cm	0.20 mg/L	29.90 NTU	13.8 mV	5.25 ft	200.00 ml/min
2/16/2021 1:30 PM	25:00	7.16 pH	13.54 °C	972.88 µS/cm	0.18 mg/L	27.30 NTU	5.7 mV	5.25 ft	200.00 ml/min
2/16/2021 1:35 PM	30:00	7.16 pH	13.68 °C	969.69 µS/cm	0.16 mg/L	21.70 NTU	11.1 mV	5.25 ft	200.00 ml/min
2/16/2021 1:40 PM	35:00	7.16 pH	13.45 °C	965.75 µS/cm	0.16 mg/L	20.00 NTU	11.1 mV	5.25 ft	200.00 ml/min
2/16/2021 1:45 PM	40:00	7.16 pH	13.57 °C	967.46 µS/cm	0.16 mg/L	15.80 NTU	4.7 mV	5.25 ft	200.00 ml/min
2/16/2021 1:50 PM	45:00	7.15 pH	13.61 °C	967.84 µS/cm	0.15 mg/L	13.30 NTU	4.8 mV	5.25 ft	200.00 ml/min
2/16/2021 1:55 PM	50:00	7.16 pH	13.77 °C	968.87 µS/cm	0.15 mg/L	11.60 NTU	8.9 mV	5.25 ft	200.00 ml/min
2/16/2021 2:00 PM	55:00	7.16 pH	13.31 °C	968.90 µS/cm	0.14 mg/L	10.91 NTU	4.2 mV	5.25 ft	200.00 ml/min
2/16/2021 2:05 PM	01:00:00	7.16 pH	13.13 °C	965.07 µS/cm	0.14 mg/L	9.59 NTU	8.8 mV	5.25 ft	200.00 ml/min

2/16/2021 2:10 PM	01:05:00	7.16 pH	13.04 °C	961.96 µS/cm	0.14 mg/L	7.95 NTU	8.2 mV	5.25 ft	200.00 ml/min
2/16/2021 2:15 PM	01:10:00	7.16 pH	13.36 °C	971.78 µS/cm	0.15 mg/L	7.59 NTU	7.9 mV	5.25 ft	200.00 ml/min
2/16/2021 2:20 PM	01:15:00	7.15 pH	13.50 °C	969.17 µS/cm	0.14 mg/L	6.67 NTU	8.1 mV	5.25 ft	200.00 ml/min
2/16/2021 2:25 PM	01:20:00	7.16 pH	13.31 °C	973.32 µS/cm	0.14 mg/L	7.07 NTU	3.7 mV	5.25 ft	200.00 ml/min
2/16/2021 2:30 PM	01:25:00	7.16 pH	13.81 °C	970.17 µS/cm	0.14 mg/L	6.87 NTU	3.3 mV	5.25 ft	200.00 ml/min
2/16/2021 2:35 PM	01:30:00	7.15 pH	14.22 °C	969.59 µS/cm	0.15 mg/L	6.07 NTU	6.8 mV	5.25 ft	200.00 ml/min
2/16/2021 2:40 PM	01:35:00	7.16 pH	14.29 °C	968.28 µS/cm	0.12 mg/L	5.05 NTU	7.8 mV	5.25 ft	200.00 ml/min
2/16/2021 2:43 PM	01:38:00	7.16 pH	14.13 °C	962.92 µS/cm	0.14 mg/L	5.05 NTU	4.5 mV	5.25 ft	200.00 ml/min
2/16/2021 2:48 PM	01:43:00	7.15 pH	14.51 °C	970.80 µS/cm	0.14 mg/L	4.96 NTU	3.1 mV	5.25 ft	200.00 ml/min
2/16/2021 2:53 PM	01:48:00	7.16 pH	14.57 °C	964.80 µS/cm	0.14 mg/L	4.70 NTU	4.1 mV	5.25 ft	200.00 ml/min
2/16/2021 2:56 PM	01:50:59	7.15 pH	14.67 °C	961.30 µS/cm	0.13 mg/L	4.70 NTU	6.9 mV	5.25 ft	200.00 ml/min
2/16/2021 3:01 PM	01:55:59	7.16 pH	14.17 °C	961.04 µS/cm	0.13 mg/L	4.48 NTU	3.2 mV	5.25 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-8	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/16/2021 4:12:26 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWC-9 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 36.98 ft Total Depth: 46.69 ft Initial Depth to Water: 13.04 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 41.98 ft Estimated Total Volume Pumped: 28.4 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: 728541
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Sunny, 20 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/16/2021 4:12 PM	00:00	7.26 pH	13.92 °C	1,094.7 µS/cm	1.14 mg/L	31.30 NTU	-95.8 mV	13.04 ft	200.00 ml/min
2/16/2021 4:14 PM	01:52	7.24 pH	13.68 °C	1,127.1 µS/cm	0.46 mg/L	31.30 NTU	-56.9 mV	13.04 ft	200.00 ml/min
2/16/2021 4:19 PM	06:52	7.25 pH	15.23 °C	1,108.4 µS/cm	0.16 mg/L	18.80 NTU	-22.7 mV	13.08 ft	200.00 ml/min
2/16/2021 4:24 PM	11:52	7.25 pH	15.63 °C	1,117.7 µS/cm	0.13 mg/L	26.70 NTU	-26.0 mV	13.08 ft	200.00 ml/min
2/16/2021 4:29 PM	16:52	7.25 pH	15.44 °C	1,114.6 µS/cm	0.10 mg/L	47.60 NTU	-17.1 mV	13.08 ft	200.00 ml/min
2/16/2021 4:34 PM	21:52	7.26 pH	15.08 °C	1,111.6 µS/cm	0.08 mg/L	64.00 NTU	-12.1 mV	13.08 ft	200.00 ml/min
2/16/2021 4:39 PM	26:52	7.26 pH	15.02 °C	1,116.7 µS/cm	0.08 mg/L	60.40 NTU	-9.3 mV	13.08 ft	200.00 ml/min
2/16/2021 4:44 PM	31:52	7.25 pH	15.04 °C	1,114.9 µS/cm	0.09 mg/L	55.22 NTU	-7.7 mV	13.08 ft	200.00 ml/min
2/16/2021 4:49 PM	36:52	7.26 pH	15.30 °C	1,112.6 µS/cm	0.08 mg/L	48.40 NTU	-6.3 mV	13.08 ft	200.00 ml/min
2/16/2021 4:54 PM	41:52	7.25 pH	15.45 °C	1,117.2 µS/cm	0.08 mg/L	42.80 NTU	-5.4 mV	13.08 ft	200.00 ml/min
2/16/2021 4:59 PM	46:52	7.26 pH	15.29 °C	1,110.0 µS/cm	0.08 mg/L	37.30 NTU	-4.4 mV	13.09 ft	200.00 ml/min
2/16/2021 5:04 PM	51:52	7.26 pH	15.31 °C	1,113.1 µS/cm	0.09 mg/L	31.80 NTU	-3.9 mV	13.09 ft	200.00 ml/min
2/16/2021 5:09 PM	56:52	7.26 pH	15.12 °C	1,113.4 µS/cm	0.09 mg/L	28.30 NTU	-2.7 mV	13.09 ft	200.00 ml/min

2/16/2021 5:14 PM	01:01:52	7.26 pH	15.26 °C	1,114.0 µS/cm	0.10 mg/L	21.80 NTU	-3.0 mV	13.09 ft	200.00 ml/min
2/16/2021 5:19 PM	01:06:52	7.26 pH	14.85 °C	1,115.4 µS/cm	0.10 mg/L	19.30 NTU	-2.6 mV	13.10 ft	200.00 ml/min
2/16/2021 5:24 PM	01:11:52	7.26 pH	15.08 °C	1,113.9 µS/cm	0.10 mg/L	17.40 NTU	-2.6 mV	13.10 ft	200.00 ml/min
2/16/2021 5:29 PM	01:16:52	7.26 pH	15.04 °C	1,116.4 µS/cm	0.11 mg/L	14.60 NTU	-2.5 mV	13.10 ft	200.00 ml/min
2/16/2021 5:34 PM	01:21:52	7.26 pH	15.12 °C	1,117.4 µS/cm	0.11 mg/L	13.90 NTU	-1.5 mV	13.10 ft	200.00 ml/min
2/16/2021 5:39 PM	01:26:52	7.26 pH	15.12 °C	1,116.2 µS/cm	0.10 mg/L	12.10 NTU	-2.0 mV	13.10 ft	200.00 ml/min
2/16/2021 5:44 PM	01:31:52	7.26 pH	15.08 °C	1,115.3 µS/cm	0.11 mg/L	11.20 NTU	-2.0 mV	13.10 ft	200.00 ml/min
2/16/2021 5:49 PM	01:36:52	7.26 pH	15.27 °C	1,117.2 µS/cm	0.11 mg/L	10.99 NTU	-0.8 mV	13.10 ft	200.00 ml/min
2/16/2021 5:54 PM	01:41:52	7.26 pH	15.35 °C	1,116.8 µS/cm	0.11 mg/L	10.52 NTU	-1.1 mV	13.10 ft	200.00 ml/min
2/16/2021 5:59 PM	01:46:52	7.26 pH	15.27 °C	1,115.0 µS/cm	0.12 mg/L	9.70 NTU	-1.1 mV	13.10 ft	200.00 ml/min
2/16/2021 6:04 PM	01:51:52	7.25 pH	15.07 °C	1,116.0 µS/cm	0.12 mg/L	7.77 NTU	-1.7 mV	13.10 ft	200.00 ml/min
2/16/2021 6:09 PM	01:56:52	7.26 pH	14.94 °C	1,114.5 µS/cm	0.12 mg/L	6.14 NTU	-1.2 mV	13.10 ft	200.00 ml/min
2/16/2021 6:14 PM	02:01:52	7.26 pH	14.84 °C	1,115.6 µS/cm	0.12 mg/L	5.77 NTU	-1.1 mV	13.10 ft	200.00 ml/min
2/16/2021 6:19 PM	02:06:52	7.26 pH	14.72 °C	1,116.5 µS/cm	0.12 mg/L	5.47 NTU	-1.4 mV	13.10 ft	200.00 ml/min
2/16/2021 6:24 PM	02:11:52	7.26 pH	14.64 °C	1,119.9 µS/cm	0.12 mg/L	4.91 NTU	-1.1 mV	13.11 ft	200.00 ml/min
2/16/2021 6:29 PM	02:16:52	7.26 pH	14.43 °C	1,118.7 µS/cm	0.12 mg/L	4.56 NTU	-0.7 mV	13.11 ft	200.00 ml/min
2/16/2021 6:34 PM	02:21:52	7.26 pH	14.85 °C	1,120.6 µS/cm	0.12 mg/L	4.20 NTU	-1.4 mV	13.11 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-9	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/15/2021 12:56:21 PM

Project: Plant Hammond

Operator Name: Chad Russo

Location Name: HGWC-10 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 13 ft Total Depth: 23 ft Initial Depth to Water: 12.42 ft	Pump Type: Alexis Tubing Type: Polyethylene Pump Intake From TOC: 20 ft Estimated Total Volume Pumped: 3000 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/15/2021 12:56 PM	00:00	7.13 pH	13.02 °C	568.53 µS/cm	4.07 mg/L		75.3 mV	12.42 ft	100.00 ml/min
2/15/2021 1:01 PM	05:00	6.94 pH	13.66 °C	573.79 µS/cm	3.81 mg/L	1.01 NTU	57.8 mV	12.42 ft	100.00 ml/min
2/15/2021 1:06 PM	10:00	6.88 pH	13.75 °C	596.35 µS/cm	3.52 mg/L	1.31 NTU	56.0 mV	12.42 ft	100.00 ml/min
2/15/2021 1:11 PM	15:00	6.86 pH	13.80 °C	606.98 µS/cm	3.37 mg/L	1.18 NTU	54.8 mV	12.42 ft	100.00 ml/min
2/15/2021 1:16 PM	20:00	6.86 pH	14.07 °C	627.08 µS/cm	3.05 mg/L	1.15 NTU	77.4 mV	12.42 ft	100.00 ml/min
2/15/2021 1:21 PM	25:00	6.84 pH	14.15 °C	634.84 µS/cm	2.92 mg/L	1.19 NTU	77.1 mV	12.42 ft	100.00 ml/min
2/15/2021 1:26 PM	30:00	6.83 pH	14.07 °C	649.65 µS/cm	2.78 mg/L	0.88 NTU	76.0 mV	12.42 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWC-10	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/12/2021 1:47:15 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWC-11 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 15.78 ft Total Depth: 25.79 ft Initial Depth to Water: 16.93 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 20.73 ft Estimated Total Volume Pumped: 12 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: 728541
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Cloudy, 45 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/12/2021 1:47 PM	00:00	6.05 pH	16.02 °C	808.46 µS/cm	4.49 mg/L	7.14 NTU	47.6 mV	16.93 ft	200.00 ml/min
2/12/2021 1:52 PM	05:00	6.04 pH	16.29 °C	804.55 µS/cm	4.30 mg/L	7.08 NTU	29.9 mV	17.00 ft	200.00 ml/min
2/12/2021 1:57 PM	10:00	6.05 pH	16.31 °C	803.39 µS/cm	4.01 mg/L	3.96 NTU	41.0 mV	17.00 ft	200.00 ml/min
2/12/2021 2:02 PM	15:00	6.06 pH	16.29 °C	802.73 µS/cm	3.74 mg/L	3.11 NTU	38.3 mV	17.00 ft	200.00 ml/min
2/12/2021 2:07 PM	20:00	6.09 pH	16.29 °C	807.83 µS/cm	3.41 mg/L	2.02 NTU	35.9 mV	17.00 ft	200.00 ml/min
2/12/2021 2:12 PM	25:00	6.11 pH	16.23 °C	807.55 µS/cm	3.23 mg/L	1.70 NTU	34.3 mV	17.00 ft	200.00 ml/min
2/12/2021 2:17 PM	30:00	6.12 pH	16.26 °C	807.88 µS/cm	3.04 mg/L	1.89 NTU	33.0 mV	17.00 ft	200.00 ml/min
2/12/2021 2:22 PM	35:00	6.15 pH	16.25 °C	811.27 µS/cm	2.81 mg/L	1.29 NTU	31.4 mV	17.00 ft	200.00 ml/min
2/12/2021 2:27 PM	40:00	6.16 pH	16.28 °C	810.23 µS/cm	2.78 mg/L	1.30 NTU	30.7 mV	17.00 ft	200.00 ml/min
2/12/2021 2:32 PM	45:00	6.18 pH	16.29 °C	810.86 µS/cm	2.56 mg/L	0.97 NTU	29.7 mV	17.00 ft	200.00 ml/min
2/12/2021 2:37 PM	50:00	6.21 pH	16.16 °C	812.87 µS/cm	2.34 mg/L	1.09 NTU	28.5 mV	17.00 ft	200.00 ml/min
2/12/2021 2:42 PM	55:00	6.23 pH	16.14 °C	815.06 µS/cm	2.26 mg/L	1.26 NTU	27.9 mV	17.00 ft	200.00 ml/min
2/12/2021 2:47 PM	01:00:00	6.23 pH	16.22 °C	819.93 µS/cm	2.25 mg/L	0.87 NTU	20.6 mV	17.00 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-11	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/12/2021 11:50:41 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWC-12 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 25.68 ft Total Depth: 35.68 ft Initial Depth to Water: 17.05 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 30.68 ft Estimated Total Volume Pumped: 10 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Cloudy, 45 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/12/2021 11:50 AM	00:00	7.60 pH	11.34 °C	1,000.4 µS/cm	8.85 mg/L	10.51 NTU	8.7 mV	17.05 ft	200.00 ml/min
2/12/2021 11:55 AM	05:00	7.42 pH	16.59 °C	1,005.7 µS/cm	1.34 mg/L	18.30 NTU	9.1 mV	17.05 ft	200.00 ml/min
2/12/2021 12:00 PM	10:00	7.39 pH	17.10 °C	1,001.5 µS/cm	1.04 mg/L	14.00 NTU	8.5 mV	17.05 ft	200.00 ml/min
2/12/2021 12:05 PM	15:00	7.34 pH	17.06 °C	999.47 µS/cm	0.46 mg/L	13.30 NTU	9.4 mV	17.05 ft	200.00 ml/min
2/12/2021 12:10 PM	20:00	7.32 pH	17.10 °C	999.52 µS/cm	0.28 mg/L	11.91 NTU	4.6 mV	17.05 ft	200.00 ml/min
2/12/2021 12:15 PM	25:00	7.30 pH	17.02 °C	998.52 µS/cm	0.23 mg/L	8.93 NTU	4.7 mV	17.05 ft	200.00 ml/min
2/12/2021 12:20 PM	30:00	7.29 pH	17.23 °C	1,002.0 µS/cm	0.20 mg/L	7.20 NTU	9.4 mV	17.05 ft	200.00 ml/min
2/12/2021 12:25 PM	35:00	7.28 pH	17.14 °C	1,001.6 µS/cm	0.18 mg/L	5.64 NTU	6.1 mV	17.05 ft	200.00 ml/min
2/12/2021 12:30 PM	40:00	7.28 pH	17.10 °C	1,000.9 µS/cm	0.18 mg/L	4.76 NTU	10.0 mV	17.05 ft	200.00 ml/min
2/12/2021 12:35 PM	45:00	7.28 pH	17.06 °C	999.94 µS/cm	0.18 mg/L	4.30 NTU	6.6 mV	17.05 ft	200.00 ml/min
2/12/2021 12:40 PM	50:00	7.27 pH	17.19 °C	996.07 µS/cm	0.17 mg/L	3.72 NTU	10.2 mV	17.05 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-12	Grab Sample.

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 2/22/2021 1:09:08 PM

Project: GP-Plant Hammond

Operator Name: Chad Russo

Location Name: HGWC-13 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 35.07 ft Total Depth: 45.07 ft Initial Depth to Water: 21.38 ft	Pump Type: QED MP50 Tubing Type: polyethylene Tubing Inner Diameter: 0.17 in Pump Intake From TOC: 40 ft Estimated Total Volume Pumped: 8 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.07 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
2/22/2021 1:09 PM	00:00	7.14 pH	19.23 °C	986.31 µS/cm	0.98 mg/L		20.6 mV	21.38 ft	200.00 ml/min
2/22/2021 1:14 PM	05:00	7.19 pH	19.59 °C	986.48 µS/cm	0.37 mg/L	82.00 NTU	-3.4 mV	21.45 ft	200.00 ml/min
2/22/2021 1:19 PM	10:00	7.21 pH	19.68 °C	982.76 µS/cm	0.19 mg/L	53.60 NTU	-15.9 mV	21.45 ft	200.00 ml/min
2/22/2021 1:24 PM	15:00	7.23 pH	19.77 °C	980.49 µS/cm	0.17 mg/L	31.30 NTU	-23.2 mV	21.45 ft	200.00 ml/min
2/22/2021 1:29 PM	20:00	7.24 pH	19.70 °C	981.51 µS/cm	0.15 mg/L	19.40 NTU	-28.1 mV	21.45 ft	200.00 ml/min
2/22/2021 1:34 PM	25:00	7.25 pH	19.82 °C	983.51 µS/cm	0.14 mg/L	13.30 NTU	-31.3 mV	21.45 ft	200.00 ml/min
2/22/2021 1:39 PM	30:00	7.26 pH	19.77 °C	984.15 µS/cm	0.14 mg/L	10.55 NTU	-33.1 mV	21.45 ft	200.00 ml/min
2/22/2021 1:44 PM	35:00	7.27 pH	19.77 °C	984.37 µS/cm	0.14 mg/L	6.80 NTU	-34.9 mV	21.45 ft	200.00 ml/min
2/22/2021 1:49 PM	40:00	7.27 pH	19.73 °C	981.02 µS/cm	0.14 mg/L	4.80 NTU	-35.6 mV	21.45 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-13	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/16/2021 3:52:17 PM

Project: GP-Plant Hammond

Operator Name: Chad Russo

Location Name: MW-5 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 20.82 ft Total Depth: 30.82 ft Initial Depth to Water: 15.97 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 26 ft Estimated Total Volume Pumped: 6 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.18 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Rainy, 46 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/16/2021 3:52 PM	00:00	6.13 pH	16.01 °C	478.44 µS/cm	3.67 mg/L		89.6 mV		200.00 ml/min
2/16/2021 3:57 PM	05:00	6.04 pH	16.55 °C	498.50 µS/cm	3.60 mg/L	4.02 NTU	76.3 mV	16.15 ft	200.00 ml/min
2/16/2021 4:02 PM	10:00	5.99 pH	16.55 °C	500.49 µS/cm	3.33 mg/L	2.88 NTU	75.9 mV	16.15 ft	200.00 ml/min
2/16/2021 4:07 PM	15:00	5.98 pH	16.51 °C	505.14 µS/cm	3.24 mg/L	2.14 NTU	118.8 mV	16.15 ft	200.00 ml/min
2/16/2021 4:12 PM	20:00	5.96 pH	16.37 °C	500.99 µS/cm	3.19 mg/L	2.03 NTU	75.0 mV	16.15 ft	200.00 ml/min
2/16/2021 4:17 PM	25:00	5.95 pH	16.55 °C	503.00 µS/cm	3.16 mg/L	1.90 NTU	73.6 mV	16.15 ft	200.00 ml/min
2/16/2021 4:22 PM	30:00	5.95 pH	16.64 °C	504.04 µS/cm	3.13 mg/L	1.67 NTU	117.4 mV	16.15 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-5	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/16/2021 2:22:03 PM

Project: GP-Plant Hammond

Operator Name: Chad Russo

Location Name: MW-6 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 20.82 ft Total Depth: 30.82 ft Initial Depth to Water: 15.96 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 25 ft Estimated Total Volume Pumped: 9 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.04 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Rainy, 46 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/16/2021 2:22 PM	00:00	7.17 pH	14.57 °C	1,058.7 µS/cm	3.60 mg/L		-39.6 mV	15.96 ft	200.00 ml/min
2/16/2021 2:27 PM	05:00	7.05 pH	17.18 °C	1,001.9 µS/cm	0.83 mg/L	103.50 NTU	-11.0 mV	16.00 ft	200.00 ml/min
2/16/2021 2:32 PM	10:00	7.02 pH	17.63 °C	982.53 µS/cm	0.50 mg/L	64.60 NTU	4.5 mV	16.00 ft	200.00 ml/min
2/16/2021 2:37 PM	15:00	7.01 pH	17.28 °C	985.43 µS/cm	0.37 mg/L	32.40 NTU	-3.8 mV	16.00 ft	200.00 ml/min
2/16/2021 2:42 PM	20:00	7.01 pH	17.38 °C	984.64 µS/cm	0.27 mg/L	21.90 NTU	13.0 mV	16.00 ft	200.00 ml/min
2/16/2021 2:47 PM	25:00	7.00 pH	17.76 °C	984.03 µS/cm	0.21 mg/L	14.20 NTU	15.2 mV	16.00 ft	200.00 ml/min
2/16/2021 2:52 PM	30:00	7.00 pH	17.44 °C	976.16 µS/cm	0.20 mg/L	11.38 NTU	17.0 mV	16.00 ft	200.00 ml/min
2/16/2021 2:57 PM	35:00	7.00 pH	17.53 °C	977.14 µS/cm	0.21 mg/L	8.81 NTU	9.7 mV	16.00 ft	200.00 ml/min
2/16/2021 3:02 PM	40:00	7.00 pH	17.14 °C	980.79 µS/cm	0.22 mg/L	6.21 NTU	18.9 mV	16.00 ft	200.00 ml/min
2/16/2021 3:07 PM	45:00	7.00 pH	17.21 °C	984.52 µS/cm	0.22 mg/L	4.14 NTU	19.4 mV	16.00 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-6	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/15/2021 4:12:24 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: MW-7 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 16.8 ft Total Depth: 26.70 ft Initial Depth to Water: 13.45 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 21.8 ft Estimated Total Volume Pumped: 12 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Rainy, 46 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/15/2021 4:12 PM	00:00	6.92 pH	13.49 °C	431.20 µS/cm	5.87 mg/L	5.82 NTU	35.6 mV	13.45 ft	200.00 ml/min
2/15/2021 4:17 PM	05:00	6.69 pH	15.86 °C	386.71 µS/cm	3.76 mg/L	4.80 NTU	21.4 mV	13.45 ft	200.00 ml/min
2/15/2021 4:22 PM	10:00	6.65 pH	16.47 °C	389.73 µS/cm	3.09 mg/L	3.18 NTU	19.6 mV	13.45 ft	200.00 ml/min
2/15/2021 4:27 PM	15:00	6.64 pH	16.72 °C	392.05 µS/cm	2.73 mg/L	2.34 NTU	17.8 mV	13.45 ft	200.00 ml/min
2/15/2021 4:32 PM	20:00	6.65 pH	16.92 °C	399.31 µS/cm	2.60 mg/L	2.18 NTU	34.0 mV	13.45 ft	200.00 ml/min
2/15/2021 4:36 PM	24:26	6.67 pH	16.94 °C	429.38 µS/cm	2.86 mg/L	1.53 NTU	22.0 mV	13.45 ft	200.00 ml/min
2/15/2021 4:41 PM	29:26	6.67 pH	16.88 °C	431.19 µS/cm	2.32 mg/L	1.05 NTU	17.8 mV	13.45 ft	200.00 ml/min
2/15/2021 4:46 PM	34:26	6.72 pH	16.98 °C	443.10 µS/cm	2.16 mg/L	1.52 NTU	16.4 mV	13.45 ft	200.00 ml/min
2/15/2021 4:51 PM	39:26	6.74 pH	17.11 °C	454.67 µS/cm	2.16 mg/L	0.89 NTU	25.9 mV	13.45 ft	200.00 ml/min
2/15/2021 4:56 PM	44:26	6.75 pH	17.10 °C	466.62 µS/cm	2.16 mg/L	0.91 NTU	26.2 mV	13.45 ft	200.00 ml/min
2/15/2021 5:01 PM	49:26	6.78 pH	17.19 °C	475.93 µS/cm	1.86 mg/L	0.83 NTU	25.1 mV	13.45 ft	200.00 ml/min
2/15/2021 5:06 PM	54:26	6.79 pH	17.04 °C	474.98 µS/cm	1.85 mg/L	0.56 NTU	24.7 mV	13.45 ft	200.00 ml/min
2/15/2021 5:11 PM	59:26	6.77 pH	16.96 °C	473.10 µS/cm	1.85 mg/L	0.60 NTU	25.2 mV	13.45 ft	200.00 ml/min

2/15/2021 5:12 PM	01:00:05	6.78 pH	16.96 °C	499.90 µS/cm	1.88 mg/L		15.9 mV	13.45 ft	200.00 ml/min
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Samples

Sample ID:	Description:
MW-7	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/12/2021 12:15:15 PM

Project: GP-Plant Hammond

Operator Name: Aaron Reeder

Location Name: MW-19 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 39.87 ft Total Depth: 29.87 ft Initial Depth to Water: 13.6 ft	Pump Type: QED MP50 Tubing Type: polyethylene Tubing Inner Diameter: 0.17 in Pump Intake From TOC: 24.87 ft Estimated Total Volume Pumped: 17 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Cloudy and rain.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
2/12/2021 12:15 PM	00:00	6.08 pH	14.43 °C	744.59 µS/cm	3.19 mg/L		120.4 mV	13.60 ft	200.00 ml/min
2/12/2021 12:20 PM	05:00	6.21 pH	17.14 °C	765.56 µS/cm	1.14 mg/L	7.65 NTU	132.8 mV	13.60 ft	200.00 ml/min
2/12/2021 12:25 PM	10:00	6.28 pH	17.72 °C	785.80 µS/cm	0.74 mg/L	9.65 NTU	147.7 mV	13.60 ft	200.00 ml/min
2/12/2021 12:30 PM	15:00	6.30 pH	17.68 °C	785.39 µS/cm	0.37 mg/L	6.75 NTU	146.8 mV	13.60 ft	200.00 ml/min
2/12/2021 12:35 PM	20:00	6.30 pH	17.65 °C	786.68 µS/cm	0.44 mg/L	5.56 NTU	146.5 mV	13.60 ft	200.00 ml/min
2/12/2021 12:40 PM	25:00	6.32 pH	17.63 °C	788.80 µS/cm	0.38 mg/L	7.75 NTU	144.9 mV	13.60 ft	200.00 ml/min
2/12/2021 12:45 PM	30:00	6.33 pH	17.45 °C	791.05 µS/cm	0.37 mg/L	6.23 NTU	143.8 mV	13.60 ft	200.00 ml/min
2/12/2021 12:50 PM	35:00	6.34 pH	17.19 °C	788.49 µS/cm	0.47 mg/L	5.23 NTU	142.9 mV	13.60 ft	200.00 ml/min
2/12/2021 12:55 PM	40:00	6.35 pH	16.46 °C	791.78 µS/cm	0.72 mg/L	5.72 NTU	142.2 mV	13.60 ft	200.00 ml/min
2/12/2021 1:00 PM	45:00	6.35 pH	16.29 °C	698.63 µS/cm	0.86 mg/L	11.30 NTU	141.1 mV	13.60 ft	200.00 ml/min
2/12/2021 1:05 PM	50:00	6.35 pH	16.26 °C	790.82 µS/cm	0.87 mg/L	10.57 NTU	139.9 mV	13.60 ft	200.00 ml/min
2/12/2021 1:10 PM	55:00	6.35 pH	16.14 °C	791.87 µS/cm	0.91 mg/L	8.17 NTU	138.8 mV	13.60 ft	200.00 ml/min
2/12/2021 1:15 PM	01:00:00	6.36 pH	16.27 °C	792.42 µS/cm	0.86 mg/L	8.09 NTU	137.7 mV	13.60 ft	200.00 ml/min

2/12/2021 1:20 PM	01:05:00	6.36 pH	16.23 °C	792.02 µS/cm	0.92 mg/L	7.42 NTU	136.8 mV	13.60 ft	200.00 ml/min
2/12/2021 1:25 PM	01:10:00	6.36 pH	16.24 °C	795.66 µS/cm	0.91 mg/L	6.69 NTU	136.0 mV	13.60 ft	200.00 ml/min
2/12/2021 1:30 PM	01:15:00	6.35 pH	16.22 °C	809.12 µS/cm	0.88 mg/L	5.89 NTU	135.2 mV	13.60 ft	200.00 ml/min
2/12/2021 1:35 PM	01:20:00	6.36 pH	16.35 °C	795.13 µS/cm	0.88 mg/L	5.23 NTU	134.2 mV	13.60 ft	200.00 ml/min
2/12/2021 1:40 PM	01:25:00	6.36 pH	16.29 °C	778.47 µS/cm	0.90 mg/L	4.56 NTU	133.5 mV	13.60 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-19	Grab Sample.
DUP-1	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/11/2021 10:22:22 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: MW-20 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 24.36 ft Total Depth: 34.4 ft Initial Depth to Water: 14.55 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 29.36 ft Estimated Total Volume Pumped: 6.4 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.35 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Cloudy, 53 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/11/2021 10:22 AM	00:00	6.74 pH	16.77 °C	627.36 µS/cm	3.99 mg/L	18.90 NTU	28.4 mV	14.55 ft	200.00 ml/min
2/11/2021 10:27 AM	05:00	6.67 pH	17.58 °C	620.72 µS/cm	1.96 mg/L	9.98 NTU	0.1 mV	14.70 ft	200.00 ml/min
2/11/2021 10:29 AM	07:31	6.69 pH	17.72 °C	640.89 µS/cm	1.44 mg/L	9.98 NTU	-3.3 mV	14.70 ft	200.00 ml/min
2/11/2021 10:34 AM	12:31	6.77 pH	17.75 °C	670.14 µS/cm	0.99 mg/L	5.68 NTU	-10.3 mV	14.85 ft	200.00 ml/min
2/11/2021 10:39 AM	17:31	6.84 pH	17.73 °C	683.02 µS/cm	0.74 mg/L	4.43 NTU	-14.9 mV	14.85 ft	200.00 ml/min
2/11/2021 10:44 AM	22:31	6.88 pH	17.77 °C	688.34 µS/cm	0.58 mg/L	4.47 NTU	-43.0 mV	14.85 ft	200.00 ml/min
2/11/2021 10:49 AM	27:31	6.91 pH	17.72 °C	694.85 µS/cm	0.48 mg/L	3.51 NTU	-17.1 mV	14.90 ft	200.00 ml/min
2/11/2021 10:54 AM	32:31	6.93 pH	17.77 °C	694.77 µS/cm	0.41 mg/L	3.25 NTU	-46.3 mV	14.90 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-20	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/16/2021 11:55:04 AM

Project: GP-Plant Hammond

Operator Name: Chad Russo

Location Name: MW-24D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 63.11 ft Total Depth: 73.11 ft Initial Depth to Water: 26.66 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 68 ft Estimated Total Volume Pumped: 9 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Cloudy, 20 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/16/2021 11:55 AM	00:00	6.95 pH	10.87 °C	600.76 µS/cm	3.95 mg/L		-49.0 mV		200.00 ml/min
2/16/2021 12:00 PM	05:00	7.42 pH	15.79 °C	587.16 µS/cm	0.36 mg/L	4.96 NTU	-6.1 mV	26.70 ft	200.00 ml/min
2/16/2021 12:05 PM	10:00	7.53 pH	16.23 °C	591.16 µS/cm	0.28 mg/L	6.47 NTU	0.3 mV	26.66 ft	200.00 ml/min
2/16/2021 12:10 PM	15:00	7.60 pH	16.31 °C	587.39 µS/cm	0.20 mg/L	11.40 NTU	18.7 mV	26.66 ft	200.00 ml/min
2/16/2021 12:15 PM	20:00	7.64 pH	16.37 °C	585.23 µS/cm	0.19 mg/L	10.41 NTU	20.3 mV	26.66 ft	200.00 ml/min
2/16/2021 12:20 PM	25:00	7.66 pH	16.54 °C	588.15 µS/cm	0.19 mg/L	11.82 NTU	21.3 mV	26.70 ft	200.00 ml/min
2/16/2021 12:25 PM	30:00	7.67 pH	16.52 °C	586.28 µS/cm	0.20 mg/L	10.06 NTU	21.7 mV	26.66 ft	200.00 ml/min
2/16/2021 12:30 PM	35:00	7.69 pH	16.64 °C	588.17 µS/cm	0.21 mg/L	7.61 NTU	21.5 mV	26.66 ft	200.00 ml/min
2/16/2021 12:35 PM	40:00	7.70 pH	16.49 °C	583.09 µS/cm	0.21 mg/L	6.12 NTU	21.3 mV	26.66 ft	200.00 ml/min
2/16/2021 12:40 PM	45:00	7.69 pH	16.83 °C	583.89 µS/cm	0.21 mg/L	4.87 NTU	21.4 mV	26.66 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-24D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/12/2021 9:45:03 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: MW-25D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 53.03 ft Total Depth: 63.19 Initial Depth to Water: 16.85 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 58.03 ft Estimated Total Volume Pumped: 4.6 liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 3.5 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Rainy, 50 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/12/2021 9:45 AM	00:00	7.71 pH	15.12 °C	660.77 µS/cm	1.52 mg/L	4.73 NTU	-79.3 mV	16.85 ft	200.00 ml/min
2/12/2021 9:50 AM	05:00	7.71 pH	16.72 °C	654.70 µS/cm	0.17 mg/L	3.11 NTU	-92.5 mV	18.90 ft	200.00 ml/min
2/12/2021 9:55 AM	10:00	7.72 pH	15.75 °C	637.58 µS/cm	0.18 mg/L	3.31 NTU	-166.1 mV	19.18 ft	200.00 ml/min
2/12/2021 10:00 AM	15:00	7.72 pH	15.27 °C	645.56 µS/cm	0.16 mg/L	2.93 NTU	-94.3 mV	19.46 ft	200.00 ml/min
2/12/2021 10:05 AM	20:00	7.74 pH	15.22 °C	637.39 µS/cm	0.16 mg/L	1.42 NTU	-97.1 mV	19.70 ft	200.00 ml/min
2/12/2021 10:06 AM	21:02	7.74 pH	15.20 °C	651.41 µS/cm	0.16 mg/L	1.42 NTU	-95.2 mV	19.70 ft	200.00 ml/min
2/12/2021 10:11 AM	26:02	7.75 pH	15.27 °C	635.87 µS/cm	0.17 mg/L	1.96 NTU	-176.2 mV	19.90 ft	200.00 ml/min
2/12/2021 10:16 AM	31:02	7.76 pH	15.24 °C	633.54 µS/cm	0.18 mg/L	1.79 NTU	-179.1 mV	20.12 ft	200.00 ml/min
2/12/2021 10:21 AM	36:02	7.76 pH	15.30 °C	632.76 µS/cm	0.20 mg/L	2.34 NTU	-181.7 mV	20.25 ft	200.00 ml/min
2/12/2021 10:26 AM	41:02	7.77 pH	15.36 °C	634.22 µS/cm	0.21 mg/L	2.23 NTU	-184.1 mV	20.35 ft	200.00 ml/min

Samples

Sample ID:	Description:
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MW-25D

Grab Sample.

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 2/16/2021 4:57:41 PM

Project: GP-Plant Hammond

Operator Name: Chad Russo

Location Name: MW-26D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 67.91 ft Total Depth: 77.91 ft Initial Depth to Water: 13.17 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 72 ft Estimated Total Volume Pumped: 12 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
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Snowy, 20 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 10	+/- 10	+/- 0.3	
2/16/2021 4:57 PM	00:00	7.17 pH	15.15 °C	922.39 µS/cm	1.41 mg/L		-37.0 mV	13.17 ft	200.00 ml/min
2/16/2021 5:02 PM	05:00	7.25 pH	15.74 °C	994.59 µS/cm	0.50 mg/L	22.30 NTU	-17.9 mV	13.17 ft	200.00 ml/min
2/16/2021 5:07 PM	10:00	7.27 pH	15.73 °C	1,004.8 µS/cm	0.32 mg/L	34.70 NTU	-34.9 mV	13.17 ft	200.00 ml/min
2/16/2021 5:12 PM	15:00	7.27 pH	15.74 °C	1,015.6 µS/cm	0.24 mg/L	24.40 NTU	-3.0 mV	13.17 ft	200.00 ml/min
2/16/2021 5:17 PM	20:00	7.27 pH	15.11 °C	1,026.5 µS/cm	0.21 mg/L	17.40 NTU	0.5 mV	13.17 ft	200.00 ml/min
2/16/2021 5:22 PM	25:00	7.27 pH	15.53 °C	1,027.9 µS/cm	0.21 mg/L	12.70 NTU	1.8 mV	13.17 ft	200.00 ml/min
2/16/2021 5:27 PM	30:00	7.27 pH	15.46 °C	1,027.6 µS/cm	0.22 mg/L	13.20 NTU	3.1 mV	13.17 ft	200.00 ml/min
2/16/2021 5:32 PM	35:00	7.27 pH	15.38 °C	1,032.2 µS/cm	0.23 mg/L	12.41 NTU	3.7 mV	13.17 ft	200.00 ml/min
2/16/2021 5:37 PM	40:00	7.27 pH	15.42 °C	1,030.6 µS/cm	0.24 mg/L	10.51 NTU	4.8 mV	13.17 ft	200.00 ml/min
2/16/2021 5:42 PM	45:00	7.27 pH	15.26 °C	1,033.3 µS/cm	0.25 mg/L	8.78 NTU	5.9 mV	13.17 ft	200.00 ml/min
2/16/2021 5:47 PM	50:00	7.27 pH	15.29 °C	1,032.8 µS/cm	0.26 mg/L	7.84 NTU	6.9 mV	13.17 ft	200.00 ml/min

2/16/2021 5:52 PM	55:00	7.27 pH	15.34 °C	1,035.4 µS/cm	0.27 mg/L	5.82 NTU	7.3 mV	13.17 ft	200.00 ml/min
2/16/2021 5:57 PM	01:00:00	7.27 pH	15.22 °C	1,038.0 µS/cm	0.27 mg/L	4.60 NTU	8.2 mV	13.17 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-26D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/15/2021 10:02:21 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: MW-27D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 52.97 ft Total Depth: 63.25 ft Initial Depth to Water: 4.36 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 57.97 ft Estimated Total Volume Pumped: 3.5 liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 2.54 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Well purged dry. Purged 40.5 L

Weather Conditions:

Cloudy, 38 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/15/2021 10:02 AM	00:00	7.98 pH	10.45 °C	420.90 µS/cm	6.15 mg/L	2.17 NTU	52.1 mV	3.36 ft	100.00 ml/min
2/15/2021 10:07 AM	05:00	7.87 pH	11.34 °C	492.87 µS/cm	4.64 mg/L	22.90 NTU	-27.6 mV	3.50 ft	100.00 ml/min
2/15/2021 10:12 AM	10:00	7.79 pH	12.48 °C	496.30 µS/cm	0.96 mg/L	35.90 NTU	-34.8 mV	4.10 ft	100.00 ml/min
2/15/2021 10:17 AM	15:00	7.80 pH	12.64 °C	492.15 µS/cm	0.50 mg/L	28.30 NTU	-70.9 mV	4.60 ft	100.00 ml/min
2/15/2021 10:22 AM	20:00	7.80 pH	12.77 °C	492.30 µS/cm	0.43 mg/L	36.20 NTU	-74.5 mV	5.25 ft	100.00 ml/min
2/15/2021 10:27 AM	25:00	7.80 pH	12.95 °C	489.73 µS/cm	0.39 mg/L	26.20 NTU	-39.6 mV	5.75 ft	100.00 ml/min
2/15/2021 10:32 AM	30:00	7.81 pH	13.04 °C	484.88 µS/cm	0.36 mg/L	16.30 NTU	-83.7 mV	6.40 ft	100.00 ml/min
2/15/2021 10:37 AM	35:00	7.81 pH	13.08 °C	484.72 µS/cm	0.36 mg/L	16.70 NTU	-88.4 mV	6.90 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW-27D	No Sample.

Low-Flow Test Report:

Test Date / Time: 2/16/2021 10:58:20 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: MW-27D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 52.97 ft Total Depth: 63.25 ft Initial Depth to Water: 5.3 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 57.97 ft Estimated Total Volume Pumped: 0.7 liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 1.6 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Snowy, 20 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/16/2021 10:58 AM	00:00	8.03 pH	10.36 °C	475.59 µS/cm	8.38 mg/L	10.54 NTU	62.8 mV	5.30 ft	100.00 ml/min
2/16/2021 11:01 AM	02:47	7.99 pH	8.47 °C	468.73 µS/cm	4.92 mg/L	29.60 NTU	16.0 mV	6.20 ft	100.00 ml/min
2/16/2021 11:06 AM	07:47	7.96 pH	9.61 °C	454.12 µS/cm	1.77 mg/L	30.10 NTU	-25.9 mV	6.90 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW-27D, MW-27D Filtered.	One filtered duplicate due to turbidity.

Low-Flow Test Report:

Test Date / Time: 2/10/2021 2:21:19 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: MW-28D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 48.14 ft Total Depth: 58.2 ft Initial Depth to Water: 4.8 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 53.14 ft Estimated Total Volume Pumped: 37 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.11 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Sunny, 50 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/10/2021 2:21 PM	00:00	7.64 pH	22.40 °C	552.11 µS/cm	4.23 mg/L	11.39 NTU	-9.6 mV	4.80 ft	200.00 ml/min
2/10/2021 2:26 PM	05:00	7.54 pH	18.23 °C	549.74 µS/cm	0.29 mg/L	89.00 NTU	-106.8 mV	4.85 ft	200.00 ml/min
2/10/2021 2:27 PM	05:50	7.54 pH	18.26 °C	557.13 µS/cm	0.24 mg/L	90.00 NTU	-104.9 mV	4.85 ft	200.00 ml/min
2/10/2021 2:32 PM	10:50	7.54 pH	18.26 °C	545.52 µS/cm	0.16 mg/L	121.00 NTU	-109.5 mV	4.85 ft	200.00 ml/min
2/10/2021 2:37 PM	15:50	7.55 pH	18.30 °C	541.46 µS/cm	0.14 mg/L	127.00 NTU	-116.2 mV	4.85 ft	200.00 ml/min
2/10/2021 2:42 PM	20:50	7.55 pH	18.35 °C	543.56 µS/cm	0.14 mg/L	116.00 NTU	-116.7 mV	4.90 ft	200.00 ml/min
2/10/2021 2:43 PM	22:25	7.55 pH	18.35 °C	544.44 µS/cm	0.14 mg/L	81.00 NTU	-119.6 mV	4.90 ft	200.00 ml/min
2/10/2021 2:48 PM	27:25	7.56 pH	18.44 °C	541.64 µS/cm	0.14 mg/L	68.00 NTU	-197.6 mV	4.90 ft	200.00 ml/min
2/10/2021 2:53 PM	32:25	7.56 pH	18.52 °C	543.38 µS/cm	0.15 mg/L	92.40 NTU	-202.4 mV	4.90 ft	200.00 ml/min
2/10/2021 2:58 PM	37:25	7.56 pH	18.47 °C	545.20 µS/cm	0.15 mg/L	85.30 NTU	-128.2 mV	4.90 ft	200.00 ml/min
2/10/2021 3:03 PM	42:25	7.56 pH	18.57 °C	547.56 µS/cm	0.15 mg/L	83.10 NTU	-127.0 mV	4.90 ft	200.00 ml/min
2/10/2021 3:08 PM	47:25	7.56 pH	18.09 °C	552.25 µS/cm	0.16 mg/L	67.70 NTU	-129.6 mV	4.90 ft	200.00 ml/min
2/10/2021 3:13 PM	52:11	7.56 pH	18.24 °C	556.35 µS/cm	0.17 mg/L	63.90 NTU	-130.5 mV	4.90 ft	200.00 ml/min

2/10/2021 3:18 PM	57:11	7.57 pH	18.35 °C	557.32 µS/cm	0.16 mg/L	54.50 NTU	-218.9 mV	4.90 ft	200.00 ml/min
2/10/2021 3:23 PM	01:02:11	7.57 pH	18.48 °C	557.37 µS/cm	0.17 mg/L	50.50 NTU	-130.0 mV	4.90 ft	200.00 ml/min
2/10/2021 3:24 PM	01:03:00	7.56 pH	18.52 °C	561.37 µS/cm	0.17 mg/L	50.00 NTU	-123.9 mV	4.90 ft	200.00 ml/min
2/10/2021 3:25 PM	01:04:34	7.57 pH	18.52 °C	561.93 µS/cm	0.17 mg/L	50.00 NTU	-126.6 mV	4.90 ft	200.00 ml/min
2/10/2021 3:30 PM	01:09:34	7.57 pH	18.59 °C	561.01 µS/cm	0.16 mg/L	45.00 NTU	-223.6 mV	4.90 ft	200.00 ml/min
2/10/2021 3:35 PM	01:14:34	7.57 pH	18.62 °C	563.57 µS/cm	0.17 mg/L	42.30 NTU	-224.3 mV	4.90 ft	200.00 ml/min
2/10/2021 3:40 PM	01:19:34	7.56 pH	18.70 °C	565.12 µS/cm	0.17 mg/L	37.50 NTU	-130.8 mV	4.90 ft	200.00 ml/min
2/10/2021 3:42 PM	01:21:35	7.57 pH	18.69 °C	568.99 µS/cm	0.17 mg/L	37.50 NTU	-134.5 mV	4.90 ft	200.00 ml/min
2/10/2021 3:44 PM	01:23:02	7.57 pH	18.58 °C	569.30 µS/cm	0.17 mg/L	37.50 NTU	-134.8 mV	4.90 ft	200.00 ml/min
2/10/2021 3:49 PM	01:28:02	7.56 pH	18.69 °C	569.27 µS/cm	0.17 mg/L	34.70 NTU	-134.4 mV	4.90 ft	200.00 ml/min
2/10/2021 3:54 PM	01:33:02	7.56 pH	18.72 °C	575.29 µS/cm	0.17 mg/L	32.70 NTU	-132.6 mV	4.90 ft	200.00 ml/min
2/10/2021 3:59 PM	01:38:02	7.56 pH	18.75 °C	570.68 µS/cm	0.17 mg/L	27.70 NTU	-230.1 mV	4.90 ft	200.00 ml/min
2/10/2021 4:04 PM	01:43:02	7.56 pH	18.61 °C	572.61 µS/cm	0.17 mg/L	29.40 NTU	-127.7 mV	4.90 ft	200.00 ml/min
2/10/2021 4:05 PM	01:43:47	7.56 pH	18.61 °C	576.55 µS/cm	0.18 mg/L	29.40 NTU	-129.4 mV	4.90 ft	200.00 ml/min
2/10/2021 4:10 PM	01:48:47	7.56 pH	18.42 °C	575.60 µS/cm	0.16 mg/L	25.70 NTU	-233.3 mV	4.90 ft	200.00 ml/min
2/10/2021 4:15 PM	01:53:47	7.55 pH	18.75 °C	575.56 µS/cm	0.17 mg/L	22.60 NTU	-137.9 mV	4.91 ft	200.00 ml/min
2/10/2021 4:16 PM	01:55:17	7.55 pH	18.61 °C	582.77 µS/cm	0.17 mg/L	22.60 NTU	-138.1 mV	4.91 ft	200.00 ml/min
2/10/2021 4:21 PM	02:00:17	7.55 pH	18.75 °C	575.35 µS/cm	0.16 mg/L	21.90 NTU	-140.5 mV	4.91 ft	200.00 ml/min
2/10/2021 4:26 PM	02:05:17	7.55 pH	18.67 °C	577.84 µS/cm	0.17 mg/L	20.90 NTU	-238.6 mV	4.91 ft	200.00 ml/min
2/10/2021 4:31 PM	02:10:17	7.55 pH	18.73 °C	582.20 µS/cm	0.17 mg/L	20.40 NTU	-239.9 mV	4.91 ft	200.00 ml/min
2/10/2021 4:36 PM	02:15:17	7.55 pH	18.70 °C	578.64 µS/cm	0.17 mg/L	18.50 NTU	-242.1 mV	4.91 ft	200.00 ml/min
2/10/2021 4:41 PM	02:20:17	7.55 pH	18.61 °C	582.13 µS/cm	0.17 mg/L	17.20 NTU	-147.4 mV	4.91 ft	200.00 ml/min
2/10/2021 4:46 PM	02:25:17	7.55 pH	18.57 °C	584.40 µS/cm	0.16 mg/L	17.60 NTU	-147.2 mV	4.91 ft	200.00 ml/min
2/10/2021 4:51 PM	02:30:17	7.54 pH	18.61 °C	585.22 µS/cm	0.16 mg/L	16.50 NTU	-144.3 mV	4.91 ft	200.00 ml/min
2/10/2021 4:54 PM	02:33:38	7.55 pH	18.45 °C	588.91 µS/cm	0.16 mg/L	15.30 NTU	-152.3 mV	4.91 ft	200.00 ml/min
2/10/2021 4:59 PM	02:38:38	7.54 pH	18.56 °C	587.59 µS/cm	0.16 mg/L	15.80 NTU	-146.2 mV	4.91 ft	200.00 ml/min
2/10/2021 5:00 PM	02:39:25	7.54 pH	18.39 °C	592.27 µS/cm	0.16 mg/L	15.80 NTU	-146.5 mV	4.91 ft	200.00 ml/min
2/10/2021 5:02 PM	02:41:15	7.55 pH	18.47 °C	589.22 µS/cm	0.16 mg/L	15.80 NTU	-147.2 mV	4.91 ft	200.00 ml/min
2/10/2021 5:05 PM	02:44:00	7.54 pH	18.48 °C	588.68 µS/cm	0.17 mg/L	15.80 NTU	-148.7 mV	4.91 ft	200.00 ml/min

2/10/2021 5:06 PM	02:45:20	7.54 pH	18.53 °C	588.60 µS/cm	0.17 mg/L	15.80 NTU	-144.2 mV	4.91 ft	200.00 ml/min
2/10/2021 5:09 PM	02:47:42	7.54 pH	18.44 °C	590.40 µS/cm	0.17 mg/L	14.20 NTU	-146.1 mV	4.91 ft	200.00 ml/min
2/10/2021 5:10 PM	02:48:48	7.54 pH	18.40 °C	591.19 µS/cm	0.16 mg/L	14.20 NTU	-147.0 mV	4.91 ft	200.00 ml/min
2/10/2021 5:11 PM	02:50:07	7.55 pH	18.39 °C	591.09 µS/cm	0.17 mg/L	14.20 NTU	-149.0 mV	4.91 ft	200.00 ml/min
2/10/2021 5:16 PM	02:55:07	7.54 pH	18.26 °C	588.42 µS/cm	0.17 mg/L	13.90 NTU	-153.0 mV	4.91 ft	200.00 ml/min
2/10/2021 5:19 PM	02:57:42	7.56 pH	18.30 °C	589.86 µS/cm	0.17 mg/L	13.60 NTU	-157.6 mV	4.91 ft	200.00 ml/min
2/10/2021 5:20 PM	02:59:18	7.54 pH	18.35 °C	589.51 µS/cm	0.16 mg/L	13.60 NTU	-147.8 mV	4.91 ft	200.00 ml/min
2/10/2021 5:26 PM	03:04:48	7.54 pH	18.27 °C	591.48 µS/cm	0.17 mg/L	13.00 NTU	-153.2 mV	4.91 ft	200.00 ml/min
2/10/2021 5:26 PM	03:05:37	7.54 pH	18.26 °C	594.10 µS/cm	0.16 mg/L		-150.2 mV	4.91 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-28D ,MW-28D Filtered	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/15/2021 1:49:57 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: MW-29 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 18.21 ft Total Depth: 28.21 ft Initial Depth to Water: 4.4 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 23.21 ft Estimated Total Volume Pumped: 5 liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Four bottles: Two 1-L plastic bottles with HNO₃ for radium (EPA 9315/9320); one 120-mL plastic bottle for F (EPA 300.0); and one 250-mL plastic bottle with HNO₃ for App. IV metals (EPA 6010D/6020B/7470A).

Weather Conditions:

Cloudy, 40 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/15/2021 1:49 PM	00:00	7.12 pH	12.25 °C	828.01 µS/cm	3.65 mg/L	6.63 NTU	-20.3 mV	4.40 ft	100.00 ml/min
2/15/2021 1:54 PM	05:00	7.14 pH	12.44 °C	849.29 µS/cm	1.69 mg/L	53.80 NTU	-0.3 mV	4.40 ft	100.00 ml/min
2/15/2021 1:59 PM	10:00	7.11 pH	12.92 °C	839.87 µS/cm	1.06 mg/L	31.20 NTU	6.3 mV	4.40 ft	100.00 ml/min
2/15/2021 2:04 PM	15:00	7.10 pH	13.13 °C	836.84 µS/cm	0.97 mg/L	17.50 NTU	6.4 mV	4.40 ft	100.00 ml/min
2/15/2021 2:09 PM	20:00	7.09 pH	13.13 °C	834.32 µS/cm	0.77 mg/L	13.90 NTU	10.2 mV	4.40 ft	100.00 ml/min
2/15/2021 2:14 PM	25:00	7.08 pH	13.19 °C	833.16 µS/cm	0.53 mg/L	11.96 NTU	10.6 mV	4.40 ft	100.00 ml/min
2/15/2021 2:19 PM	30:00	7.08 pH	13.22 °C	833.35 µS/cm	0.43 mg/L	9.49 NTU	10.2 mV	4.40 ft	100.00 ml/min
2/15/2021 2:24 PM	35:00	7.08 pH	13.22 °C	834.44 µS/cm	0.38 mg/L	5.88 NTU	10.3 mV	4.40 ft	100.00 ml/min
2/15/2021 2:29 PM	40:00	7.09 pH	13.22 °C	836.22 µS/cm	0.35 mg/L	4.90 NTU	10.2 mV	4.40 ft	100.00 ml/min
2/15/2021 2:34 PM	45:00	7.09 pH	12.70 °C	830.04 µS/cm	0.34 mg/L	4.09 NTU	11.0 mV	4.40 ft	100.00 ml/min
2/15/2021 2:39 PM	50:00	7.09 pH	12.46 °C	834.05 µS/cm	0.35 mg/L	3.39 NTU	7.1 mV	4.40 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW-29	Grab Sample.

Created using VuSitu from In-Situ, Inc.

March 2021

Low-Flow Test Report:

Test Date / Time: 3/10/2021 3:42:04 PM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: HGWA-1 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 22.5 ft Total Depth: 32.5 ft Initial Depth to Water: 10.84 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 28 ft Estimated Total Volume Pumped: 8 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 1.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Sunny

Low wind

50 degrees F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/10/2021 3:42 PM	00:00	6.98 pH	17.27 °C	604.28 µS/cm	0.27 mg/L	2.98 NTU	14.4 mV	11.82 ft	200.00 ml/min
3/10/2021 3:47 PM	05:00	6.97 pH	17.21 °C	600.58 µS/cm	0.24 mg/L	2.44 NTU	0.8 mV	11.84 ft	200.00 ml/min
3/10/2021 3:52 PM	10:00	6.96 pH	17.19 °C	600.84 µS/cm	0.24 mg/L	1.52 NTU	-3.3 mV	11.86 ft	200.00 ml/min
3/10/2021 3:57 PM	15:00	6.96 pH	17.23 °C	599.63 µS/cm	0.22 mg/L	1.49 NTU	-7.0 mV	11.86 ft	200.00 ml/min
3/10/2021 4:02 PM	20:00	6.95 pH	17.31 °C	598.41 µS/cm	0.21 mg/L	1.40 NTU	3.4 mV	11.86 ft	200.00 ml/min
3/10/2021 4:07 PM	25:00	6.95 pH	17.29 °C	598.87 µS/cm	0.20 mg/L	1.35 NTU	-9.3 mV	11.86 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-1	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/11/2021 9:07:23 AM

Project: GP-Plant Hammond

Operator Name: Vashish Taukooor

Location Name: HGWA-2 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 17.95 ft Total Depth: 27.95 ft Initial Depth to Water: 7.11 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 23 ft Estimated Total Volume Pumped: 14.5 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.10 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Sunny

55 deg F

No wind

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/11/2021 9:07 AM	00:00	5.93 pH	16.04 °C	330.25 µS/cm	1.23 mg/L	11.40 NTU	83.5 mV	7.21 ft	200.00 ml/min
3/11/2021 9:12 AM	05:00	5.89 pH	16.20 °C	317.44 µS/cm	1.09 mg/L	11.00 NTU	108.3 mV	7.25 ft	200.00 ml/min
3/11/2021 9:17 AM	10:00	5.87 pH	16.23 °C	310.57 µS/cm	1.08 mg/L	7.97 NTU	87.1 mV	7.25 ft	200.00 ml/min
3/11/2021 9:22 AM	15:00	5.85 pH	16.32 °C	306.71 µS/cm	1.09 mg/L	6.85 NTU	89.0 mV	7.23 ft	200.00 ml/min
3/11/2021 9:27 AM	20:00	5.85 pH	16.32 °C	305.68 µS/cm	1.08 mg/L	6.18 NTU	115.2 mV	7.25 ft	200.00 ml/min
3/11/2021 9:32 AM	25:00	5.84 pH	16.33 °C	301.10 µS/cm	1.05 mg/L	5.43 NTU	89.7 mV	7.21 ft	200.00 ml/min
3/11/2021 9:37 AM	30:00	5.80 pH	16.35 °C	288.98 µS/cm	1.03 mg/L	5.09 NTU	91.2 mV	7.25 ft	200.00 ml/min
3/11/2021 9:42 AM	35:00	5.81 pH	16.43 °C	291.38 µS/cm	0.97 mg/L	4.69 NTU	90.1 mV	7.25 ft	200.00 ml/min
3/11/2021 9:47 AM	40:00	5.81 pH	16.47 °C	294.20 µS/cm	0.93 mg/L	4.21 NTU	117.5 mV	7.21 ft	200.00 ml/min
3/11/2021 9:52 AM	45:00	5.79 pH	16.48 °C	288.27 µS/cm	0.98 mg/L	4.15 NTU	120.2 mV	7.21 ft	200.00 ml/min
3/11/2021 9:57 AM	50:00	5.80 pH	16.47 °C	288.45 µS/cm	0.98 mg/L	4.00 NTU	88.6 mV	7.21 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-2	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/11/2021 10:57:05 AM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: HGWA-3 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 34.87 ft Total Depth: 44.87 ft Initial Depth to Water: 6.71 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 40 ft Estimated Total Volume Pumped: 8 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Sunny

Low wind

50 deg F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/11/2021 10:57 AM	00:00	7.26 pH	17.10 °C	470.32 µS/cm	0.67 mg/L	4.21 NTU	-50.0 mV	6.72 ft	200.00 ml/min
3/11/2021 11:02 AM	05:00	7.28 pH	17.37 °C	467.49 µS/cm	0.62 mg/L	1.29 NTU	-54.2 mV	6.72 ft	200.00 ml/min
3/11/2021 11:07 AM	10:06	7.30 pH	17.25 °C	467.75 µS/cm	0.59 mg/L	0.67 NTU	-57.4 mV	6.72 ft	200.00 ml/min
3/11/2021 11:12 AM	15:06	7.31 pH	17.23 °C	466.88 µS/cm	0.57 mg/L	0.55 NTU	-59.9 mV	6.72 ft	200.00 ml/min
3/11/2021 11:17 AM	20:06	7.32 pH	17.23 °C	466.87 µS/cm	0.58 mg/L	0.50 NTU	-75.3 mV	6.72 ft	200.00 ml/min
3/11/2021 11:22 AM	24:57	7.33 pH	17.42 °C	467.54 µS/cm	0.56 mg/L	0.45 NTU	-64.5 mV	6.72 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-3	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/11/2021 9:02:31 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWA-43D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 51.25 ft Total Depth: 61.85 ft Initial Depth to Water: 11.19 ft	Pump Type: Bladder Tubing Type: polyethylene Pump Intake From TOC: 56.25 ft Estimated Total Volume Pumped: 8 Liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 1.73 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Cloudy, 55 degrees

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/11/2021 9:02 AM	00:00	7.44 pH	15.53 °C	518.31 µS/cm	1.99 mg/L	15.70 NTU	-59.3 mV	11.19 ft	200.00 ml/min
3/11/2021 9:07 AM	05:00	7.43 pH	15.84 °C	519.02 µS/cm	0.82 mg/L	16.40 NTU	-73.8 mV	12.15 ft	200.00 ml/min
3/11/2021 9:12 AM	10:00	7.44 pH	16.13 °C	514.46 µS/cm	0.56 mg/L	18.90 NTU	-78.6 mV	12.75 ft	200.00 ml/min
3/11/2021 9:17 AM	15:00	7.46 pH	16.20 °C	515.21 µS/cm	0.41 mg/L	12.80 NTU	-83.0 mV	13.20 ft	200.00 ml/min
3/11/2021 9:22 AM	20:00	7.47 pH	16.29 °C	511.87 µS/cm	0.40 mg/L	13.40 NTU	-103.2 mV	13.45 ft	200.00 ml/min
3/11/2021 9:27 AM	25:00	7.46 pH	16.42 °C	502.64 µS/cm	0.34 mg/L	8.45 NTU	-104.5 mV	13.65 ft	200.00 ml/min
3/11/2021 9:32 AM	30:00	7.45 pH	16.47 °C	496.83 µS/cm	0.13 mg/L	6.57 NTU	-87.9 mV	13.80 ft	200.00 ml/min
3/11/2021 9:37 AM	35:00	7.45 pH	16.45 °C	494.24 µS/cm	0.11 mg/L	7.73 NTU	-88.1 mV	13.80 ft	200.00 ml/min
3/11/2021 9:42 AM	40:00	7.46 pH	16.22 °C	485.88 µS/cm	0.10 mg/L	4.38 NTU	-85.0 mV	13.13 ft	200.00 ml/min
3/11/2021 9:47 AM	45:00	7.46 pH	16.21 °C	479.85 µS/cm	0.10 mg/L	2.45 NTU	-81.0 mV	13.07 ft	200.00 ml/min
3/11/2021 9:52 AM	50:00	7.46 pH	16.22 °C	475.91 µS/cm	0.10 mg/L	4.58 NTU	-77.8 mV	12.92 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-43D	Grab Sample.

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 3/10/2021 1:57:00 PM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: HGWA-44D Well Diameter: 2 cm Casing Type: PVC Screen Length: 10 ft Top of Screen: 103.28 ft Total Depth: 113.28 ft Initial Depth to Water: 11.1 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 108 ft Estimated Total Volume Pumped: 9.5 Liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 3.25 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Pre-purged 6.5 L @ 200 ml/min, then dropped to 100 ml/min

Weather Conditions:

Sunny

Low wind

55 degree F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/10/2021 1:57 PM	00:00	7.85 pH	18.25 °C	495.62 µS/cm	0.23 mg/L	2.89 NTU	-107.3 mV	14.48 ft	100.00 ml/min
3/10/2021 2:02 PM	05:00	7.89 pH	18.22 °C	498.99 µS/cm	0.23 mg/L	2.45 NTU	-112.3 mV	14.45 ft	100.00 ml/min
3/10/2021 2:07 PM	10:00	7.91 pH	18.44 °C	496.45 µS/cm	0.23 mg/L	2.67 NTU	-116.4 mV	14.45 ft	100.00 ml/min
3/10/2021 2:12 PM	15:00	7.92 pH	18.58 °C	501.57 µS/cm	0.23 mg/L	2.84 NTU	-120.9 mV	14.45 ft	100.00 ml/min
3/10/2021 2:17 PM	20:00	7.92 pH	18.61 °C	504.22 µS/cm	0.23 mg/L	2.56 NTU	-124.6 mV	14.45 ft	100.00 ml/min
3/10/2021 2:22 PM	25:00	7.92 pH	18.79 °C	502.44 µS/cm	0.22 mg/L	3.54 NTU	-147.9 mV	14.35 ft	100.00 ml/min
3/10/2021 2:27 PM	30:00	7.92 pH	18.88 °C	499.04 µS/cm	0.21 mg/L	2.98 NTU	-129.8 mV	14.35 ft	100.00 ml/min

Samples

Sample ID:	Description:
HGWA-44D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/15/2021 1:46:48 PM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: HGWC-7 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 18.17 ft Total Depth: 28.17 ft Initial Depth to Water: 5.39 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 23 ft Estimated Total Volume Pumped: 30 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
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium

Pre purged 30 min @ 100 ml/min.

Turbidity above 10 NTU after 3 hours. Grab HGWC-7 and HGWC-7 FILTERED.

Weather Conditions:

Cloudy

70 deg F

Slightly windy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/15/2021 1:46 PM	00:00	7.17 pH	18.16 °C	672.05 µS/cm	0.25 mg/L	1,336.0 NTU	26.0 mV	5.42 ft	200.00 ml/min
3/15/2021 2:01 PM	15:00	7.17 pH	18.21 °C	665.07 µS/cm	0.25 mg/L	202.00 NTU	25.2 mV	5.45 ft	200.00 ml/min
3/15/2021 2:16 PM	30:00	7.19 pH	18.28 °C	663.25 µS/cm	0.27 mg/L	120.00 NTU	23.9 mV	5.45 ft	200.00 ml/min
3/15/2021 2:19 PM	32:40	7.18 pH	18.26 °C	657.87 µS/cm	0.25 mg/L	113.00 NTU	25.4 mV	5.45 ft	200.00 ml/min
3/15/2021 2:34 PM	47:40	7.18 pH	18.35 °C	663.00 µS/cm	0.28 mg/L	109.00 NTU	23.5 mV	5.46 ft	200.00 ml/min
3/15/2021 2:38 PM	51:47	7.18 pH	18.37 °C	666.36 µS/cm	0.29 mg/L	107.00 NTU	24.7 mV	5.46 ft	200.00 ml/min
3/15/2021 2:53 PM	01:06:47	7.19 pH	18.39 °C	662.59 µS/cm	0.21 mg/L	71.30 NTU	22.0 mV	5.46 ft	200.00 ml/min
3/15/2021 3:08 PM	01:21:47	7.18 pH	18.38 °C	662.02 µS/cm	0.31 mg/L	68.10 NTU	22.8 mV	5.46 ft	200.00 ml/min
3/15/2021 3:23 PM	01:36:47	7.19 pH	18.39 °C	662.62 µS/cm	0.28 mg/L	54.30 NTU	22.6 mV	5.46 ft	200.00 ml/min

3/15/2021 3:38 PM	01:51:47	7.19 pH	18.40 °C	662.69 µS/cm	0.27 mg/L	43.50 NTU	22.3 mV	5.46 ft	200.00 ml/min
3/15/2021 3:44 PM	01:58:05	7.18 pH	18.39 °C	660.78 µS/cm	0.21 mg/L	42.80 NTU	16.3 mV	5.46 ft	200.00 ml/min
3/15/2021 3:54 PM	02:08:05	7.19 pH	18.46 °C	661.99 µS/cm	0.27 mg/L	39.10 NTU	22.8 mV	5.46 ft	200.00 ml/min
3/15/2021 4:04 PM	02:18:05	7.19 pH	18.44 °C	666.28 µS/cm	0.33 mg/L	38.9 NTU	23.4 mV	5.46 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-7	Grab Sample.
HGWC-7 FILTERED	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 2/16/2021 1:05:57 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWC-8 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 16.65 ft Total Depth: 25.08 ft Initial Depth to Water: 5.23 ft	Pump Type: Bladder Tubing Type: Poly Pump Intake From TOC: 21.65 m Estimated Total Volume Pumped: 23.4 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Cloudy, 20 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.03	
2/16/2021 1:05 PM	00:00	7.27 pH	11.04 °C	870.86 µS/cm	6.57 mg/L	9.69 NTU	27.1 mV	5.23 ft	200.00 ml/min
2/16/2021 1:10 PM	05:00	7.19 pH	12.62 °C	959.79 µS/cm	0.42 mg/L	27.60 NTU	10.3 mV	5.23 ft	200.00 ml/min
2/16/2021 1:15 PM	10:00	7.17 pH	13.13 °C	950.59 µS/cm	0.32 mg/L	28.40 NTU	16.8 mV	5.24 ft	200.00 ml/min
2/16/2021 1:20 PM	15:00	7.16 pH	13.09 °C	960.29 µS/cm	0.24 mg/L	28.30 NTU	15.1 mV	5.24 ft	200.00 ml/min
2/16/2021 1:25 PM	20:00	7.16 pH	13.18 °C	964.66 µS/cm	0.20 mg/L	29.90 NTU	13.8 mV	5.25 ft	200.00 ml/min
2/16/2021 1:30 PM	25:00	7.16 pH	13.54 °C	972.88 µS/cm	0.18 mg/L	27.30 NTU	5.7 mV	5.25 ft	200.00 ml/min
2/16/2021 1:35 PM	30:00	7.16 pH	13.68 °C	969.69 µS/cm	0.16 mg/L	21.70 NTU	11.1 mV	5.25 ft	200.00 ml/min
2/16/2021 1:40 PM	35:00	7.16 pH	13.45 °C	965.75 µS/cm	0.16 mg/L	20.00 NTU	11.1 mV	5.25 ft	200.00 ml/min
2/16/2021 1:45 PM	40:00	7.16 pH	13.57 °C	967.46 µS/cm	0.16 mg/L	15.80 NTU	4.7 mV	5.25 ft	200.00 ml/min
2/16/2021 1:50 PM	45:00	7.15 pH	13.61 °C	967.84 µS/cm	0.15 mg/L	13.30 NTU	4.8 mV	5.25 ft	200.00 ml/min
2/16/2021 1:55 PM	50:00	7.16 pH	13.77 °C	968.87 µS/cm	0.15 mg/L	11.60 NTU	8.9 mV	5.25 ft	200.00 ml/min
2/16/2021 2:00 PM	55:00	7.16 pH	13.31 °C	968.90 µS/cm	0.14 mg/L	10.91 NTU	4.2 mV	5.25 ft	200.00 ml/min
2/16/2021 2:05 PM	01:00:00	7.16 pH	13.13 °C	965.07 µS/cm	0.14 mg/L	9.59 NTU	8.8 mV	5.25 ft	200.00 ml/min

2/16/2021 2:10 PM	01:05:00	7.16 pH	13.04 °C	961.96 µS/cm	0.14 mg/L	7.95 NTU	8.2 mV	5.25 ft	200.00 ml/min
2/16/2021 2:15 PM	01:10:00	7.16 pH	13.36 °C	971.78 µS/cm	0.15 mg/L	7.59 NTU	7.9 mV	5.25 ft	200.00 ml/min
2/16/2021 2:20 PM	01:15:00	7.15 pH	13.50 °C	969.17 µS/cm	0.14 mg/L	6.67 NTU	8.1 mV	5.25 ft	200.00 ml/min
2/16/2021 2:25 PM	01:20:00	7.16 pH	13.31 °C	973.32 µS/cm	0.14 mg/L	7.07 NTU	3.7 mV	5.25 ft	200.00 ml/min
2/16/2021 2:30 PM	01:25:00	7.16 pH	13.81 °C	970.17 µS/cm	0.14 mg/L	6.87 NTU	3.3 mV	5.25 ft	200.00 ml/min
2/16/2021 2:35 PM	01:30:00	7.15 pH	14.22 °C	969.59 µS/cm	0.15 mg/L	6.07 NTU	6.8 mV	5.25 ft	200.00 ml/min
2/16/2021 2:40 PM	01:35:00	7.16 pH	14.29 °C	968.28 µS/cm	0.12 mg/L	5.05 NTU	7.8 mV	5.25 ft	200.00 ml/min
2/16/2021 2:43 PM	01:38:00	7.16 pH	14.13 °C	962.92 µS/cm	0.14 mg/L	5.05 NTU	4.5 mV	5.25 ft	200.00 ml/min
2/16/2021 2:48 PM	01:43:00	7.15 pH	14.51 °C	970.80 µS/cm	0.14 mg/L	4.96 NTU	3.1 mV	5.25 ft	200.00 ml/min
2/16/2021 2:53 PM	01:48:00	7.16 pH	14.57 °C	964.80 µS/cm	0.14 mg/L	4.70 NTU	4.1 mV	5.25 ft	200.00 ml/min
2/16/2021 2:56 PM	01:50:59	7.15 pH	14.67 °C	961.30 µS/cm	0.13 mg/L	4.70 NTU	6.9 mV	5.25 ft	200.00 ml/min
2/16/2021 3:01 PM	01:55:59	7.16 pH	14.17 °C	961.04 µS/cm	0.13 mg/L	4.48 NTU	3.2 mV	5.25 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-8	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/16/2021 2:23:06 PM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: HGWC-9 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 36.98 ft Total Depth: 46.98 ft Initial Depth to Water: 14.3 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 42 ft Estimated Total Volume Pumped: 7 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.00 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Rainy

50 deg F

Windy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/16/2021 2:23 PM	00:00	7.08 pH	17.41 °C	1,087.9 µS/cm	0.28 mg/L	1.97 NTU	40.7 mV	14.30 ft	200.00 ml/min
3/16/2021 2:28 PM	05:00	7.10 pH	17.40 °C	1,088.4 µS/cm	0.28 mg/L	5.34 NTU	35.7 mV	14.30 ft	200.00 ml/min
3/16/2021 2:33 PM	10:00	7.10 pH	17.41 °C	1,085.4 µS/cm	0.27 mg/L	4.56 NTU	36.3 mV	14.30 ft	200.00 ml/min
3/16/2021 2:38 PM	15:00	7.10 pH	17.45 °C	1,088.0 µS/cm	0.25 mg/L	4.88 NTU	35.9 mV	14.30 ft	200.00 ml/min
3/16/2021 2:43 PM	20:00	7.10 pH	17.46 °C	1,086.4 µS/cm	0.26 mg/L	4.59 NTU	36.2 mV	14.30 ft	200.00 ml/min
3/16/2021 2:48 PM	25:00	7.10 pH	17.49 °C	1,088.3 µS/cm	0.23 mg/L		35.5 mV	14.30 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-9	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/12/2021 9:36:03 AM

Project: GP-Plant Hammond

Operator Name: Chad Russo

Location Name: HGWC-10 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 13 ft Total Depth: 23 ft Initial Depth to Water: 14.28 ft	Pump Type: Peri Tubing Type: Polyethylene Pump Intake From TOC: 18 ft Estimated Total Volume Pumped: 6 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/12/2021 9:36 AM	00:00	6.66 pH	17.81 °C	764.81 µS/cm	0.64 mg/L		81.4 mV	14.28 ft	200.00 ml/min
3/12/2021 9:41 AM	05:00	6.70 pH	17.68 °C	773.59 µS/cm	0.44 mg/L	6.40 NTU	108.8 mV	14.31 ft	200.00 ml/min
3/12/2021 9:46 AM	10:00	6.72 pH	17.81 °C	781.13 µS/cm	0.33 mg/L	2.12 NTU	90.1 mV	14.31 ft	200.00 ml/min
3/12/2021 9:51 AM	15:00	6.74 pH	17.95 °C	783.78 µS/cm	0.31 mg/L	2.01 NTU	89.5 mV	14.31 ft	200.00 ml/min
3/12/2021 9:56 AM	20:00	6.74 pH	17.81 °C	787.93 µS/cm	0.29 mg/L	0.68 NTU	150.4 mV	14.31 ft	200.00 ml/min
3/12/2021 10:01 AM	25:00	6.75 pH	17.76 °C	789.78 µS/cm	0.27 mg/L	0.41 NTU	105.1 mV	14.31 ft	200.00 ml/min
3/12/2021 10:06 AM	30:00	6.76 pH	17.81 °C	790.48 µS/cm	0.26 mg/L	0.78 NTU	165.5 mV	14.31 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-10	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/16/2021 9:20:50 AM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: HGWC-11 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 15.78 ft Total Depth: 25.78 ft Initial Depth to Water: 16.38 ft	Pump Type: Peri Tubing Type: Polyethylene Pump Intake From TOC: 20 ft Estimated Total Volume Pumped: 11000 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.04 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.
Prepurged for 30 min @ 200 ml/min

Weather Conditions:

Rain

Windy

50 deg F

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/16/2021 9:20 AM	00:00	5.83 pH	14.81 °C	810.53 µS/cm	3.50 mg/L	0.59 NTU	110.5 mV	16.42 ft	200.00 ml/min
3/16/2021 9:25 AM	05:00	5.87 pH	14.83 °C	808.73 µS/cm	3.30 mg/L	0.66 NTU	98.3 mV	16.42 ft	200.00 ml/min
3/16/2021 9:30 AM	10:00	5.89 pH	14.81 °C	804.80 µS/cm	3.09 mg/L	0.83 NTU	129.3 mV	16.42 ft	200.00 ml/min
3/16/2021 9:35 AM	15:00	5.91 pH	14.81 °C	801.95 µS/cm	3.04 mg/L	0.23 NTU	94.3 mV	16.42 ft	200.00 ml/min
3/16/2021 9:40 AM	20:00	5.93 pH	14.86 °C	799.33 µS/cm	2.97 mg/L	0.17 NTU	92.1 mV	16.42 ft	200.00 ml/min
3/16/2021 9:45 AM	25:00	5.95 pH	14.60 °C	799.46 µS/cm	2.83 mg/L	0.11 NTU	90.9 mV	16.42 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-11	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/16/2021 10:42:28 AM

Project: GP-Plant Hammond

Operator Name: Vashish Taukooor

Location Name: HGWC-12 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 25.68 ft Total Depth: 35.68 ft Initial Depth to Water: 16.4 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 30 ft Estimated Total Volume Pumped: 8 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: -0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Pre purged for 10 min @ 200 ml/min

Weather Conditions:

Rainy

50 deg F

Windy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/16/2021 10:42 AM	00:00	7.07 pH	17.45 °C	1,016.7 µS/cm	0.40 mg/L	7.85 NTU	29.6 mV	16.45 ft	200.00 ml/min
3/16/2021 10:47 AM	05:00	7.10 pH	17.32 °C	983.00 µS/cm	0.23 mg/L	14.50 NTU	34.3 mV	16.38 ft	200.00 ml/min
3/16/2021 10:52 AM	10:00	7.12 pH	17.55 °C	983.06 µS/cm	0.18 mg/L	12.20 NTU	35.6 mV	16.38 ft	200.00 ml/min
3/16/2021 10:57 AM	15:00	7.13 pH	17.54 °C	985.73 µS/cm	0.16 mg/L	5.53 NTU	35.4 mV	16.38 ft	200.00 ml/min
3/16/2021 11:02 AM	20:00	7.14 pH	17.68 °C	987.37 µS/cm	0.14 mg/L	7.78 NTU	35.7 mV	16.38 ft	200.00 ml/min
3/16/2021 11:07 AM	25:00	7.14 pH	17.70 °C	985.18 µS/cm	0.13 mg/L	4.53 NTU	35.9 mV	16.38 ft	200.00 ml/min
3/16/2021 11:12 AM	30:00	7.15 pH	17.64 °C	981.32 µS/cm	0.12 mg/L	4.22 NTU	35.5 mV	16.38 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-12	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/17/2021 1:56:31 PM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: HGWC-13 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 35.07 ft Total Depth: 45.07 ft Initial Depth to Water: 21.95 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 40 ft Estimated Total Volume Pumped: 13 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.
Prepurged for 5 min @ 200 ml/min

Weather Conditions:

Cloudy

60 deg F

Windy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/17/2021 1:56 PM	00:00	7.10 pH	19.09 °C	1,016.5 µS/cm	0.73 mg/L	40.30 NTU	-33.4 mV	22.00 ft	200.00 ml/min
3/17/2021 2:01 PM	05:00	7.18 pH	19.24 °C	1,016.0 µS/cm	0.21 mg/L	37.60 NTU	-45.9 mV	22.00 ft	200.00 ml/min
3/17/2021 2:06 PM	10:00	7.23 pH	19.24 °C	1,015.6 µS/cm	0.16 mg/L	32.80 NTU	-48.9 mV	21.95 ft	200.00 ml/min
3/17/2021 2:11 PM	15:00	7.25 pH	19.24 °C	1,015.8 µS/cm	0.15 mg/L	24.60 NTU	-50.8 mV	21.95 ft	200.00 ml/min
3/17/2021 2:16 PM	20:00	7.27 pH	19.19 °C	1,016.3 µS/cm	0.14 mg/L	20.50 NTU	-51.4 mV	21.97 ft	200.00 ml/min
3/17/2021 2:21 PM	25:00	7.28 pH	19.15 °C	1,016.7 µS/cm	0.14 mg/L	14.50 NTU	-90.5 mV	21.97 ft	200.00 ml/min
3/17/2021 2:26 PM	30:00	7.29 pH	19.10 °C	1,016.2 µS/cm	0.14 mg/L	11.80 NTU	-91.6 mV	21.97 ft	200.00 ml/min
3/17/2021 2:31 PM	35:00	7.30 pH	18.97 °C	1,016.2 µS/cm	0.14 mg/L	10.50 NTU	-52.6 mV	21.97 ft	200.00 ml/min
3/17/2021 2:36 PM	40:00	7.31 pH	18.97 °C	1,016.6 µS/cm	0.15 mg/L	9.36 NTU	-52.3 mV	21.97 ft	200.00 ml/min
3/17/2021 2:41 PM	45:00	7.32 pH	18.97 °C	1,017.1 µS/cm	0.15 mg/L	8.45 NTU	-91.0 mV	21.97 ft	200.00 ml/min
3/17/2021 2:46 PM	50:00	7.32 pH	18.88 °C	1,017.8 µS/cm	0.15 mg/L	6.54 NTU	-52.1 mV	21.97 ft	200.00 ml/min
3/17/2021 2:51 PM	55:00	7.33 pH	18.93 °C	1,017.1 µS/cm	0.15 mg/L	5.73 NTU	-90.7 mV	21.97 ft	200.00 ml/min

3/17/2021 2:56 PM	01:00:00	7.33 pH	18.84 °C	1,016.8 µS/cm	0.15 mg/L	4.69 NTU	-51.9 mV	21.97 ft	200.00 ml/min
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Samples

Sample ID:	Description:
HGWC-13	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/16/2021 3:43:50 PM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: MW-5 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 20.82 ft Total Depth: 30.82 ft Initial Depth to Water: 17.25 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 25 ft Estimated Total Volume Pumped: 7 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.30 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Pre purged for 10 min @ 200 ml/min

Weather Conditions:

Rainy

50 deg F

Windy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/16/2021 3:43 PM	00:00	5.78 pH	17.19 °C	497.46 µS/cm	2.58 mg/L	0.10 NTU	99.4 mV	17.55 ft	200.00 ml/min
3/16/2021 3:48 PM	05:00	5.77 pH	17.28 °C	500.53 µS/cm	2.53 mg/L	0.83 NTU	76.6 mV	17.55 ft	200.00 ml/min
3/16/2021 3:53 PM	10:00	5.77 pH	17.27 °C	497.95 µS/cm	2.45 mg/L	0.22 NTU	74.0 mV	17.55 ft	200.00 ml/min
3/16/2021 3:58 PM	15:00	5.76 pH	17.31 °C	498.35 µS/cm	2.44 mg/L	0.31 NTU	72.1 mV	17.55 ft	200.00 ml/min
3/16/2021 4:03 PM	20:00	5.78 pH	17.30 °C	499.39 µS/cm	2.41 mg/L	1.02 NTU	94.4 mV	17.55 ft	200.00 ml/min
3/16/2021 4:08 PM	25:00	5.78 pH	17.37 °C	500.11 µS/cm	2.41 mg/L	0.90 NTU	71.2 mV	17.55 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-5	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/16/2021 3:08:08 PM

Project: GP-Plant Hammond

Operator Name: Chad Russo

Location Name: MW-6 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 23 ft Total Depth: 33 ft Initial Depth to Water: 17.72 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 28 ft Estimated Total Volume Pumped: 6 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728550
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Test Notes:

Five Bottles: Metals, TDS, Inorganics, Radium.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/16/2021 3:08 PM	00:00	6.90 pH	16.97 °C	1,004.8 µS/cm	3.60 mg/L		-51.2 mV	17.72 ft	200.00 ml/min
3/16/2021 3:13 PM	05:00	6.94 pH	18.04 °C	983.63 µS/cm	1.07 mg/L	16.70 NTU	-23.2 mV	17.72 ft	200.00 ml/min
3/16/2021 3:18 PM	10:00	6.95 pH	17.99 °C	980.15 µS/cm	0.94 mg/L	10.90 NTU	5.7 mV	17.72 ft	200.00 ml/min
3/16/2021 3:23 PM	15:00	6.94 pH	18.13 °C	982.61 µS/cm	0.54 mg/L	8.19 NTU	1.8 mV	17.72 ft	200.00 ml/min
3/16/2021 3:28 PM	20:00	6.95 pH	17.95 °C	979.71 µS/cm	0.36 mg/L	5.10 NTU	6.1 mV	17.72 ft	200.00 ml/min
3/16/2021 3:33 PM	25:00	6.95 pH	18.21 °C	979.69 µS/cm	0.29 mg/L	4.66 NTU	8.8 mV	17.72 ft	200.00 ml/min
3/16/2021 3:38 PM	30:00	6.96 pH	18.17 °C	977.83 µS/cm	0.25 mg/L	2.96 NTU	19.0 mV	17.72 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-6	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/15/2021 11:29:54 AM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: MW-7 Well Diameter: 2 in Casing Type; PVC Screen Length: 10 ft Top of Screen: 16.8 ft Total Depth: 26.8 ft Initial Depth to Water: 14.92 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 22 ft Estimated Total Volume Pumped: 8 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: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.
 Prepurged for 10 min @ 200 ml/min

Weather Conditions:

Cloudy
 70 deg F
 Slight wind

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/15/2021 11:29 AM	00:00	6.45 pH	17.72 °C	327.33 µS/cm	2.63 mg/L	2.74 NTU	85.7 mV	14.95 ft	200.00 ml/min
3/15/2021 11:34 AM	05:00	6.50 pH	18.26 °C	352.94 µS/cm	2.34 mg/L	1.26 NTU	68.1 mV	14.95 ft	200.00 ml/min
3/15/2021 11:39 AM	10:00	6.55 pH	18.30 °C	389.90 µS/cm	2.06 mg/L	0.91 NTU	65.2 mV	14.95 ft	200.00 ml/min
3/15/2021 11:44 AM	15:00	6.59 pH	18.26 °C	401.01 µS/cm	1.97 mg/L	0.74 NTU	63.7 mV	14.95 ft	200.00 ml/min
3/15/2021 11:49 AM	20:00	6.62 pH	18.12 °C	417.99 µS/cm	1.86 mg/L	0.57 NTU	61.4 mV	14.95 ft	200.00 ml/min
3/15/2021 11:54 AM	25:00	6.64 pH	18.07 °C	424.35 µS/cm	1.81 mg/L	0.63 NTU	60.9 mV	14.95 ft	200.00 ml/min
3/15/2021 11:59 AM	29:38	6.66 pH	17.99 °C	436.20 µS/cm	1.76 mg/L	0.53 NTU	65.3 mV	14.95 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-7	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/17/2021 9:55:04 AM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: MW-19 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 19.87 ft Total Depth: 29.87 ft Initial Depth to Water: 11.9 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 25 ft Estimated Total Volume Pumped: 7 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.05 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.
Prepurged for 10 min @ 200 ml/min

Weather Conditions:

Cloudy

55 deg F

Windy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/17/2021 9:55 AM	00:00	6.33 pH	17.78 °C	779.29 µS/cm	0.44 mg/L	1.93 NTU	53.5 mV	12.00 ft	200.00 ml/min
3/17/2021 10:00 AM	05:00	6.34 pH	17.84 °C	782.74 µS/cm	0.39 mg/L	0.97 NTU	49.3 mV	12.00 ft	200.00 ml/min
3/17/2021 10:05 AM	10:00	6.34 pH	17.86 °C	783.09 µS/cm	0.34 mg/L	0.76 NTU	56.5 mV	11.95 ft	200.00 ml/min
3/17/2021 10:10 AM	15:00	6.34 pH	17.90 °C	782.81 µS/cm	0.30 mg/L	0.81 NTU	57.1 mV	11.95 ft	200.00 ml/min
3/17/2021 10:15 AM	20:00	6.34 pH	17.90 °C	783.65 µS/cm	0.29 mg/L	0.67 NTU	56.7 mV	11.95 ft	200.00 ml/min
3/17/2021 10:20 AM	25:00	6.34 pH	17.90 °C	784.80 µS/cm	0.27 mg/L	0.55 NTU	48.6 mV	11.95 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-19	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/15/2021 1:31:58 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: MW-20 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 16.36 ft Total Depth: 34.40 ft Initial Depth to Water: 14.32 ft	Pump Type: Bladder Tubing Type: polyethylene Pump Intake From TOC: 21.36 ft Estimated Total Volume Pumped: 9000 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.34 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Cloudy, 65 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/15/2021 1:31 PM	00:00	6.73 pH	18.72 °C	525.07 µS/cm	4.22 mg/L	54.30 NTU	42.7 mV	14.32 ft	200.00 ml/min
3/15/2021 1:36 PM	05:00	6.73 pH	18.03 °C	591.52 µS/cm	1.23 mg/L	27.10 NTU	3.1 mV	14.51 ft	200.00 ml/min
3/15/2021 1:41 PM	10:00	6.82 pH	18.08 °C	635.97 µS/cm	0.91 mg/L	17.90 NTU	-34.2 mV	14.60 ft	200.00 ml/min
3/15/2021 1:46 PM	15:00	6.87 pH	18.07 °C	659.99 µS/cm	0.66 mg/L	13.90 NTU	-32.6 mV	14.65 ft	200.00 ml/min
3/15/2021 1:51 PM	20:00	6.91 pH	18.06 °C	671.72 µS/cm	0.52 mg/L	12.30 NTU	-58.9 mV	14.65 ft	200.00 ml/min
3/15/2021 1:56 PM	25:00	6.93 pH	18.08 °C	677.14 µS/cm	0.44 mg/L	9.45 NTU	-64.3 mV	14.65 ft	200.00 ml/min
3/15/2021 2:01 PM	30:00	6.95 pH	18.11 °C	682.02 µS/cm	0.40 mg/L	8.49 NTU	-49.8 mV	14.65 ft	200.00 ml/min
3/15/2021 2:06 PM	35:00	6.95 pH	18.15 °C	683.70 µS/cm	0.35 mg/L	6.50 NTU	-51.3 mV	14.65 ft	200.00 ml/min
3/15/2021 2:11 PM	40:00	6.96 pH	18.17 °C	685.27 µS/cm	0.31 mg/L	5.28 NTU	-53.2 mV	14.65 ft	200.00 ml/min
3/15/2021 2:16 PM	45:00	6.97 pH	18.17 °C	686.63 µS/cm	0.29 mg/L	4.35 NTU	-54.3 mV	14.66 ft	200.00 ml/min

Samples

Sample ID:	Description:
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MW-20

Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/17/2021 3:32:14 PM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: MW-24D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 63.11 ft Total Depth: 73.11 ft Initial Depth to Water: 26.65 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 68 ft Estimated Total Volume Pumped: 6 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.00 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium
Prepurged for 5 min @ 200 ml/min

Weather Conditions:

Rainy

55 d g F

Windy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/17/2021 3:32 PM	00:00	7.55 pH	18.30 °C	616.48 µS/cm	0.91 mg/L	2.11 NTU	-42.0 mV	26.65 ft	200.00 ml/min
3/17/2021 3:37 PM	05:00	7.62 pH	18.45 °C	615.92 µS/cm	0.48 mg/L	1.11 NTU	-5.8 mV	26.65 ft	200.00 ml/min
3/17/2021 3:42 PM	10:00	7.64 pH	18.52 °C	611.26 µS/cm	0.30 mg/L	1.64 NTU	-18.9 mV	26.65 ft	200.00 ml/min
3/17/2021 3:47 PM	15:00	7.65 pH	18.45 °C	611.17 µS/cm	0.25 mg/L	1.90 NTU	3.6 mV	26.65 ft	200.00 ml/min
3/17/2021 3:52 PM	20:00	7.66 pH	18.47 °C	610.25 µS/cm	0.25 mg/L	1.32 NTU	5.5 mV	26.65 ft	200.00 ml/min
3/17/2021 3:57 PM	25:00	7.66 pH	18.46 °C	610.14 µS/cm	0.24 mg/L	0.97 NTU	6.7 mV	26.65 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-24D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/16/2021 12:06:09 PM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: MW-25D Well Diameter: 2 in Casing Type: PVC Screen Length: 20 ft Top of Screen: 53.03 ft Total Depth: 63.03 ft Initial Depth to Water: 16.8 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 58 ft Estimated Total Volume Pumped: 5 Liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 5.80 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium

Prepurged for 10 min @ 200 ml/min. Water table dropping fast.

Reduced flow rate to 100 ml/min.

Then prepurged for 5 min @ 100 ml/min.

Weather Conditions:

Rainy

50 deg F

Windy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/16/2021 12:06 PM	00:00	7.71 pH	16.74 °C	597.43 µS/cm	0.07 mg/L	0.34 NTU	-175.1 mV	21.90 ft	100.00 ml/min
3/16/2021 12:11 PM	05:00	7.73 pH	16.69 °C	613.87 µS/cm	0.09 mg/L	0.22 NTU	-222.7 mV	22.10 ft	100.00 ml/min
3/16/2021 12:16 PM	10:00	7.74 pH	16.61 °C	613.68 µS/cm	0.11 mg/L	0.19 NTU	-167.7 mV	22.38 ft	100.00 ml/min
3/16/2021 12:21 PM	15:00	7.75 pH	17.29 °C	617.06 µS/cm	0.17 mg/L	0.04 NTU	-219.0 mV	22.42 ft	100.00 ml/min
3/16/2021 12:26 PM	20:00	7.76 pH	17.18 °C	613.07 µS/cm	0.13 mg/L	0.01 NTU	-167.7 mV	22.53 ft	100.00 ml/min
3/16/2021 12:31 PM	25:00	7.76 pH	16.92 °C	610.68 µS/cm	0.13 mg/L	0.13 NTU	-165.8 mV	22.60 ft	100.00 ml/min

Samples

Sample ID:	Description:
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MW-25D	Grab Sample.
DUP-1	Grab Sample.

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 3/17/2021 8:27:56 AM

Project: GP-Plant Hammond

Operator Name: Vashish Taukoor

Location Name: MW-26D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 67.91 ft Total Depth: 77.91 ft Initial Depth to Water: 13.45 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 73 ft Estimated Total Volume Pumped: 3.5 Liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.10 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728563
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.
Prepurged for 10 min @ 100 ml/min

Weather Conditions:

Cloudy, foggy

52 deg F

No wind

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 5	
3/17/2021 8:27 AM	00:00	7.15 pH	17.01 °C	1,060.0 µS/cm	1.10 mg/L	2.97 NTU	-31.4 mV	13.55 ft	100.00 ml/min
3/17/2021 8:32 AM	05:00	7.14 pH	17.00 °C	1,060.5 µS/cm	0.68 mg/L	2.74 NTU	-48.6 mV	13.55 ft	100.00 ml/min
3/17/2021 8:37 AM	10:00	7.14 pH	16.83 °C	1,065.5 µS/cm	0.58 mg/L	2.67 NTU	-14.6 mV	13.55 ft	100.00 ml/min
3/17/2021 8:42 AM	15:00	7.15 pH	16.86 °C	1,066.5 µS/cm	0.52 mg/L	2.54 NTU	-37.8 mV	13.55 ft	100.00 ml/min
3/17/2021 8:47 AM	20:00	7.15 pH	16.78 °C	1,069.0 µS/cm	0.54 mg/L	2.33 NTU	-9.7 mV	13.55 ft	100.00 ml/min
3/17/2021 8:52 AM	25:00	7.14 pH	16.87 °C	1,069.2 µS/cm	0.54 mg/L	2.10 NTU	-34.4 mV	13.55 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW-26D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/11/2021 2:11:12 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: MW-27D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 51.97 ft Initial Depth to Water: 5.3 ft	Pump Type: Bladder Tubing Type: polyethylene Pump Intake From TOC: 67.97 ft Estimated Total Volume Pumped: 7 Liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 4.80 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

No sample taken.

Weather Conditions:

Cloudy, 70 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/11/2021 2:11 PM	00:00	7.68 pH	21.91 °C	406.58 µS/cm	2.84 mg/L	1.01 NTU	25.0 mV	4.30 ft	200.00 ml/min
3/11/2021 2:16 PM	05:00	7.73 pH	18.93 °C	440.36 µS/cm	2.14 mg/L	18.50 NTU	7.5 mV	4.40 ft	200.00 ml/min
3/11/2021 2:21 PM	10:00	7.76 pH	18.56 °C	446.39 µS/cm	1.16 mg/L	16.80 NTU	-8.1 mV	4.80 ft	200.00 ml/min
3/11/2021 2:26 PM	15:00	7.76 pH	18.64 °C	445.51 µS/cm	0.86 mg/L	14.30 NTU	5.5 mV	5.35 ft	200.00 ml/min
3/11/2021 2:31 PM	20:00	7.77 pH	18.66 °C	444.55 µS/cm	0.81 mg/L	14.60 NTU	6.0 mV	5.92 ft	200.00 ml/min
3/11/2021 2:36 PM	25:00	7.76 pH	18.85 °C	443.01 µS/cm	0.76 mg/L	15.20 NTU	-6.6 mV	6.25 ft	200.00 ml/min
3/11/2021 2:41 PM	30:00	7.76 pH	18.61 °C	440.96 µS/cm	0.69 mg/L	14.10 NTU	6.3 mV	6.72 ft	200.00 ml/min
3/11/2021 2:46 PM	35:00	7.77 pH	18.35 °C	442.21 µS/cm	0.64 mg/L	12.80 NTU	7.2 mV	7.15 ft	200.00 ml/min
3/11/2021 2:51 PM	40:00	7.77 pH	18.51 °C	445.40 µS/cm	0.58 mg/L	11.60 NTU	-5.2 mV	7.61 ft	200.00 ml/min
3/11/2021 2:56 PM	45:00	7.78 pH	18.52 °C	443.12 µS/cm	0.55 mg/L	16.20 NTU	-6.4 mV	8.00 ft	200.00 ml/min
3/11/2021 3:01 PM	50:00	7.77 pH	18.33 °C	441.82 µS/cm	0.33 mg/L	9.74 NTU	6.8 mV	8.62 ft	200.00 ml/min
3/11/2021 3:06 PM	55:00	7.78 pH	18.59 °C	435.76 µS/cm	0.28 mg/L	9.27 NTU	5.4 mV	8.93 ft	200.00 ml/min
3/11/2021 3:11 PM	01:00:00	7.76 pH	18.72 °C	429.77 µS/cm	0.25 mg/L	8.86 NTU	-1.0 mV	9.30 ft	200.00 ml/min

3/11/2021 3:16 PM	01:05:00	7.74 pH	18.76 °C	420.40 µS/cm	0.24 mg/L	6.35 NTU	-10.7 mV	9.70 ft	200.00 ml/min
3/11/2021 3:21 PM	01:10:00	7.74 pH	18.80 °C	415.72 µS/cm	0.24 mg/L	4.79 NTU	-18.9 mV	10.10 ft	200.00 ml/min

Samples

Sample ID:	Description:
No Sample Taken.	

Low-Flow Test Report:

Test Date / Time: 3/12/2021 9:26:41 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: MW-27D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 51.97 ft Total Depth: 63.25 ft Initial Depth to Water: 11.54 ft	Pump Type: Bladder Tubing Type: polyethylene Pump Intake From TOC: 57.97 ft Estimated Total Volume Pumped: 1.5 Liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 1.31 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Cloudy, 50 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/12/2021 9:26 AM	00:00	7.73 pH	18.03 °C	439.65 µS/cm	3.87 mg/L	16.40 NTU	62.0 mV	11.54 ft	200.00 ml/min
3/12/2021 9:31 AM	05:00	7.81 pH	17.01 °C	422.93 µS/cm	2.80 mg/L	9.72 NTU	-8.6 mV	12.22 ft	200.00 ml/min
3/12/2021 9:36 AM	10:00	7.86 pH	17.19 °C	417.05 µS/cm	1.31 mg/L	5.24 NTU	-64.8 mV	12.50 ft	200.00 ml/min
3/12/2021 9:41 AM	15:00	7.88 pH	17.35 °C	414.95 µS/cm	0.92 mg/L	3.61 NTU	-47.4 mV	12.85 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-27D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/15/2021 3:20:47 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: MW-28D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 48.14 ft Total Depth: 58.2 ft Initial Depth to Water: 5.46 ft	Pump Type: Bladder Tubing Type: polyethylene Pump Intake From TOC: 53.14 ft Estimated Total Volume Pumped: 36 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.13 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Cloudy, 65 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/15/2021 3:20 PM	00:00	7.51 pH	18.11 °C	549.82 µS/cm	4.04 mg/L	20.50 NTU	-89.5 mV	5.46 ft	200.00 ml/min
3/15/2021 3:25 PM	05:00	7.57 pH	17.64 °C	525.11 µS/cm	0.37 mg/L	807.00 NTU	-162.8 mV	5.53 ft	200.00 ml/min
3/15/2021 3:30 PM	10:00	7.59 pH	17.72 °C	525.22 µS/cm	0.31 mg/L	772.00 NTU	-192.6 mV	5.55 ft	200.00 ml/min
3/15/2021 3:35 PM	15:00	7.60 pH	17.72 °C	524.30 µS/cm	0.27 mg/L	650.00 NTU	-217.0 mV	5.55 ft	200.00 ml/min
3/15/2021 3:40 PM	20:00	7.61 pH	17.73 °C	524.51 µS/cm	0.24 mg/L	78.00 NTU	-237.7 mV	5.58 ft	200.00 ml/min
3/15/2021 3:45 PM	25:00	7.63 pH	17.74 °C	525.12 µS/cm	0.23 mg/L	64.00 NTU	-266.6 mV	5.58 ft	200.00 ml/min
3/15/2021 3:50 PM	30:00	7.65 pH	17.79 °C	526.48 µS/cm	0.21 mg/L	50.00 NTU	-274.7 mV	5.58 ft	200.00 ml/min
3/15/2021 3:55 PM	35:00	7.65 pH	17.85 °C	528.48 µS/cm	0.20 mg/L	69.10 NTU	-277.8 mV	5.58 ft	200.00 ml/min
3/15/2021 4:00 PM	40:00	7.66 pH	17.88 °C	530.01 µS/cm	0.19 mg/L	60.20 NTU	-276.3 mV	5.58 ft	200.00 ml/min
3/15/2021 4:05 PM	45:00	7.67 pH	17.90 °C	531.94 µS/cm	0.19 mg/L	48.00 NTU	-279.0 mV	5.58 ft	200.00 ml/min
3/15/2021 4:10 PM	50:00	7.69 pH	17.87 °C	533.15 µS/cm	0.18 mg/L	47.70 NTU	-284.4 mV	5.58 ft	200.00 ml/min
3/15/2021 4:15 PM	55:00	7.70 pH	17.87 °C	533.37 µS/cm	0.17 mg/L	41.80 NTU	-286.2 mV	5.58 ft	200.00 ml/min
3/15/2021 4:20 PM	01:00:00	7.70 pH	17.89 °C	533.82 µS/cm	0.16 mg/L	36.90 NTU	-283.8 mV	5.58 ft	200.00 ml/min

3/15/2021 4:25 PM	01:05:00	7.70 pH	17.88 °C	535.02 µS/cm	0.15 mg/L	36.40 NTU	-284.5 mV	5.59 ft	200.00 ml/min
3/15/2021 4:30 PM	01:10:00	7.69 pH	17.90 °C	535.03 µS/cm	0.15 mg/L	32.70 NTU	-282.8 mV	5.59 ft	200.00 ml/min
3/15/2021 4:35 PM	01:15:00	7.70 pH	17.90 °C	536.18 µS/cm	0.14 mg/L	26.30 NTU	-286.5 mV	5.59 ft	200.00 ml/min
3/15/2021 4:40 PM	01:20:00	7.70 pH	17.85 °C	535.76 µS/cm	0.14 mg/L	27.00 NTU	-282.5 mV	5.59 ft	200.00 ml/min
3/15/2021 4:45 PM	01:25:00	7.70 pH	17.86 °C	537.08 µS/cm	0.13 mg/L	23.80 NTU	-282.0 mV	5.59 ft	200.00 ml/min
3/15/2021 4:50 PM	01:30:00	7.70 pH	17.87 °C	537.10 µS/cm	0.13 mg/L	21.60 NTU	-281.0 mV	5.59 ft	200.00 ml/min
3/15/2021 4:55 PM	01:35:00	7.70 pH	17.85 °C	537.50 µS/cm	0.12 mg/L	21.30 NTU	-280.5 mV	5.59 ft	200.00 ml/min
3/15/2021 5:00 PM	01:40:00	7.68 pH	17.88 °C	538.35 µS/cm	0.12 mg/L	19.50 NTU	-278.8 mV	5.59 ft	200.00 ml/min
3/15/2021 5:05 PM	01:45:00	7.68 pH	17.93 °C	539.45 µS/cm	0.11 mg/L	20.60 NTU	-278.7 mV	5.59 ft	200.00 ml/min
3/15/2021 5:10 PM	01:50:00	7.67 pH	17.97 °C	539.96 µS/cm	0.11 mg/L	17.00 NTU	-277.7 mV	5.59 ft	200.00 ml/min
3/15/2021 5:15 PM	01:55:00	7.67 pH	17.99 °C	540.80 µS/cm	0.11 mg/L	15.90 NTU	-276.7 mV	5.59 ft	200.00 ml/min
3/15/2021 5:20 PM	02:00:00	7.67 pH	17.95 °C	541.98 µS/cm	0.11 mg/L	14.80 NTU	-277.3 mV	5.59 ft	200.00 ml/min
3/15/2021 5:25 PM	02:05:00	7.66 pH	17.95 °C	543.57 µS/cm	0.11 mg/L	14.40 NTU	-276.7 mV	5.59 ft	200.00 ml/min
3/15/2021 5:30 PM	02:10:00	7.65 pH	17.92 °C	544.74 µS/cm	0.10 mg/L	14.90 NTU	-276.7 mV	5.59 ft	200.00 ml/min
3/15/2021 5:35 PM	02:15:00	7.64 pH	17.94 °C	546.17 µS/cm	0.10 mg/L	14.70 NTU	-279.3 mV	5.59 ft	200.00 ml/min
3/15/2021 5:40 PM	02:20:00	7.64 pH	17.90 °C	546.03 µS/cm	0.10 mg/L	14.40 NTU	-279.2 mV	5.59 ft	200.00 ml/min
3/15/2021 5:45 PM	02:25:00	7.64 pH	17.91 °C	548.55 µS/cm	0.10 mg/L	12.30 NTU	-275.1 mV	5.59 ft	200.00 ml/min
3/15/2021 5:50 PM	02:30:00	7.63 pH	17.90 °C	549.71 µS/cm	0.10 mg/L	11.40 NTU	-274.7 mV	5.59 ft	200.00 ml/min
3/15/2021 5:55 PM	02:35:00	7.63 pH	17.91 °C	550.67 µS/cm	0.09 mg/L	11.50 NTU	-275.6 mV	5.59 ft	200.00 ml/min
3/15/2021 6:00 PM	02:40:00	7.62 pH	17.90 °C	551.55 µS/cm	0.09 mg/L	9.31 NTU	-274.9 mV	5.59 ft	200.00 ml/min
3/15/2021 6:05 PM	02:45:00	7.61 pH	17.90 °C	552.40 µS/cm	0.09 mg/L	9.75 NTU	-273.9 mV	5.59 ft	200.00 ml/min
3/15/2021 6:10 PM	02:50:00	7.61 pH	17.90 °C	554.77 µS/cm	0.09 mg/L	9.71 NTU	-273.6 mV	5.59 ft	200.00 ml/min
3/15/2021 6:15 PM	02:55:00	7.61 pH	17.90 °C	554.43 µS/cm	0.09 mg/L	9.30 NTU	-273.9 mV	5.59 ft	200.00 ml/min
3/15/2021 6:20 PM	03:00:00	7.61 pH	17.89 °C	554.99 µS/cm	0.09 mg/L	9.38 NTU	-274.2 mV	5.59 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-28D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 3/15/2021 12:17:38 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: MW-29 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 18.21 ft Total Depth: 28.26 ft Initial Depth to Water: 5.63 ft	Pump Type: Bladder Tubing Type: polyethylene Pump Intake From TOC: 23.21 ft Estimated Total Volume Pumped: 6 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.07 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728566
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Cloudy, 65 degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
3/15/2021 12:17 PM	00:00	7.05 pH	17.72 °C	821.21 µS/cm	4.47 mg/L	7.57 NTU	1.1 mV	5.63 ft	200.00 ml/min
3/15/2021 12:22 PM	05:00	7.06 pH	17.10 °C	833.99 µS/cm	0.40 mg/L	15.10 NTU	14.8 mV	5.70 ft	200.00 ml/min
3/15/2021 12:27 PM	10:00	7.06 pH	17.06 °C	829.36 µS/cm	0.27 mg/L	30.00 NTU	17.0 mV	5.70 ft	200.00 ml/min
3/15/2021 12:32 PM	15:00	7.05 pH	17.10 °C	826.26 µS/cm	0.20 mg/L	8.38 NTU	18.1 mV	5.70 ft	200.00 ml/min
3/15/2021 12:37 PM	20:00	7.06 pH	17.05 °C	826.59 µS/cm	0.15 mg/L	4.85 NTU	17.9 mV	5.70 ft	200.00 ml/min
3/15/2021 12:42 PM	25:00	7.06 pH	17.07 °C	825.39 µS/cm	0.11 mg/L	4.34 NTU	18.5 mV	5.70 ft	200.00 ml/min
3/15/2021 12:47 PM	30:00	7.05 pH	17.05 °C	825.41 µS/cm	0.10 mg/L	2.95 NTU	18.6 mV	5.70 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-29	Grab Sample.

August 2021

Low-Flow Test Report:

Test Date / Time: 8/11/2021 1:57:08 PM

Project: GP-Plant Hammond

Operator Name: Connor Cain

Location Name: HGWA-1 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 22.50 ft Total Depth: 32.50 ft Initial Depth to Water: 18.88 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 27.50 ft Estimated Total Volume Pumped: 36.75 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.52 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Five bottles: Full app. III & IV.

Weather Conditions:

Sunny, 96 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/11/2021 1:57 PM	00:00	7.00 pH	21.04 °C	667.52 µS/cm	0.64 mg/L	3.23 NTU	33.4 mV	19.28 ft	200.00 ml/min
8/11/2021 2:02 PM	05:00	6.99 pH	19.20 °C	683.41 µS/cm	0.40 mg/L	1.41 NTU	33.7 mV	19.33 ft	200.00 ml/min
8/11/2021 2:07 PM	10:00	6.99 pH	19.15 °C	659.32 µS/cm	0.45 mg/L	2.60 NTU	33.5 mV	19.38 ft	200.00 ml/min
8/11/2021 2:12 PM	15:00	6.99 pH	19.02 °C	656.40 µS/cm	0.40 mg/L	0.75 NTU	32.2 mV	19.39 ft	200.00 ml/min
8/11/2021 2:15 PM	18:12	6.99 pH	19.03 °C	661.45 µS/cm	0.35 mg/L	0.36 NTU	34.6 mV	19.40 ft	200.00 ml/min
8/11/2021 2:20 PM	23:12	6.98 pH	18.94 °C	660.06 µS/cm	0.28 mg/L	0.55 NTU	35.7 mV	19.40 ft	200.00 ml/min
8/11/2021 2:25 PM	28:12	6.98 pH	19.06 °C	660.13 µS/cm	0.28 mg/L	0.19 NTU	35.4 mV	19.40 ft	200.00 ml/min
8/11/2021 2:30 PM	33:12	6.99 pH	18.90 °C	665.62 µS/cm	0.38 mg/L	1.14 NTU	35.4 mV	19.40 ft	200.00 ml/min
8/11/2021 2:35 PM	38:12	6.99 pH	18.79 °C	661.37 µS/cm	0.33 mg/L	0.28 NTU	35.6 mV	19.40 ft	200.00 ml/min
8/11/2021 2:40 PM	43:12	6.98 pH	18.75 °C	662.88 µS/cm	0.26 mg/L	--	37.0 mV	19.40 ft	200.00 ml/min
8/11/2021 2:45 PM	48:12	6.98 pH	18.75 °C	663.83 µS/cm	0.25 mg/L	--	36.8 mV	19.40 ft	200.00 ml/min
8/11/2021 2:50 PM	53:12	6.98 pH	18.74 °C	655.03 µS/cm	0.36 mg/L	--	34.6 mV	19.40 ft	200.00 ml/min
8/11/2021 2:55 PM	58:12	6.98 pH	18.80 °C	664.96 µS/cm	0.32 mg/L	--	34.7 mV	19.40 ft	200.00 ml/min

8/11/2021 3:00 PM	01:03:12	6.98 pH	18.73 °C	667.63 µS/cm	0.27 mg/L	--	34.7 mV	19.40 ft	200.00 ml/min
8/11/2021 3:05 PM	01:08:12	6.98 pH	18.79 °C	667.13 µS/cm	0.26 mg/L	--	34.5 mV	19.40 ft	200.00 ml/min
8/11/2021 3:10 PM	01:13:12	6.98 pH	18.92 °C	666.06 µS/cm	0.30 mg/L	--	32.6 mV	19.40 ft	200.00 ml/min
8/11/2021 3:15 PM	01:18:12	6.98 pH	18.99 °C	665.79 µS/cm	0.24 mg/L	--	30.5 mV	19.40 ft	200.00 ml/min
8/11/2021 3:20 PM	01:23:12	6.97 pH	18.97 °C	665.66 µS/cm	0.34 mg/L	--	30.7 mV	19.40 ft	200.00 ml/min
8/11/2021 3:25 PM	01:28:12	6.98 pH	18.84 °C	666.38 µS/cm	0.25 mg/L	--	30.9 mV	19.40 ft	200.00 ml/min
8/11/2021 3:30 PM	01:33:12	6.98 pH	18.79 °C	665.01 µS/cm	0.19 mg/L	--	29.8 mV	19.40 ft	200.00 ml/min
8/11/2021 3:35 PM	01:38:12	6.98 pH	18.74 °C	664.47 µS/cm	0.22 mg/L	--	30.0 mV	19.40 ft	200.00 ml/min
8/11/2021 3:40 PM	01:43:12	6.98 pH	18.69 °C	664.99 µS/cm	0.24 mg/L	--	28.6 mV	19.40 ft	200.00 ml/min
8/11/2021 3:45 PM	01:48:12	6.97 pH	18.75 °C	662.12 µS/cm	0.21 mg/L	--	29.5 mV	19.40 ft	200.00 ml/min
8/11/2021 3:50 PM	01:53:12	6.98 pH	18.78 °C	663.73 µS/cm	0.28 mg/L	--	28.4 mV	19.40 ft	200.00 ml/min
8/11/2021 3:55 PM	01:58:12	6.98 pH	18.70 °C	665.36 µS/cm	0.21 mg/L	--	27.3 mV	19.40 ft	200.00 ml/min
8/11/2021 4:00 PM	02:03:12	6.98 pH	18.70 °C	664.22 µS/cm	0.20 mg/L	--	28.1 mV	19.40 ft	200.00 ml/min
8/11/2021 4:05 PM	02:08:12	6.98 pH	18.70 °C	663.86 µS/cm	0.33 mg/L	--	29.3 mV	19.40 ft	200.00 ml/min
8/11/2021 4:10 PM	02:13:12	6.97 pH	18.75 °C	662.73 µS/cm	0.24 mg/L	--	29.7 mV	19.40 ft	200.00 ml/min
8/11/2021 4:15 PM	02:18:12	6.98 pH	18.93 °C	663.37 µS/cm	0.20 mg/L	--	30.1 mV	19.40 ft	200.00 ml/min
8/11/2021 4:20 PM	02:23:12	6.98 pH	18.97 °C	663.89 µS/cm	0.20 mg/L	--	28.0 mV	19.40 ft	200.00 ml/min
8/11/2021 4:25 PM	02:28:12	6.98 pH	18.85 °C	661.80 µS/cm	0.31 mg/L	--	30.1 mV	19.40 ft	200.00 ml/min
8/11/2021 4:30 PM	02:33:12	6.97 pH	18.84 °C	663.72 µS/cm	0.28 mg/L	--	30.4 mV	19.40 ft	200.00 ml/min
8/11/2021 4:35 PM	02:38:12	6.97 pH	18.71 °C	662.50 µS/cm	0.22 mg/L	--	29.4 mV	19.40 ft	200.00 ml/min
8/11/2021 4:40 PM	02:43:12	6.98 pH	18.74 °C	660.97 µS/cm	0.32 mg/L	--	29.4 mV	19.40 ft	200.00 ml/min
8/11/2021 4:45 PM	02:48:12	6.98 pH	18.73 °C	636.44 µS/cm	0.23 mg/L	0.36 NTU	29.7 mV	19.40 ft	200.00 ml/min
8/11/2021 4:50 PM	02:53:12	6.98 pH	18.73 °C	663.99 µS/cm	0.37 mg/L	0.38 NTU	30.5 mV	19.40 ft	200.00 ml/min
8/11/2021 4:55 PM	02:58:12	6.98 pH	18.65 °C	661.28 µS/cm	0.36 mg/L	0.37 NTU	28.5 mV	19.40 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-1	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/12/2021 2:21:33 PM

Project: GP-Plant Hammond

Operator Name: Ashley Ramsey

Location Name: HGWA-2 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 17.95 ft Total Depth: 27.95 ft Initial Depth to Water: 10.67 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 22.95 ft Estimated Total Volume Pumped: 14 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.05 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Five bottle: Full app. III & IV.

Weather Conditions:

Sunny, 91 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/12/2021 2:21 PM	00:00	5.15 pH	23.08 °C	203.81 µS/cm	0.77 mg/L	34.00 NTU	130.2 mV	10.67 ft	200.00 ml/min
8/12/2021 2:26 PM	05:00	5.08 pH	21.50 °C	202.92 µS/cm	0.26 mg/L	49.60 NTU	130.2 mV	10.72 ft	200.00 ml/min
8/12/2021 2:31 PM	10:00	5.08 pH	21.42 °C	203.27 µS/cm	0.19 mg/L	29.60 NTU	155.5 mV	10.72 ft	200.00 ml/min
8/12/2021 2:36 PM	15:00	5.10 pH	21.73 °C	204.60 µS/cm	0.26 mg/L	22.80 NTU	127.2 mV	10.72 ft	200.00 ml/min
8/12/2021 2:41 PM	20:00	5.09 pH	21.78 °C	204.30 µS/cm	0.25 mg/L	16.80 NTU	156.0 mV	10.72 ft	200.00 ml/min
8/12/2021 2:46 PM	25:00	5.08 pH	21.69 °C	203.45 µS/cm	0.23 mg/L	16.10 NTU	127.1 mV	10.72 ft	200.00 ml/min
8/12/2021 2:51 PM	30:00	5.06 pH	21.60 °C	202.80 µS/cm	0.18 mg/L	15.50 NTU	156.8 mV	10.72 ft	200.00 ml/min
8/12/2021 2:56 PM	35:00	5.05 pH	21.81 °C	202.03 µS/cm	0.15 mg/L	11.70 NTU	127.1 mV	10.72 ft	200.00 ml/min
8/12/2021 3:01 PM	40:00	5.05 pH	21.65 °C	202.15 µS/cm	0.14 mg/L	9.76 NTU	126.0 mV	10.72 ft	200.00 ml/min
8/12/2021 3:06 PM	45:00	5.05 pH	21.82 °C	201.32 µS/cm	0.13 mg/L	9.92 NTU	125.4 mV	10.72 ft	200.00 ml/min
8/12/2021 3:11 PM	50:00	5.05 pH	21.82 °C	202.01 µS/cm	0.14 mg/L	7.58 NTU	125.2 mV	10.72 ft	200.00 ml/min
8/12/2021 3:16 PM	55:00	5.04 pH	21.33 °C	202.45 µS/cm	0.12 mg/L	6.44 NTU	124.8 mV	10.72 ft	200.00 ml/min
8/12/2021 3:21 PM	01:00:00	5.04 pH	21.24 °C	203.65 µS/cm	0.12 mg/L	6.07 NTU	124.7 mV	10.72 ft	200.00 ml/min

8/12/2021 3:26 PM	01:05:00	5.05 pH	21.37 °C	202.40 µS/cm	0.11 mg/L	5.42 NTU	158.0 mV	10.72 ft	200.00 ml/min
8/12/2021 3:31 PM	01:10:00	5.05 pH	21.04 °C	203.48 µS/cm	0.11 mg/L	4.12 NTU	124.4 mV	10.72 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-2	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/12/2021 8:42:53 AM

Project: GP-Plant Hammond

Operator Name: Connor Cain

Location Name: HGWA-3 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 34.87 ft Initial Total Depth: 44.87 ft Depth to Water: 10.51 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 39.87 ft Estimated Total Volume Pumped: 19 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Five bottles: Full app. III & IV.

Weather Conditions:

Sunny 75 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/12/2021 8:42 AM	00:00	7.28 pH	20.30 °C	460.79 µS/cm	2.04 mg/L	74.50 NTU	-65.2 mV	10.51 ft	200.00 ml/min
8/12/2021 8:47 AM	05:00	7.28 pH	19.16 °C	461.91 µS/cm	2.42 mg/L	10.15 NTU	-80.8 mV	10.51 ft	200.00 ml/min
8/12/2021 8:52 AM	10:00	7.27 pH	19.20 °C	464.76 µS/cm	2.64 mg/L	6.23 NTU	-85.6 mV	10.52 ft	200.00 ml/min
8/12/2021 8:57 AM	15:00	7.29 pH	19.26 °C	465.02 µS/cm	1.36 mg/L	5.51 NTU	-81.9 mV	10.52 ft	200.00 ml/min
8/12/2021 9:02 AM	20:00	7.29 pH	19.15 °C	462.89 µS/cm	2.28 mg/L	3.51 NTU	-98.1 mV	10.52 ft	200.00 ml/min
8/12/2021 9:07 AM	25:00	7.30 pH	19.15 °C	464.17 µS/cm	1.25 mg/L	2.55 NTU	-87.8 mV	10.52 ft	200.00 ml/min
8/12/2021 9:12 AM	30:00	7.30 pH	19.23 °C	462.67 µS/cm	1.71 mg/L	2.10 NTU	-83.8 mV	10.52 ft	200.00 ml/min
8/12/2021 9:17 AM	35:00	7.29 pH	19.30 °C	463.45 µS/cm	1.56 mg/L	1.32 NTU	-86.3 mV	10.52 ft	200.00 ml/min
8/12/2021 9:22 AM	40:00	7.30 pH	19.42 °C	451.88 µS/cm	1.79 mg/L	1.21 NTU	-87.3 mV	10.53 ft	200.00 ml/min
8/12/2021 9:27 AM	45:00	7.30 pH	19.43 °C	462.08 µS/cm	3.14 mg/L	1.28 NTU	-97.4 mV	10.53 ft	200.00 ml/min
8/12/2021 9:32 AM	50:00	7.31 pH	19.39 °C	463.60 µS/cm	1.34 mg/L	1.02 NTU	-85.6 mV	10.53 ft	200.00 ml/min
8/12/2021 9:37 AM	55:00	7.31 pH	19.42 °C	463.46 µS/cm	1.30 mg/L	2.16 NTU	-86.2 mV	10.53 ft	200.00 ml/min
8/12/2021 9:42 AM	01:00:00	7.29 pH	19.34 °C	464.62 µS/cm	1.08 mg/L	1.99 NTU	-79.5 mV	10.53 ft	200.00 ml/min

8/12/2021 9:47 AM	01:05:00	7.31 pH	19.37 °C	455.63 µS/cm	1.00 mg/L	1.53 NTU	-81.6 mV	10.53 ft	200.00 ml/min
8/12/2021 9:52 AM	01:10:00	7.31 pH	19.42 °C	462.54 µS/cm	1.40 mg/L	1.14 NTU	-97.2 mV	10.53 ft	200.00 ml/min
8/12/2021 9:57 AM	01:15:00	7.31 pH	19.28 °C	463.04 µS/cm	1.73 mg/L	0.99 NTU	-85.2 mV	10.53 ft	200.00 ml/min
8/12/2021 10:02 AM	01:20:00	7.31 pH	19.55 °C	463.83 µS/cm	1.41 mg/L	0.71 NTU	-95.5 mV	10.53 ft	200.00 ml/min
8/12/2021 10:07 AM	01:25:00	7.30 pH	19.58 °C	464.34 µS/cm	1.44 mg/L	0.58 NTU	-83.4 mV	10.53 ft	200.00 ml/min
8/12/2021 10:12 AM	01:30:00	7.31 pH	19.69 °C	457.58 µS/cm	1.28 mg/L	0.61 NTU	-85.1 mV	10.53 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-3	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/11/2021 2:08:01 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWA-43D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 51.26 ft Total Depth: 61.25 ft Initial Depth to Water: 18.65 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 56.25 ft Estimated Total Volume Pumped: 34 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 3.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Five bottles: Full app. III & IV.

Weather Conditions:

Sunny, 90 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/11/2021 2:08 PM	00:00	8.30 pH	37.12 °C	0.11 µS/cm	6.81 mg/L	3.16 NTU	82.9 mV	20.00 ft	200.00 ml/min
8/11/2021 2:13 PM	05:00	7.50 pH	20.20 °C	528.39 µS/cm	0.58 mg/L	4.21 NTU	-95.1 mV	20.20 ft	200.00 ml/min
8/11/2021 2:18 PM	10:00	7.49 pH	19.63 °C	521.25 µS/cm	0.36 mg/L	3.80 NTU	-91.7 mV	20.65 ft	200.00 ml/min
8/11/2021 2:23 PM	15:00	7.49 pH	19.49 °C	516.37 µS/cm	0.27 mg/L	--	-94.4 mV	--	200.00 ml/min
8/11/2021 2:28 PM	20:00	7.49 pH	19.40 °C	509.58 µS/cm	0.18 mg/L	--	-94.2 mV	--	200.00 ml/min
8/11/2021 2:33 PM	25:00	7.48 pH	19.45 °C	503.82 µS/cm	0.15 mg/L	--	-111.7 mV	--	200.00 ml/min
8/11/2021 2:38 PM	30:00	7.48 pH	19.36 °C	502.21 µS/cm	0.14 mg/L	--	-112.0 mV	--	200.00 ml/min
8/11/2021 2:43 PM	35:00	7.47 pH	19.47 °C	502.19 µS/cm	0.13 mg/L	--	-111.8 mV	--	200.00 ml/min
8/11/2021 2:48 PM	40:00	7.46 pH	19.40 °C	496.56 µS/cm	0.12 mg/L	--	-110.4 mV	--	200.00 ml/min
8/11/2021 2:53 PM	45:00	7.46 pH	19.44 °C	499.36 µS/cm	0.12 mg/L	--	-109.0 mV	--	200.00 ml/min
8/11/2021 2:58 PM	50:00	7.45 pH	19.34 °C	490.56 µS/cm	0.12 mg/L	--	-89.6 mV	--	200.00 ml/min
8/11/2021 3:03 PM	55:00	7.45 pH	19.41 °C	491.20 µS/cm	0.12 mg/L	--	-88.4 mV	--	200.00 ml/min
8/11/2021 3:08 PM	01:00:00	7.44 pH	19.54 °C	488.13 µS/cm	0.12 mg/L	--	-102.9 mV	--	200.00 ml/min

8/11/2021 3:13 PM	01:05:00	7.43 pH	19.70 °C	485.51 µS/cm	0.12 mg/L	--	-85.5 mV	--	200.00 ml/min
8/11/2021 3:18 PM	01:10:00	7.43 pH	19.69 °C	481.07 µS/cm	0.12 mg/L	--	-83.4 mV	--	200.00 ml/min
8/11/2021 3:23 PM	01:15:00	7.42 pH	19.57 °C	479.55 µS/cm	0.12 mg/L	--	-81.7 mV	--	200.00 ml/min
8/11/2021 3:28 PM	01:20:00	7.42 pH	19.56 °C	486.53 µS/cm	0.12 mg/L	--	-95.2 mV	--	200.00 ml/min
8/11/2021 3:33 PM	01:25:00	7.42 pH	19.49 °C	480.24 µS/cm	0.13 mg/L	--	-78.9 mV	--	200.00 ml/min
8/11/2021 3:38 PM	01:30:00	7.42 pH	19.51 °C	475.62 µS/cm	0.12 mg/L	--	-94.9 mV	--	200.00 ml/min
8/11/2021 3:43 PM	01:35:00	7.42 pH	19.50 °C	480.10 µS/cm	0.12 mg/L	--	-93.0 mV	--	200.00 ml/min
8/11/2021 3:48 PM	01:40:00	7.42 pH	19.58 °C	483.92 µS/cm	0.12 mg/L	--	-92.3 mV	--	200.00 ml/min
8/11/2021 3:53 PM	01:45:00	7.42 pH	19.61 °C	477.83 µS/cm	0.12 mg/L	--	-92.7 mV	--	200.00 ml/min
8/11/2021 3:58 PM	01:50:00	7.41 pH	19.54 °C	476.06 µS/cm	0.12 mg/L	--	-74.3 mV	--	200.00 ml/min
8/11/2021 4:03 PM	01:55:00	7.41 pH	19.65 °C	479.74 µS/cm	0.12 mg/L	--	-90.4 mV	--	200.00 ml/min
8/11/2021 4:08 PM	02:00:00	7.41 pH	19.70 °C	475.89 µS/cm	0.12 mg/L	--	-74.2 mV	--	200.00 ml/min
8/11/2021 4:13 PM	02:05:00	7.41 pH	19.76 °C	476.21 µS/cm	0.12 mg/L	--	-89.0 mV	--	200.00 ml/min
8/11/2021 4:18 PM	02:10:00	7.41 pH	19.75 °C	479.29 µS/cm	0.12 mg/L	--	-88.6 mV	--	200.00 ml/min
8/11/2021 4:23 PM	02:15:00	7.41 pH	19.70 °C	480.88 µS/cm	0.12 mg/L	--	-71.7 mV	--	200.00 ml/min
8/11/2021 4:28 PM	02:20:00	7.41 pH	19.54 °C	476.43 µS/cm	0.12 mg/L	--	-86.2 mV	--	200.00 ml/min
8/11/2021 4:33 PM	02:25:00	7.41 pH	19.49 °C	472.66 µS/cm	0.12 mg/L	--	-85.6 mV	--	200.00 ml/min
8/11/2021 4:38 PM	02:30:00	7.41 pH	19.45 °C	478.48 µS/cm	0.13 mg/L	--	-86.5 mV	--	200.00 ml/min
8/11/2021 4:43 PM	02:35:00	7.41 pH	19.35 °C	475.82 µS/cm	0.12 mg/L	--	-69.5 mV	--	200.00 ml/min
8/11/2021 4:48 PM	02:40:00	7.41 pH	19.39 °C	473.79 µS/cm	0.12 mg/L	2.27 NTU	-68.5 mV	21.68 ft	200.00 ml/min
8/11/2021 4:53 PM	02:45:00	7.41 pH	19.36 °C	476.17 µS/cm	0.12 mg/L	1.68 NTU	-67.8 mV	21.68 ft	200.00 ml/min
8/11/2021 4:58 PM	02:50:00	7.40 pH	19.40 °C	469.00 µS/cm	0.12 mg/L	0.68 NTU	-82.5 mV	21.68 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-43D	Grab Sample.

Low-Flow Test Report:

Test Date / Time: 8/13/2021 9:25:02 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: HGWA-44D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 103 ft Total Depth: 113.28 ft Initial Depth to Water: 18.25 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 108.28 ft Estimated Total Volume Pumped: 23 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 3.1 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Five bottles: Full app. III and IV.

Weather Conditions:

Sunny, 85 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/13/2021 9:25 AM	00:00	7.61 pH	24.10 °C	1,163.3 µS/cm	2.99 mg/L	50.70 NTU	98.2 mV	18.55 ft	200.00 ml/min
8/13/2021 9:30 AM	05:00	7.63 pH	19.76 °C	1,113.6 µS/cm	1.57 mg/L	69.60 NTU	39.4 mV	18.55 ft	200.00 ml/min
8/13/2021 9:35 AM	10:00	7.69 pH	19.26 °C	1,112.3 µS/cm	0.65 mg/L	65.80 NTU	-32.9 mV	18.55 ft	200.00 ml/min
8/13/2021 9:40 AM	15:00	7.69 pH	19.24 °C	1,109.5 µS/cm	0.43 mg/L	58.60 NTU	-62.0 mV	19.75 ft	200.00 ml/min
8/13/2021 9:45 AM	20:00	7.68 pH	19.74 °C	1,071.7 µS/cm	0.36 mg/L	46.30 NTU	-20.2 mV	19.85 ft	200.00 ml/min
8/13/2021 9:50 AM	25:00	7.67 pH	19.85 °C	1,053.8 µS/cm	0.31 mg/L	25.00 NTU	-14.5 mV	20.15 ft	200.00 ml/min
8/13/2021 9:55 AM	30:00	7.67 pH	19.76 °C	1,050.8 µS/cm	0.28 mg/L	18.40 NTU	3.1 mV	20.26 ft	200.00 ml/min
8/13/2021 10:00 AM	35:00	7.67 pH	19.64 °C	1,046.8 µS/cm	0.26 mg/L	12.40 NTU	14.2 mV	20.38 ft	200.00 ml/min
8/13/2021 10:05 AM	40:00	7.67 pH	19.70 °C	1,033.5 µS/cm	0.25 mg/L	11.20 NTU	24.6 mV	20.43 ft	200.00 ml/min
8/13/2021 10:10 AM	45:00	7.67 pH	19.69 °C	1,039.2 µS/cm	0.24 mg/L	8.47 NTU	27.3 mV	20.55 ft	200.00 ml/min
8/13/2021 10:15 AM	50:00	7.68 pH	19.67 °C	1,027.9 µS/cm	0.23 mg/L	8.93 NTU	28.6 mV	20.67 ft	200.00 ml/min
8/13/2021 10:20 AM	55:00	7.68 pH	19.69 °C	1,020.1 µS/cm	0.22 mg/L	14.06 NTU	28.7 mV	20.67 ft	200.00 ml/min
8/13/2021 10:25 AM	01:00:00	7.69 pH	19.63 °C	1,033.7 µS/cm	0.21 mg/L	11.74 NTU	29.4 mV	20.70 ft	200.00 ml/min

8/13/2021 10:30 AM	01:05:00	7.70 pH	19.62 °C	992.87 µS/cm	0.20 mg/L	8.71 NTU	30.0 mV	20.70 ft	200.00 ml/min
8/13/2021 10:35 AM	01:10:00	7.72 pH	19.60 °C	939.74 µS/cm	0.19 mg/L	6.36 NTU	30.4 mV	20.88 ft	200.00 ml/min
8/13/2021 10:37 AM	01:12:03	7.72 pH	19.49 °C	895.36 µS/cm	0.18 mg/L	6.36 NTU	32.2 mV	20.88 ft	200.00 ml/min
8/13/2021 10:42 AM	01:17:03	7.73 pH	19.45 °C	890.88 µS/cm	0.17 mg/L	4.39 NTU	30.6 mV	20.90 ft	200.00 ml/min
8/13/2021 10:47 AM	01:22:03	7.74 pH	19.50 °C	844.55 µS/cm	0.16 mg/L	4.13 NTU	30.9 mV	21.00 ft	200.00 ml/min
8/13/2021 10:52 AM	01:27:03	7.75 pH	19.40 °C	838.90 µS/cm	0.15 mg/L	3.85 NTU	30.6 mV	21.05 ft	200.00 ml/min
8/13/2021 10:57 AM	01:32:03	7.76 pH	19.49 °C	804.21 µS/cm	0.14 mg/L	3.05 NTU	30.5 mV	21.15 ft	200.00 ml/min
8/13/2021 11:02 AM	01:37:03	7.77 pH	19.86 °C	781.29 µS/cm	0.13 mg/L	2.95 NTU	30.6 mV	21.25 ft	200.00 ml/min
8/13/2021 11:07 AM	01:42:03	7.77 pH	20.03 °C	769.60 µS/cm	0.12 mg/L	5.36 NTU	30.7 mV	21.30 ft	200.00 ml/min
8/13/2021 11:12 AM	01:47:03	7.77 pH	20.14 °C	775.38 µS/cm	0.11 mg/L	5.44 NTU	30.8 mV	21.30 ft	200.00 ml/min
8/13/2021 11:17 AM	01:52:03	7.77 pH	20.35 °C	761.59 µS/cm	0.11 mg/L	4.83 NTU	30.8 mV	21.35 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWA-44D	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/16/2021 2:48:37 PM

Project: GP-Plant Hammond

Operator Name: Ashley Ramsey

Location Name: HGWC-7 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 18.17 ft Total Depth: 28.17 ft Initial Depth to Water: 7.43 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 23.17 ft Estimated Total Volume Pumped: 30 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: 728623
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Test Notes:

Five bottles: Metals, TDS, Inorganics, radium.

Weather Conditions:

Cloudy, 88 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/16/2021 2:48 PM	00:00	7.10 pH	22.09 °C	678.25 µS/cm	0.38 mg/L	15.70 NTU	37.5 mV	7.43 ft	200.00 ml/min
8/16/2021 2:53 PM	04:41	7.14 pH	21.64 °C	683.99 µS/cm	0.22 mg/L	--	37.8 mV	7.43 ft	200.00 ml/min
8/16/2021 2:53 PM	04:59	7.14 pH	21.65 °C	682.07 µS/cm	0.22 mg/L	15.40 NTU	38.6 mV	7.50 ft	200.00 ml/min
8/16/2021 2:56 PM	07:43	7.15 pH	21.57 °C	684.55 µS/cm	0.19 mg/L	--	37.6 mV	7.50 ft	200.00 ml/min
8/16/2021 2:58 PM	10:05	7.15 pH	21.50 °C	683.31 µS/cm	0.19 mg/L	16.50 NTU	38.5 mV	7.50 ft	200.00 ml/min
8/16/2021 3:03 PM	15:05	7.15 pH	21.37 °C	682.52 µS/cm	0.15 mg/L	15.80 NTU	37.3 mV	7.50 ft	200.00 ml/min
8/16/2021 3:08 PM	20:05	7.16 pH	21.45 °C	683.66 µS/cm	0.11 mg/L	15.00 NTU	37.2 mV	7.50 ft	200.00 ml/min
8/16/2021 3:13 PM	25:05	7.15 pH	21.41 °C	684.72 µS/cm	0.15 mg/L	12.70 NTU	37.1 mV	7.50 ft	200.00 ml/min
8/16/2021 3:18 PM	30:05	7.15 pH	21.37 °C	686.55 µS/cm	0.11 mg/L	12.10 NTU	36.9 mV	7.50 ft	200.00 ml/min
8/16/2021 3:23 PM	35:05	7.15 pH	21.46 °C	683.30 µS/cm	0.23 mg/L	12.00 NTU	36.1 mV	7.50 ft	200.00 ml/min
8/16/2021 3:28 PM	40:05	7.15 pH	21.34 °C	685.08 µS/cm	0.24 mg/L	11.19 NTU	36.2 mV	7.50 ft	200.00 ml/min
8/16/2021 3:33 PM	45:05	7.14 pH	21.37 °C	684.14 µS/cm	0.09 mg/L	10.20 NTU	35.9 mV	7.50 ft	200.00 ml/min
8/16/2021 3:38 PM	50:05	7.13 pH	21.56 °C	684.66 µS/cm	0.09 mg/L	10.45 NTU	36.9 mV	7.50 ft	200.00 ml/min

8/16/2021 3:43 PM	55:05	7.13 pH	21.60 °C	682.22 µS/cm	0.09 mg/L	10.41 NTU	35.8 mV	7.50 ft	200.00 ml/min
8/16/2021 3:48 PM	01:00:05	7.13 pH	21.45 °C	683.59 µS/cm	0.08 mg/L	10.53 NTU	37.2 mV	7.50 ft	200.00 ml/min
8/16/2021 3:53 PM	01:05:05	7.12 pH	21.55 °C	682.84 µS/cm	0.09 mg/L	10.56 NTU	36.1 mV	7.50 ft	200.00 ml/min
8/16/2021 3:58 PM	01:10:05	7.12 pH	21.51 °C	682.09 µS/cm	0.08 mg/L	10.45 NTU	36.8 mV	7.50 ft	200.00 ml/min
8/16/2021 4:03 PM	01:15:05	7.12 pH	21.54 °C	683.67 µS/cm	0.09 mg/L	9.14 NTU	36.7 mV	7.50 ft	200.00 ml/min
8/16/2021 4:08 PM	01:20:05	7.12 pH	21.80 °C	681.81 µS/cm	0.08 mg/L	8.36 NTU	37.0 mV	7.50 ft	200.00 ml/min
8/16/2021 4:13 PM	01:25:05	7.12 pH	21.86 °C	682.87 µS/cm	0.09 mg/L	8.17 NTU	38.8 mV	7.50 ft	200.00 ml/min
8/16/2021 4:18 PM	01:30:05	7.11 pH	21.60 °C	682.53 µS/cm	0.09 mg/L	7.32 NTU	37.7 mV	7.50 ft	200.00 ml/min
8/16/2021 4:23 PM	01:35:05	7.11 pH	21.60 °C	683.12 µS/cm	0.08 mg/L	7.22 NTU	39.5 mV	7.50 ft	200.00 ml/min
8/16/2021 4:28 PM	01:40:05	7.12 pH	21.37 °C	682.17 µS/cm	0.08 mg/L	7.99 NTU	37.5 mV	7.50 ft	200.00 ml/min
8/16/2021 4:33 PM	01:45:05	7.12 pH	21.47 °C	682.32 µS/cm	0.09 mg/L	7.08 NTU	39.4 mV	7.50 ft	200.00 ml/min
8/16/2021 4:38 PM	01:50:05	7.11 pH	21.58 °C	682.69 µS/cm	0.09 mg/L	7.13 NTU	37.6 mV	7.50 ft	200.00 ml/min
8/16/2021 4:43 PM	01:55:05	7.12 pH	21.59 °C	680.50 µS/cm	0.09 mg/L	7.32 NTU	37.3 mV	7.50 ft	200.00 ml/min
8/16/2021 4:48 PM	02:00:05	7.12 pH	21.48 °C	682.71 µS/cm	0.09 mg/L	7.14 NTU	37.1 mV	7.50 ft	200.00 ml/min
8/16/2021 4:53 PM	02:05:05	7.12 pH	21.39 °C	683.47 µS/cm	0.08 mg/L	7.02 NTU	38.3 mV	7.50 ft	200.00 ml/min
8/16/2021 4:58 PM	02:10:05	7.12 pH	21.33 °C	682.66 µS/cm	0.08 mg/L	6.17 NTU	36.9 mV	7.50 ft	200.00 ml/min
8/16/2021 5:03 PM	02:15:05	7.11 pH	21.21 °C	682.96 µS/cm	0.09 mg/L	6.11 NTU	38.3 mV	7.50 ft	200.00 ml/min
8/16/2021 5:08 PM	02:20:05	7.12 pH	21.15 °C	683.11 µS/cm	0.09 mg/L	5.74 NTU	36.4 mV	7.50 ft	200.00 ml/min
8/16/2021 5:13 PM	02:25:05	7.12 pH	21.15 °C	683.90 µS/cm	0.08 mg/L	4.56 NTU	37.0 mV	7.50 ft	200.00 ml/min
8/16/2021 5:16 PM	02:27:28	7.12 pH	21.11 °C	688.63 µS/cm	0.09 mg/L	--	36.2 mV	7.50 ft	200.00 ml/min
8/16/2021 5:18 PM	02:30:04	7.12 pH	21.14 °C	684.29 µS/cm	0.08 mg/L	4.32 NTU	36.5 mV	7.50 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-7	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/18/2021 8:46:59 AM

Project: GP-Plant Hammond

Operator Name: Connor Cain

Location Name: HGWC-8 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 16.65 ft Total Depth: 26.65 ft Initial Depth to Water: 6.16 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 21.65 ft Estimated Total Volume Pumped: 22 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Sunny, 72 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/18/2021 8:46 AM	00:00	6.94 pH	21.02 °C	1,057.4 µS/cm	1.30 mg/L	24.60 NTU	64.8 mV	6.16 ft	200.00 ml/min
8/18/2021 8:51 AM	05:00	6.97 pH	20.31 °C	977.78 µS/cm	0.35 mg/L	34.10 NTU	55.7 mV	6.16 ft	200.00 ml/min
8/18/2021 8:56 AM	10:00	7.00 pH	20.35 °C	976.24 µS/cm	0.23 mg/L	50.30 NTU	70.8 mV	6.16 ft	200.00 ml/min
8/18/2021 9:01 AM	15:00	7.00 pH	20.60 °C	974.43 µS/cm	0.18 mg/L	56.20 NTU	73.4 mV	6.16 ft	200.00 ml/min
8/18/2021 9:06 AM	20:00	7.02 pH	20.66 °C	974.52 µS/cm	0.20 mg/L	48.40 NTU	75.3 mV	6.16 ft	200.00 ml/min
8/18/2021 9:11 AM	25:00	7.02 pH	20.91 °C	972.79 µS/cm	0.17 mg/L	43.60 NTU	78.0 mV	6.16 ft	200.00 ml/min
8/18/2021 9:16 AM	30:00	7.02 pH	20.97 °C	973.06 µS/cm	0.21 mg/L	33.70 NTU	80.7 mV	6.16 ft	200.00 ml/min
8/18/2021 9:21 AM	35:00	7.01 pH	21.11 °C	973.92 µS/cm	0.17 mg/L	30.50 NTU	83.3 mV	6.16 ft	200.00 ml/min
8/18/2021 9:26 AM	40:00	7.02 pH	21.17 °C	972.78 µS/cm	0.16 mg/L	21.70 NTU	85.7 mV	6.16 ft	200.00 ml/min
8/18/2021 9:31 AM	45:00	7.01 pH	21.34 °C	980.96 µS/cm	0.56 mg/L	18.90 NTU	67.7 mV	6.16 ft	200.00 ml/min
8/18/2021 9:36 AM	50:00	7.01 pH	21.44 °C	975.95 µS/cm	0.50 mg/L	16.20 NTU	66.3 mV	6.16 ft	200.00 ml/min
8/18/2021 9:41 AM	55:00	7.01 pH	21.54 °C	972.62 µS/cm	0.37 mg/L	13.80 NTU	86.4 mV	6.16 ft	200.00 ml/min
8/18/2021 9:46 AM	01:00:00	7.01 pH	21.73 °C	980.67 µS/cm	0.87 mg/L	11.00 NTU	69.8 mV	6.16 ft	200.00 ml/min

8/18/2021 9:51 AM	01:05:00	7.01 pH	21.73 °C	975.93 µS/cm	0.26 mg/L	11.41 NTU	69.4 mV	6.16 ft	200.00 ml/min
8/18/2021 9:56 AM	01:10:00	7.02 pH	21.89 °C	974.86 µS/cm	0.26 mg/L	10.71 NTU	69.4 mV	6.16 ft	200.00 ml/min
8/18/2021 10:01 AM	01:15:00	7.02 pH	22.14 °C	969.86 µS/cm	0.22 mg/L	8.69 NTU	91.2 mV	6.16 ft	200.00 ml/min
8/18/2021 10:06 AM	01:20:00	7.02 pH	22.18 °C	980.12 µS/cm	0.31 mg/L	8.51 NTU	71.6 mV	6.16 ft	200.00 ml/min
8/18/2021 10:11 AM	01:25:00	7.02 pH	22.19 °C	972.60 µS/cm	0.25 mg/L	6.50 NTU	92.2 mV	6.16 ft	200.00 ml/min
8/18/2021 10:16 AM	01:30:00	7.02 pH	22.22 °C	976.83 µS/cm	0.41 mg/L	5.89 NTU	73.1 mV	6.16 ft	200.00 ml/min
8/18/2021 10:21 AM	01:35:00	7.02 pH	22.14 °C	968.36 µS/cm	0.26 mg/L	5.59 NTU	94.2 mV	6.16 ft	200.00 ml/min
8/18/2021 10:26 AM	01:40:00	7.02 pH	22.39 °C	968.35 µS/cm	0.34 mg/L	5.41 NTU	95.1 mV	6.16 ft	200.00 ml/min
8/18/2021 10:31 AM	01:45:00	7.02 pH	22.49 °C	982.08 µS/cm	0.33 mg/L	4.67 NTU	73.7 mV	6.16 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-8	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/17/2021 11:42:14 AM

Project: GP-Plant Hammond

Operator Name: Ashley Ramsey

Location Name: HGWC-9 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 36.98 ft Total Depth: 46.98 ft Initial Depth to Water: 14.18 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 41.98 ft Estimated Total Volume Pumped: 6 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Five bottles: Metals, TDS, Inorganics, radium.

Weather Conditions:

Rain, 79 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/17/2021 11:42 AM	00:00	7.29 pH	20.13 °C	1,064.3 µS/cm	0.22 mg/L	4.55 NTU	-188.6 mV	14.18 ft	200.00 ml/min
8/17/2021 11:47 AM	05:00	7.20 pH	19.79 °C	1,069.3 µS/cm	0.09 mg/L	3.31 NTU	-131.8 mV	14.18 ft	200.00 ml/min
8/17/2021 11:52 AM	10:00	7.16 pH	19.73 °C	1,068.5 µS/cm	0.06 mg/L	3.04 NTU	-80.4 mV	14.18 ft	200.00 ml/min
8/17/2021 11:57 AM	15:00	7.13 pH	19.72 °C	1,068.1 µS/cm	0.05 mg/L	2.94 NTU	-55.4 mV	14.18 ft	200.00 ml/min
8/17/2021 12:02 PM	20:00	7.12 pH	19.68 °C	1,067.0 µS/cm	0.04 mg/L	2.25 NTU	-37.4 mV	14.18 ft	200.00 ml/min
8/17/2021 12:07 PM	25:00	7.11 pH	19.70 °C	1,066.6 µS/cm	0.04 mg/L	2.20 NTU	-24.3 mV	14.18 ft	200.00 ml/min
8/17/2021 12:12 PM	30:00	7.10 pH	19.72 °C	1,065.7 µS/cm	0.04 mg/L	2.32 NTU	-13.8 mV	14.18 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-9	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/17/2021 2:27:45 PM

Project: GP-Plant Hammond

Operator Name: Ashley Ramsey

Location Name: HGWC-10 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 13.00 ft Total Depth: 23.00 ft Initial Depth to Water: 13.09 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 18 ft Estimated Total Volume Pumped: 7 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Five bottles: Metals, TDS, Inorganics, radium.

Weather Conditions:

Rain, 79 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/17/2021 2:27 PM	00:00	6.78 pH	20.87 °C	834.08 µS/cm	0.80 mg/L	4.49 NTU	57.6 mV	13.09 ft	200.00 ml/min
8/17/2021 2:32 PM	05:00	6.77 pH	20.79 °C	857.01 µS/cm	0.82 mg/L	3.95 NTU	54.0 mV	13.09 ft	200.00 ml/min
8/17/2021 2:37 PM	10:00	6.76 pH	20.93 °C	852.84 µS/cm	0.99 mg/L	3.21 NTU	64.1 mV	13.09 ft	200.00 ml/min
8/17/2021 2:42 PM	15:00	6.77 pH	21.16 °C	856.24 µS/cm	1.19 mg/L	2.57 NTU	65.2 mV	13.09 ft	200.00 ml/min
8/17/2021 2:47 PM	20:00	6.77 pH	21.73 °C	852.72 µS/cm	0.86 mg/L	2.35 NTU	68.0 mV	13.09 ft	200.00 ml/min
8/17/2021 2:52 PM	25:00	6.76 pH	21.69 °C	851.37 µS/cm	0.73 mg/L	2.19 NTU	56.2 mV	13.09 ft	200.00 ml/min
8/17/2021 2:57 PM	30:00	6.75 pH	21.73 °C	849.06 µS/cm	0.62 mg/L	2.08 NTU	55.9 mV	13.09 ft	200.00 ml/min
8/17/2021 3:02 PM	35:00	6.75 pH	21.78 °C	846.13 µS/cm	0.57 mg/L	2.13 NTU	55.7 mV	13.09 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-10	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/18/2021 4:23:46 PM

Project: GP-Plant Hammond

Operator Name: Connor Cain

Location Name: HGWC-11 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 15.78 ft Total Depth: 25.78 ft Initial Depth to Water: 13.04 ft	Pump Type: Peristaltic Tubing Type: Polyethylene Pump Intake From TOC: 20.78 ft Estimated Total Volume Pumped: 7 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.06 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Sunny 96 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/18/2021 4:23 PM	00:00	6.44 pH	27.77 °C	780.23 µS/cm	1.21 mg/L	1.64 NTU	91.2 mV	13.10 ft	200.00 ml/min
8/18/2021 4:28 PM	05:00	6.08 pH	23.92 °C	816.52 µS/cm	1.03 mg/L	1.77 NTU	111.3 mV	13.10 ft	200.00 ml/min
8/18/2021 4:33 PM	10:00	6.10 pH	23.30 °C	817.05 µS/cm	0.82 mg/L	0.84 NTU	110.8 mV	13.10 ft	200.00 ml/min
8/18/2021 4:38 PM	15:00	6.10 pH	23.48 °C	820.68 µS/cm	0.88 mg/L	0.79 NTU	107.7 mV	13.10 ft	200.00 ml/min
8/18/2021 4:43 PM	20:00	6.10 pH	23.34 °C	814.04 µS/cm	0.88 mg/L	0.82 NTU	105.3 mV	13.10 ft	200.00 ml/min
8/18/2021 4:48 PM	25:00	6.11 pH	23.34 °C	809.72 µS/cm	0.75 mg/L	0.68 NTU	103.9 mV	13.10 ft	200.00 ml/min
8/18/2021 4:53 PM	30:00	6.10 pH	23.44 °C	806.56 µS/cm	0.77 mg/L	0.77 NTU	102.2 mV	13.10 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-11	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/18/2021 2:32:35 PM

Project: GP-Plant Hammond

Operator Name: Connor Cain

Location Name: HGWC-12 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 25.68 ft Total Depth: 35.68 ft Initial Depth to Water: 13.09 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 30.68 ft Estimated Total Volume Pumped: 7 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Sunny, 92 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/18/2021 2:32 PM	00:00	6.94 pH	27.17 °C	970.41 µS/cm	1.00 mg/L	7.38 NTU	-11.1 mV	13.09 ft	200.00 ml/min
8/18/2021 2:37 PM	05:00	6.92 pH	22.33 °C	986.96 µS/cm	0.45 mg/L	8.96 NTU	22.3 mV	13.09 ft	200.00 ml/min
8/18/2021 2:42 PM	10:00	6.91 pH	21.87 °C	993.26 µS/cm	0.27 mg/L	5.58 NTU	21.9 mV	13.09 ft	200.00 ml/min
8/18/2021 2:47 PM	15:00	6.90 pH	21.85 °C	996.06 µS/cm	0.19 mg/L	5.15 NTU	24.2 mV	13.09 ft	200.00 ml/min
8/18/2021 2:52 PM	20:00	6.90 pH	21.66 °C	994.27 µS/cm	0.20 mg/L	3.65 NTU	26.5 mV	13.09 ft	200.00 ml/min
8/18/2021 2:57 PM	25:00	6.89 pH	21.73 °C	997.97 µS/cm	0.31 mg/L	3.03 NTU	27.6 mV	13.09 ft	200.00 ml/min
8/18/2021 3:02 PM	30:00	6.89 pH	21.65 °C	999.90 µS/cm	0.16 mg/L	2.69 NTU	28.7 mV	13.09 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-12	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/19/2021 9:42:58 AM

Project: GP-Plant Hammond

Operator Name: Connor Cain

Location Name: HGWC-13 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 35.07 ft Total Depth: 45.07 ft Initial Depth to Water: 23.19 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 40.07 ft Estimated Total Volume Pumped: 12 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.09 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Sunny, 82 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/19/2021 9:42 AM	00:00	7.17 pH	22.58 °C	1,005.1 µS/cm	2.93 mg/L	32.30 NTU	-48.1 mV	23.25 ft	200.00 ml/min
8/19/2021 9:47 AM	05:00	7.27 pH	21.13 °C	1,013.2 µS/cm	1.73 mg/L	29.20 NTU	-53.5 mV	23.28 ft	200.00 ml/min
8/19/2021 9:52 AM	10:00	7.31 pH	21.11 °C	1,017.1 µS/cm	1.55 mg/L	26.40 NTU	-66.8 mV	23.28 ft	200.00 ml/min
8/19/2021 9:57 AM	15:00	7.34 pH	21.11 °C	1,017.1 µS/cm	1.54 mg/L	20.20 NTU	-69.8 mV	23.28 ft	200.00 ml/min
8/19/2021 10:02 AM	20:00	7.35 pH	21.13 °C	1,018.3 µS/cm	1.54 mg/L	15.90 NTU	-72.1 mV	23.28 ft	200.00 ml/min
8/19/2021 10:07 AM	25:00	7.36 pH	21.24 °C	1,018.0 µS/cm	1.24 mg/L	12.70 NTU	-88.5 mV	23.28 ft	200.00 ml/min
8/19/2021 10:12 AM	30:00	7.36 pH	21.38 °C	1,026.5 µS/cm	1.36 mg/L	10.35 NTU	-73.3 mV	23.28 ft	200.00 ml/min
8/19/2021 10:17 AM	35:00	7.37 pH	21.37 °C	1,015.8 µS/cm	1.27 mg/L	8.83 NTU	-73.1 mV	23.28 ft	200.00 ml/min
8/19/2021 10:22 AM	40:00	7.37 pH	21.42 °C	1,017.8 µS/cm	1.71 mg/L	6.98 NTU	-73.6 mV	23.28 ft	200.00 ml/min
8/19/2021 10:27 AM	45:00	7.38 pH	21.29 °C	1,018.3 µS/cm	1.35 mg/L	5.74 NTU	-72.5 mV	23.28 ft	200.00 ml/min
8/19/2021 10:32 AM	50:00	7.38 pH	21.35 °C	1,019.3 µS/cm	1.38 mg/L	4.93 NTU	-71.9 mV	23.28 ft	200.00 ml/min
8/19/2021 10:37 AM	55:00	7.38 pH	21.42 °C	1,018.7 µS/cm	1.24 mg/L	4.63 NTU	-71.6 mV	23.28 ft	200.00 ml/min

Samples

Sample ID:	Description:
HGWC-13	Grab sample.
DUP-1	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/17/2021 9:16:06 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: MW-5 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 20.82 ft Initial Depth to Water: 16.8 ft Total Depth: 30.82 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 25.82 ft Estimated Total Volume Pumped: 6 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.15 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Rainy, 70 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/17/2021 9:16 AM	00:00	6.25 pH	20.83 °C	489.87 µS/cm	6.40 mg/L	4.39 NTU	120.9 mV	16.95 ft	200.00 ml/min
8/17/2021 9:21 AM	05:00	5.89 pH	19.27 °C	465.64 µS/cm	1.61 mg/L	2.60 NTU	105.5 mV	16.95 ft	200.00 ml/min
8/17/2021 9:26 AM	10:00	5.88 pH	18.78 °C	470.65 µS/cm	1.27 mg/L	2.07 NTU	94.4 mV	16.95 ft	200.00 ml/min
8/17/2021 9:31 AM	15:00	5.91 pH	18.77 °C	479.98 µS/cm	1.07 mg/L	2.15 NTU	119.0 mV	16.95 ft	200.00 ml/min
8/17/2021 9:36 AM	20:00	5.94 pH	18.75 °C	487.17 µS/cm	0.88 mg/L	1.26 NTU	114.7 mV	16.95 ft	200.00 ml/min
8/17/2021 9:41 AM	25:00	5.97 pH	18.80 °C	493.41 µS/cm	0.83 mg/L	1.08 NTU	83.6 mV	16.95 ft	200.00 ml/min
8/17/2021 9:46 AM	30:00	5.99 pH	18.82 °C	499.33 µS/cm	0.79 mg/L	1.40 NTU	104.9 mV	16.95 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-5	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/17/2021 9:00:11 AM

Project: GP-Plant Hammond

Operator Name: Ashley Ramsey

Location Name: MW-6 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 23 ft Total Depth: 33.00 ft Initial Depth to Water: 16.99 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 28 ft Estimated Total Volume Pumped: 6 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Five bottles: Metals, TDS, Inorganics, radium.

Weather Conditions:

Rain, 78 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/17/2021 9:00 AM	00:00	6.97 pH	21.68 °C	990.47 µS/cm	2.44 mg/L	21.30 NTU	-39.6 mV	16.99 ft	200.00 ml/min
8/17/2021 9:05 AM	05:00	6.87 pH	20.71 °C	997.54 µS/cm	0.30 mg/L	12.92 NTU	-14.6 mV	17.01 ft	200.00 ml/min
8/17/2021 9:10 AM	10:00	6.87 pH	20.63 °C	995.90 µS/cm	0.29 mg/L	3.79 NTU	-15.3 mV	17.01 ft	200.00 ml/min
8/17/2021 9:11 AM	11:39	6.87 pH	20.61 °C	996.18 µS/cm	0.29 mg/L	--	-21.2 mV	17.01 ft	200.00 ml/min
8/17/2021 9:15 AM	15:38	6.87 pH	20.57 °C	995.86 µS/cm	0.25 mg/L	3.24 NTU	-19.5 mV	17.01 ft	200.00 ml/min
8/17/2021 9:20 AM	20:38	6.87 pH	20.53 °C	994.30 µS/cm	0.20 mg/L	3.76 NTU	-10.6 mV	17.01 ft	200.00 ml/min
8/17/2021 9:25 AM	25:38	6.86 pH	20.57 °C	994.74 µS/cm	0.19 mg/L	2.79 NTU	-10.0 mV	17.01 ft	200.00 ml/min
8/17/2021 9:30 AM	30:38	6.86 pH	20.57 °C	994.31 µS/cm	0.18 mg/L	2.56 NTU	-9.3 mV	17.01 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-6	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/17/2021 2:24:54 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: MW-7 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 16.8 ft Total Depth: 26.80 ft Initial Depth to Water: 12.7 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 21.9 ft Estimated Total Volume Pumped: 6 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

5 Bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Rainy, 70 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/17/2021 2:24 PM	00:00	7.82 pH	26.58 °C	0.00 µS/cm	7.97 mg/L	1.43 NTU	41.1 mV	12.70 ft	200.00 ml/min
8/17/2021 2:29 PM	05:00	6.95 pH	20.20 °C	583.20 µS/cm	1.06 mg/L	1.86 NTU	57.3 mV	12.70 ft	200.00 ml/min
8/17/2021 2:34 PM	10:00	6.92 pH	20.29 °C	562.41 µS/cm	0.73 mg/L	1.47 NTU	74.7 mV	12.70 ft	200.00 ml/min
8/17/2021 2:39 PM	15:00	6.89 pH	20.55 °C	546.73 µS/cm	0.62 mg/L	1.64 NTU	78.8 mV	12.70 ft	200.00 ml/min
8/17/2021 2:44 PM	20:00	6.87 pH	20.69 °C	539.93 µS/cm	0.60 mg/L	1.06 NTU	81.0 mV	12.70 ft	200.00 ml/min
8/17/2021 2:49 PM	25:00	6.87 pH	20.56 °C	534.16 µS/cm	0.60 mg/L	1.18 NTU	82.1 mV	12.70 ft	200.00 ml/min
8/17/2021 2:54 PM	30:00	6.88 pH	20.47 °C	536.39 µS/cm	0.58 mg/L	1.05 NTU	63.3 mV	12.70 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-7	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/18/2021 2:28:18 PM

Project: GP-Plant Hammond

Operator Name: Ashley Ramsey

Location Name: MW-19 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 19.87 ft Total Depth: 29.87 ft Initial Depth to Water: 11.37 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 22.87 ft Estimated Total Volume Pumped: 8 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Five bottles: Metals, TDS, Inorganics, radium.

Weather Conditions:

Sunny, 91 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/18/2021 2:28 PM	00:00	6.32 pH	29.89 °C	632.46 µS/cm	2.45 mg/L	3.75 NTU	66.4 mV	11.37 ft	200.00 ml/min
8/18/2021 2:33 PM	05:00	6.30 pH	25.23 °C	712.90 µS/cm	0.87 mg/L	9.91 NTU	83.7 mV	11.37 ft	200.00 ml/min
8/18/2021 2:38 PM	10:00	6.29 pH	24.87 °C	714.34 µS/cm	0.79 mg/L	11.30 NTU	112.3 mV	11.37 ft	200.00 ml/min
8/18/2021 2:43 PM	15:00	6.29 pH	24.51 °C	713.49 µS/cm	0.50 mg/L	13.68 NTU	116.0 mV	11.37 ft	200.00 ml/min
8/18/2021 2:48 PM	20:00	6.29 pH	24.53 °C	715.74 µS/cm	0.38 mg/L	10.53 NTU	118.6 mV	11.37 ft	200.00 ml/min
8/18/2021 2:53 PM	25:00	6.29 pH	24.18 °C	712.60 µS/cm	0.29 mg/L	9.36 NTU	120.4 mV	11.37 ft	200.00 ml/min
8/18/2021 2:58 PM	30:00	6.29 pH	24.02 °C	716.37 µS/cm	0.24 mg/L	7.73 NTU	121.4 mV	11.37 ft	200.00 ml/min
8/18/2021 3:03 PM	35:00	6.29 pH	24.51 °C	714.15 µS/cm	0.22 mg/L	6.48 NTU	92.1 mV	11.37 ft	200.00 ml/min
8/18/2021 3:08 PM	40:00	6.28 pH	24.69 °C	715.29 µS/cm	0.20 mg/L	4.78 NTU	121.3 mV	11.37 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-19	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/17/2021 11:51:28 AM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: MW-20 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 24.36 ft Total Depth: 34.36 Initial Depth to Water: 14.22 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 29.36 ft Estimated Total Volume Pumped: 11 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.32 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Five bottles: Metals, Inorganics, TDS, Radium.

Weather Conditions:

Rainy, 70 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/17/2021 11:51 AM	00:00	6.66 pH	20.67 °C	660.83 µS/cm	3.88 mg/L	5.59 NTU	-71.9 mV	14.22 ft	200.00 ml/min
8/17/2021 11:54 AM	02:33	6.74 pH	19.80 °C	612.85 µS/cm	1.76 mg/L	5.59 NTU	-65.5 mV	14.22 ft	200.00 ml/min
8/17/2021 11:59 AM	07:33	6.86 pH	18.98 °C	651.65 µS/cm	0.85 mg/L	7.60 NTU	-51.3 mV	14.48 ft	200.00 ml/min
8/17/2021 12:04 PM	12:33	6.94 pH	18.91 °C	668.83 µS/cm	0.41 mg/L	5.99 NTU	-60.5 mV	14.65 ft	200.00 ml/min
8/17/2021 12:09 PM	17:33	6.99 pH	18.89 °C	677.26 µS/cm	0.23 mg/L	7.52 NTU	-63.4 mV	14.54 ft	200.00 ml/min
8/17/2021 12:12 PM	21:09	7.00 pH	18.87 °C	679.56 µS/cm	0.27 mg/L	--	-66.2 mV	14.54 ft	200.00 ml/min
8/17/2021 12:13 PM	21:43	7.00 pH	18.87 °C	680.47 µS/cm	0.26 mg/L	--	-62.9 mV	14.54 ft	200.00 ml/min
8/17/2021 12:18 PM	26:43	7.02 pH	18.87 °C	682.39 µS/cm	0.41 mg/L	8.00 NTU	-64.5 mV	14.54 ft	200.00 ml/min
8/17/2021 12:23 PM	31:43	7.02 pH	18.84 °C	683.09 µS/cm	0.37 mg/L	8.86 NTU	-64.4 mV	14.54 ft	200.00 ml/min
8/17/2021 12:28 PM	36:43	7.03 pH	18.83 °C	683.88 µS/cm	0.54 mg/L	6.97 NTU	-63.6 mV	14.54 ft	200.00 ml/min
8/17/2021 12:33 PM	41:43	7.04 pH	18.82 °C	686.15 µS/cm	0.36 mg/L	--	-62.4 mV	14.54 ft	200.00 ml/min
8/17/2021 12:38 PM	46:43	7.05 pH	18.83 °C	686.81 µS/cm	0.51 mg/L	5.11 NTU	-80.8 mV	14.54 ft	200.00 ml/min
8/17/2021 12:43 PM	51:43	7.05 pH	18.82 °C	687.37 µS/cm	0.58 mg/L	4.51 NTU	-62.0 mV	14.54 ft	200.00 ml/min

8/17/2021 12:48 PM	56:43	7.05 pH	18.82 °C	687.70 µS/cm	0.40 mg/L	4.09 NTU	-78.9 mV	14.54 ft	200.00 ml/min
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Samples

Sample ID:	Description:
MW-20	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/19/2021 12:02:12 PM

Project: GP-Plant Hammond

Operator Name: Connor Cain

Location Name: MW-24D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 63.11 ft Total Depth: 73.11 ft Initial Depth to Water: 26.37 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 68.11 ft Estimated Total Volume Pumped: 7 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.05 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Cloudy, 88 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/19/2021 12:02 PM	00:00	7.49 pH	25.05 °C	622.77 µS/cm	1.55 mg/L	0.55 NTU	-161.1 mV	26.39 ft	200.00 ml/min
8/19/2021 12:07 PM	05:00	7.59 pH	21.91 °C	645.60 µS/cm	0.50 mg/L	0.38 NTU	-74.0 mV	26.42 ft	200.00 ml/min
8/19/2021 12:12 PM	10:00	7.61 pH	21.60 °C	649.36 µS/cm	0.25 mg/L	0.43 NTU	-76.0 mV	26.42 ft	200.00 ml/min
8/19/2021 12:17 PM	15:00	7.61 pH	21.60 °C	648.50 µS/cm	0.19 mg/L	0.50 NTU	-29.2 mV	26.42 ft	200.00 ml/min
8/19/2021 12:22 PM	20:00	7.61 pH	21.74 °C	648.20 µS/cm	0.17 mg/L	0.42 NTU	-47.6 mV	26.42 ft	200.00 ml/min
8/19/2021 12:27 PM	25:00	7.61 pH	21.87 °C	648.17 µS/cm	0.19 mg/L	0.36 NTU	-16.8 mV	26.42 ft	200.00 ml/min
8/19/2021 12:32 PM	30:00	7.61 pH	21.91 °C	645.15 µS/cm	0.27 mg/L	0.33 NTU	-13.7 mV	26.42 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-24D	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/19/2021 4:09:12 PM

Project: GP-Plant Hammond

Operator Name: Connor Cain

Location Name: MW-25D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 53.03 ft Total Depth: 63.03 ft Initial Depth to Water: 13.01 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 58.03 ft Estimated Total Volume Pumped: 5 Liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 3.23 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Rain, 78 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/19/2021 4:09 PM	00:00	7.56 pH	22.12 °C	666.95 µS/cm	0.60 mg/L	1.55 NTU	-140.7 mV	13.88 ft	200.00 ml/min
8/19/2021 4:14 PM	05:00	7.63 pH	20.47 °C	664.82 µS/cm	0.24 mg/L	0.79 NTU	-152.2 mV	15.24 ft	200.00 ml/min
8/19/2021 4:19 PM	10:00	7.66 pH	20.80 °C	669.38 µS/cm	0.31 mg/L	0.31 NTU	-204.1 mV	16.01 ft	200.00 ml/min
8/19/2021 4:24 PM	15:00	7.66 pH	21.32 °C	666.13 µS/cm	0.33 mg/L	1.01 NTU	-210.1 mV	16.01 ft	100.00 ml/min
8/19/2021 4:29 PM	20:00	7.68 pH	21.37 °C	663.56 µS/cm	0.36 mg/L	0.31 NTU	-192.2 mV	16.06 ft	100.00 ml/min
8/19/2021 4:34 PM	25:00	7.69 pH	21.46 °C	662.37 µS/cm	0.45 mg/L	0.24 NTU	-210.1 mV	16.19 ft	100.00 ml/min
8/19/2021 4:39 PM	30:00	7.69 pH	21.69 °C	661.54 µS/cm	0.47 mg/L	0.99 NTU	-190.3 mV	16.24 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW-25D	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/17/2021 10:31:41 AM

Project: GP-Plant Hammond

Operator Name: Ashley Ramsey

Location Name: MW-26D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 67.91 ft Total Depth: 77.91 ft Initial Depth to Water: 14.34 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 72.91 ft Estimated Total Volume Pumped: 6 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.05 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728623
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Test Notes:

Five bottles: Metals, TDS, Inorganics, radium.

Weather Conditions:

Rain, 79 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/17/2021 10:31 AM	00:00	7.61 pH	20.79 °C	962.26 µS/cm	3.09 mg/L	2.00 NTU	53.9 mV	14.34 ft	200.00 ml/min
8/17/2021 10:36 AM	05:00	7.28 pH	19.99 °C	1,040.9 µS/cm	1.19 mg/L	4.81 NTU	-60.6 mV	14.39 ft	200.00 ml/min
8/17/2021 10:41 AM	10:00	7.21 pH	19.94 °C	1,041.1 µS/cm	0.61 mg/L	4.69 NTU	-46.8 mV	14.39 ft	200.00 ml/min
8/17/2021 10:46 AM	15:00	7.17 pH	19.86 °C	1,045.2 µS/cm	0.36 mg/L	4.53 NTU	-27.3 mV	14.39 ft	200.00 ml/min
8/17/2021 10:51 AM	20:00	7.15 pH	19.86 °C	1,046.6 µS/cm	0.25 mg/L	4.10 NTU	-24.1 mV	14.39 ft	200.00 ml/min
8/17/2021 10:56 AM	25:00	7.15 pH	19.86 °C	1,045.5 µS/cm	0.21 mg/L	3.69 NTU	-22.1 mV	14.39 ft	200.00 ml/min
8/17/2021 11:01 AM	30:00	7.14 pH	19.82 °C	1,046.4 µS/cm	0.21 mg/L	3.46 NTU	-21.0 mV	14.39 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-26D	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/17/2021 9:27:37 AM

Project: GP-Plant Hammond

Operator Name: Connor Cain

Location Name: MW-27D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 52.97 ft Initial Depth to Water: 7.99 ft Total Depth: 62.97ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 57.97 ft Estimated Total Volume Pumped: 47 liter Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 36.97 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Rain, 72 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/17/2021 9:27 AM	00:00	7.55 pH	21.15 °C	439.57 µS/cm	1.96 mg/L	0.61 NTU	114.3 mV	8.32 ft	100.00 ml/min
8/17/2021 9:32 AM	05:00	7.62 pH	20.74 °C	476.37 µS/cm	1.04 mg/L	2.05 NTU	-114.5 mV	9.31 ft	100.00 ml/min
8/17/2021 9:37 AM	10:00	7.64 pH	20.71 °C	476.38 µS/cm	0.96 mg/L	2.80 NTU	-115.8 mV	9.64 ft	100.00 ml/min
8/17/2021 9:39 AM	11:52	7.65 pH	20.71 °C	474.34 µS/cm	0.80 mg/L	2.80 NTU	-112.4 mV	9.64 ft	100.00 ml/min
8/17/2021 9:44 AM	16:52	7.65 pH	20.68 °C	461.05 µS/cm	0.69 mg/L	1.38 NTU	-88.2 mV	10.31 ft	100.00 ml/min
8/17/2021 9:49 AM	21:52	7.63 pH	20.66 °C	442.01 µS/cm	0.86 mg/L	1.64 NTU	-97.1 mV	10.98 ft	100.00 ml/min
8/17/2021 9:54 AM	26:52	7.62 pH	20.62 °C	432.90 µS/cm	0.91 mg/L	1.59 NTU	-88.4 mV	11.55 ft	100.00 ml/min
8/17/2021 9:59 AM	31:52	7.61 pH	20.57 °C	426.76 µS/cm	0.68 mg/L	1.34 NTU	-79.6 mV	12.16 ft	100.00 ml/min
8/17/2021 10:04 AM	36:52	7.62 pH	20.52 °C	425.00 µS/cm	0.91 mg/L	1.04 NTU	-72.2 mV	12.68 ft	100.00 ml/min
8/17/2021 10:09 AM	41:52	7.62 pH	20.48 °C	420.70 µS/cm	1.08 mg/L	1.25 NTU	-68.7 mV	13.30 ft	100.00 ml/min
8/17/2021 10:14 AM	46:52	7.62 pH	20.48 °C	418.03 µS/cm	1.90 mg/L	1.52 NTU	-94.5 mV	13.77 ft	100.00 ml/min
8/17/2021 10:19 AM	51:52	7.62 pH	20.43 °C	422.68 µS/cm	0.90 mg/L	1.76 NTU	-73.9 mV	14.32 ft	100.00 ml/min
8/17/2021 10:24 AM	56:52	7.62 pH	20.42 °C	422.49 µS/cm	0.85 mg/L	1.41 NTU	-67.6 mV	14.76 ft	100.00 ml/min

8/17/2021 10:29 AM	01:01:52	7.62 pH	20.39 °C	424.74 µS/cm	2.51 mg/L	1.39 NTU	-74.3 mV	15.33 ft	100.00 ml/min
8/17/2021 10:34 AM	01:06:52	7.61 pH	20.39 °C	421.23 µS/cm	1.18 mg/L	1.28 NTU	-98.2 mV	15.78 ft	100.00 ml/min
8/17/2021 10:39 AM	01:11:52	7.63 pH	20.39 °C	423.56 µS/cm	1.73 mg/L	1.46 NTU	-66.1 mV	16.26 ft	100.00 ml/min
8/17/2021 10:44 AM	01:16:52	7.63 pH	20.35 °C	422.69 µS/cm	0.85 mg/L	1.23 NTU	-66.9 mV	16.86 ft	100.00 ml/min
8/17/2021 10:49 AM	01:21:52	7.63 pH	20.33 °C	422.97 µS/cm	1.13 mg/L	1.41 NTU	-65.7 mV	17.28 ft	100.00 ml/min
8/17/2021 10:51 AM	01:24:13	7.63 pH	20.34 °C	423.33 µS/cm	0.69 mg/L	1.41 NTU	-64.0 mV	17.28 ft	100.00 ml/min
8/17/2021 10:56 AM	01:29:13	7.62 pH	20.33 °C	423.83 µS/cm	1.35 mg/L	3.35 NTU	-76.4 mV	17.28 ft	100.00 ml/min
8/17/2021 11:01 AM	01:34:13	7.64 pH	20.31 °C	425.39 µS/cm	0.86 mg/L	1.62 NTU	-80.6 mV	18.38 ft	100.00 ml/min
8/17/2021 11:06 AM	01:39:13	7.64 pH	20.28 °C	425.01 µS/cm	1.96 mg/L	1.31 NTU	-81.3 mV	18.78 ft	100.00 ml/min
8/17/2021 11:11 AM	01:44:13	7.64 pH	20.26 °C	423.55 µS/cm	2.06 mg/L	1.35 NTU	-79.4 mV	19.21 ft	100.00 ml/min
8/17/2021 11:16 AM	01:49:13	7.64 pH	20.23 °C	424.15 µS/cm	1.88 mg/L	1.07 NTU	-79.0 mV	19.66 ft	100.00 ml/min
8/17/2021 11:21 AM	01:54:13	7.63 pH	20.22 °C	431.23 µS/cm	1.56 mg/L	1.66 NTU	-77.6 mV	20.07 ft	100.00 ml/min
8/17/2021 11:26 AM	01:59:13	7.64 pH	20.22 °C	430.34 µS/cm	1.36 mg/L	1.23 NTU	-76.4 mV	20.52 ft	100.00 ml/min
8/17/2021 11:31 AM	02:04:13	7.65 pH	20.21 °C	431.34 µS/cm	3.09 mg/L	1.42 NTU	-78.0 mV	20.92 ft	100.00 ml/min
8/17/2021 11:36 AM	02:09:13	7.64 pH	20.21 °C	429.83 µS/cm	0.62 mg/L	1.45 NTU	-76.5 mV	21.30 ft	100.00 ml/min
8/17/2021 11:41 AM	02:14:13	7.64 pH	20.21 °C	428.72 µS/cm	0.91 mg/L	1.22 NTU	-68.5 mV	21.68 ft	100.00 ml/min
8/17/2021 11:46 AM	02:19:13	7.65 pH	20.17 °C	427.74 µS/cm	0.88 mg/L	1.26 NTU	-90.1 mV	22.11 ft	100.00 ml/min
8/17/2021 11:51 AM	02:24:13	7.64 pH	20.17 °C	427.00 µS/cm	1.86 mg/L	1.20 NTU	-88.8 mV	22.68 ft	100.00 ml/min
8/17/2021 11:56 AM	02:29:13	7.65 pH	20.16 °C	429.29 µS/cm	2.00 mg/L	0.80 NTU	-89.3 mV	22.82 ft	100.00 ml/min
8/17/2021 12:01 PM	02:34:13	7.65 pH	20.15 °C	428.04 µS/cm	2.20 mg/L	0.96 NTU	-90.7 mV	23.14 ft	100.00 ml/min
8/17/2021 12:06 PM	02:39:13	7.64 pH	20.13 °C	430.16 µS/cm	1.01 mg/L	2.14 NTU	-88.4 mV	23.53 ft	100.00 ml/min
8/17/2021 12:11 PM	02:44:13	7.65 pH	20.13 °C	428.23 µS/cm	0.79 mg/L	1.68 NTU	-88.6 mV	23.88 ft	100.00 ml/min
8/17/2021 12:16 PM	02:49:13	7.66 pH	20.16 °C	429.90 µS/cm	1.05 mg/L	0.93 NTU	-106.7 mV	24.20 ft	100.00 ml/min
8/17/2021 12:21 PM	02:54:13	7.66 pH	20.17 °C	431.01 µS/cm	1.17 mg/L	0.77 NTU	-85.3 mV	24.58 ft	100.00 ml/min
8/17/2021 12:26 PM	02:59:13	7.66 pH	20.17 °C	432.27 µS/cm	0.78 mg/L	1.62 NTU	-84.5 mV	24.92 ft	100.00 ml/min
8/17/2021 12:31 PM	03:04:13	7.66 pH	20.22 °C	432.04 µS/cm	0.63 mg/L	0.87 NTU	-103.1 mV	25.24 ft	100.00 ml/min
8/17/2021 12:36 PM	03:09:13	7.66 pH	20.24 °C	430.56 µS/cm	0.66 mg/L	0.79 NTU	-85.3 mV	25.56 ft	100.00 ml/min
8/17/2021 12:41 PM	03:14:13	7.66 pH	20.26 °C	431.29 µS/cm	0.52 mg/L	--	-85.7 mV	25.95 ft	250.00 ml/min
8/17/2021 12:46 PM	03:19:13	7.65 pH	19.32 °C	421.72 µS/cm	1.31 mg/L	--	-99.8 mV	27.03 ft	250.00 ml/min

8/17/2021 12:51 PM	03:24:13	7.64 pH	19.24 °C	416.38 µS/cm	0.78 mg/L	--	-69.7 mV	29.35 ft	250.00 ml/min
8/17/2021 12:56 PM	03:29:13	7.64 pH	19.26 °C	418.59 µS/cm	0.41 mg/L	1.23 NTU	-67.2 mV	31.15 ft	100.00 ml/min
8/17/2021 1:01 PM	03:34:13	7.64 pH	19.95 °C	419.58 µS/cm	0.50 mg/L	0.97 NTU	-64.5 mV	31.57 ft	100.00 ml/min
8/17/2021 1:06 PM	03:39:13	7.65 pH	20.12 °C	423.49 µS/cm	0.44 mg/L	0.89 NTU	-76.3 mV	31.90 ft	100.00 ml/min
8/17/2021 1:11 PM	03:44:13	7.66 pH	20.15 °C	428.62 µS/cm	0.40 mg/L	1.13 NTU	-83.3 mV	32.24 ft	100.00 ml/min
8/17/2021 1:16 PM	03:49:13	7.67 pH	20.22 °C	433.44 µS/cm	0.40 mg/L	1.66 NTU	-84.1 mV	32.63 ft	100.00 ml/min
8/17/2021 1:21 PM	03:54:13	7.67 pH	20.29 °C	436.70 µS/cm	0.26 mg/L	2.16 NTU	-84.0 mV	32.98 ft	100.00 ml/min
8/17/2021 1:26 PM	03:59:13	7.67 pH	20.27 °C	436.23 µS/cm	0.33 mg/L	1.64 NTU	-83.2 mV	33.24 ft	100.00 ml/min
8/17/2021 1:31 PM	04:04:13	7.67 pH	20.26 °C	432.32 µS/cm	0.34 mg/L	--	-99.9 mV	--	100.00 ml/min
8/17/2021 1:36 PM	04:09:13	7.65 pH	19.32 °C	424.72 µS/cm	0.40 mg/L	--	-85.1 mV	35.60 ft	250.00 ml/min
8/17/2021 1:41 PM	04:14:13	7.65 pH	19.24 °C	421.55 µS/cm	0.44 mg/L	--	-78.3 mV	37.40 ft	250.00 ml/min
8/17/2021 1:46 PM	04:19:13	7.65 pH	19.24 °C	420.10 µS/cm	0.85 mg/L	--	-79.3 mV	--	250.00 ml/min
8/17/2021 1:51 PM	04:24:13	7.65 pH	19.42 °C	427.01 µS/cm	0.25 mg/L	--	-81.6 mV	40.16 ft	250.00 ml/min
8/17/2021 1:54 PM	04:27:18	7.64 pH	20.06 °C	424.40 µS/cm	0.26 mg/L	1.29 NTU	-82.4 mV	40.35 ft	100.00 ml/min
8/17/2021 1:59 PM	04:32:18	7.67 pH	20.26 °C	429.26 µS/cm	0.26 mg/L	1.51 NTU	-92.8 mV	40.54 ft	100.00 ml/min
8/17/2021 2:04 PM	04:37:18	7.68 pH	20.40 °C	432.40 µS/cm	0.34 mg/L	1.64 NTU	-113.2 mV	40.68 ft	100.00 ml/min
8/17/2021 2:09 PM	04:42:18	7.68 pH	20.84 °C	433.90 µS/cm	0.35 mg/L	1.09 NTU	-117.9 mV	40.92 ft	100.00 ml/min
8/17/2021 2:14 PM	04:47:18	7.69 pH	21.11 °C	435.73 µS/cm	0.41 mg/L	1.62 NTU	-108.0 mV	41.14 ft	100.00 ml/min
8/17/2021 2:19 PM	04:52:18	7.69 pH	21.29 °C	433.66 µS/cm	0.31 mg/L	1.25 NTU	-108.2 mV	41.36 ft	100.00 ml/min
8/17/2021 2:24 PM	04:57:18	7.70 pH	21.23 °C	430.89 µS/cm	0.41 mg/L	1.10 NTU	-107.6 mV	41.59 ft	100.00 ml/min
8/17/2021 2:29 PM	05:02:18	7.71 pH	21.14 °C	433.49 µS/cm	0.46 mg/L	0.86 NTU	-106.3 mV	41.89 ft	100.00 ml/min
8/17/2021 2:34 PM	05:07:18	7.71 pH	21.40 °C	433.34 µS/cm	0.60 mg/L	0.81 NTU	-105.3 mV	42.09 ft	100.00 ml/min
8/17/2021 2:39 PM	05:12:18	7.70 pH	21.54 °C	432.51 µS/cm	0.87 mg/L	0.97 NTU	-121.4 mV	42.22 ft	100.00 ml/min
8/17/2021 2:46 PM	05:19:05	7.70 pH	21.82 °C	434.85 µS/cm	0.45 mg/L	0.66 NTU	-89.6 mV	42.65 ft	100.00 ml/min
8/17/2021 2:51 PM	05:24:05	7.72 pH	21.65 °C	434.42 µS/cm	0.45 mg/L	0.81 NTU	-127.1 mV	42.74 ft	100.00 ml/min
8/17/2021 2:56 PM	05:29:05	7.73 pH	21.79 °C	432.43 µS/cm	0.40 mg/L	0.89 NTU	-127.4 mV	42.87 ft	100.00 ml/min
8/17/2021 3:01 PM	05:34:05	7.72 pH	22.13 °C	430.92 µS/cm	0.38 mg/L	0.70 NTU	-128.1 mV	43.09 ft	100.00 ml/min
8/17/2021 3:06 PM	05:39:05	7.72 pH	21.66 °C	428.67 µS/cm	0.42 mg/L	0.74 NTU	-125.9 mV	43.27 ft	100.00 ml/min
8/17/2021 3:11 PM	05:44:05	7.72 pH	21.42 °C	431.64 µS/cm	0.37 mg/L	0.72 NTU	-125.3 mV	43.40 ft	100.00 ml/min

8/17/2021 3:16 PM	05:49:05	7.73 pH	21.74 °C	429.35 µS/cm	0.42 mg/L	1.76 NTU	-125.8 mV	43.58 ft	100.00 ml/min
8/17/2021 3:21 PM	05:54:05	7.73 pH	21.82 °C	430.85 µS/cm	0.48 mg/L	0.56 NTU	-125.6 mV	43.74 ft	100.00 ml/min
8/17/2021 3:26 PM	05:59:05	7.73 pH	21.84 °C	429.92 µS/cm	0.51 mg/L	0.59 NTU	-124.6 mV	43.90 ft	100.00 ml/min
8/17/2021 3:31 PM	06:04:05	7.74 pH	21.87 °C	428.35 µS/cm	0.41 mg/L	0.67 NTU	-123.8 mV	44.09 ft	100.00 ml/min
8/17/2021 3:36 PM	06:09:05	7.73 pH	21.87 °C	427.45 µS/cm	0.45 mg/L	0.56 NTU	-124.4 mV	44.26 ft	100.00 ml/min
8/17/2021 3:41 PM	06:14:05	7.73 pH	21.94 °C	425.61 µS/cm	0.68 mg/L	0.50 NTU	-124.7 mV	44.40 ft	100.00 ml/min
8/17/2021 3:46 PM	06:19:05	7.74 pH	22.00 °C	423.75 µS/cm	1.06 mg/L	0.48 NTU	-111.5 mV	44.53 ft	100.00 ml/min
8/17/2021 3:51 PM	06:24:05	7.74 pH	22.00 °C	428.98 µS/cm	0.53 mg/L	1.05 NTU	-111.7 mV	44.67 ft	100.00 ml/min
8/17/2021 3:56 PM	06:29:05	7.74 pH	22.04 °C	428.97 µS/cm	0.59 mg/L	0.51 NTU	-125.7 mV	44.81 ft	100.00 ml/min
8/17/2021 4:01 PM	06:34:05	7.75 pH	22.17 °C	427.18 µS/cm	0.53 mg/L	0.34 NTU	-127.0 mV	44.96 ft	100.00 ml/min

Samples

Sample ID:	Description:
MW-27D	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/18/2021 11:55:07 AM

Project: GP-Plant Hammond

Operator Name: Connor Cain

Location Name: MW-28D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 48.14 ft Total Depth: 58.14 ft Initial Depth to Water: 5.38 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 53.14 ft Estimated Total Volume Pumped: 19 Liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.15 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Sunny, 88 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/18/2021 11:55 AM	00:00	7.21 pH	25.82 °C	648.98 µS/cm	0.70 mg/L	13.40 NTU	-151.2 mV	5.45 ft	200.00 ml/min
8/18/2021 12:00 PM	05:00	7.19 pH	22.67 °C	671.06 µS/cm	0.30 mg/L	32.40 NTU	-137.8 mV	5.46 ft	200.00 ml/min
8/18/2021 12:05 PM	10:00	7.18 pH	22.47 °C	677.49 µS/cm	0.39 mg/L	26.80 NTU	-129.3 mV	5.46 ft	200.00 ml/min
8/18/2021 12:10 PM	15:00	7.18 pH	22.45 °C	679.96 µS/cm	0.25 mg/L	21.60 NTU	-123.6 mV	5.51 ft	200.00 ml/min
8/18/2021 12:15 PM	20:00	7.17 pH	22.49 °C	681.40 µS/cm	0.33 mg/L	16.50 NTU	-120.5 mV	5.51 ft	200.00 ml/min
8/18/2021 12:20 PM	25:00	7.17 pH	22.53 °C	660.27 µS/cm	0.48 mg/L	14.30 NTU	-116.5 mV	5.51 ft	200.00 ml/min
8/18/2021 12:25 PM	30:00	7.17 pH	22.40 °C	679.86 µS/cm	0.60 mg/L	11.45 NTU	-113.6 mV	5.52 ft	200.00 ml/min
8/18/2021 12:30 PM	35:00	7.17 pH	22.40 °C	680.04 µS/cm	0.54 mg/L	10.23 NTU	-133.5 mV	5.52 ft	200.00 ml/min
8/18/2021 12:35 PM	40:00	7.18 pH	22.37 °C	678.38 µS/cm	0.74 mg/L	9.02 NTU	-129.8 mV	5.52 ft	200.00 ml/min
8/18/2021 12:40 PM	45:00	7.16 pH	22.45 °C	677.58 µS/cm	0.39 mg/L	7.64 NTU	-100.5 mV	5.52 ft	200.00 ml/min
8/18/2021 12:45 PM	50:00	7.16 pH	22.31 °C	678.40 µS/cm	0.38 mg/L	7.47 NTU	-99.4 mV	5.52 ft	200.00 ml/min
8/18/2021 12:50 PM	55:00	7.16 pH	22.30 °C	677.81 µS/cm	0.52 mg/L	6.81 NTU	-99.3 mV	5.52 ft	200.00 ml/min
8/18/2021 12:55 PM	01:00:00	7.17 pH	22.20 °C	672.75 µS/cm	0.38 mg/L	6.22 NTU	-97.7 mV	5.52 ft	200.00 ml/min

8/18/2021 1:00 PM	01:05:00	7.17 pH	22.29 °C	674.05 µS/cm	0.35 mg/L	5.97 NTU	-95.9 mV	5.52 ft	200.00 ml/min
8/18/2021 1:05 PM	01:10:00	7.17 pH	22.27 °C	673.19 µS/cm	0.44 mg/L	5.86 NTU	-104.6 mV	5.53 ft	200.00 ml/min
8/18/2021 1:10 PM	01:15:00	7.17 pH	22.22 °C	675.14 µS/cm	0.35 mg/L	5.45 NTU	-105.4 mV	5.53 ft	200.00 ml/min
8/18/2021 1:15 PM	01:20:00	7.16 pH	22.29 °C	675.07 µS/cm	0.39 mg/L	5.39 NTU	-106.0 mV	5.53 ft	200.00 ml/min
8/18/2021 1:20 PM	01:25:00	7.16 pH	22.27 °C	683.57 µS/cm	0.39 mg/L	5.24 NTU	-107.2 mV	5.53 ft	200.00 ml/min
8/18/2021 1:25 PM	01:30:00	7.16 pH	22.23 °C	676.40 µS/cm	0.40 mg/L	4.84 NTU	-106.6 mV	5.53 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-28D	Grab sample.

Low-Flow Test Report:

Test Date / Time: 8/16/2021 4:31:23 PM

Project: GP-Plant Hammond

Operator Name: Thomas Kessler

Location Name: MW-29 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 18.21 ft Initial Depth to Water: 8.09 ft Total Depth: 28.21	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 23.21 ft Estimated Total Volume Pumped: 6 liter Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.07 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728634
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Test Notes:

Five bottles: Metals, TDS, Inorganics, Radium.

Weather Conditions:

Cloudy, 85 Degrees.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
8/16/2021 4:31 PM	00:00	6.94 pH	30.33 °C	806.12 µS/cm	3.35 mg/L	13.55 NTU	-99.0 mV	8.09 ft	200.00 ml/min
8/16/2021 4:36 PM	05:00	7.21 pH	22.42 °C	820.44 µS/cm	0.53 mg/L	18.00 NTU	-14.1 mV	8.15 ft	200.00 ml/min
8/16/2021 4:41 PM	10:00	7.18 pH	21.63 °C	829.82 µS/cm	0.37 mg/L	12.00 NTU	-2.0 mV	8.15 ft	200.00 ml/min
8/16/2021 4:46 PM	15:00	7.13 pH	21.45 °C	827.11 µS/cm	0.39 mg/L	11.17 NTU	4.7 mV	8.16 ft	200.00 ml/min
8/16/2021 4:51 PM	20:00	7.10 pH	21.32 °C	825.00 µS/cm	0.32 mg/L	7.60 NTU	6.5 mV	8.16 ft	200.00 ml/min
8/16/2021 4:56 PM	25:00	7.09 pH	21.22 °C	821.96 µS/cm	0.33 mg/L	5.79 NTU	8.0 mV	8.16 ft	200.00 ml/min
8/16/2021 5:01 PM	30:00	7.08 pH	21.08 °C	820.20 µS/cm	0.25 mg/L	4.40 NTU	9.2 mV	8.16 ft	200.00 ml/min

Samples

Sample ID:	Description:
MW-29	Grab sample.

CALIBRATION REPORTS

December 2020

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Vessler Date: 12/15/20 Time: 8:26 Location: 0850
 SmartTroll SS#: 728634 Trench Meter Type: Levelling 202000 SN: 14179-4011
 Weather Conditions: Sunny, cold Facility and Use: Plumje Kammere Project No: 6166581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010005	11.26	4490	4784	4490	±0.5%	Yes	
pH (4)	058121		4.0	4.00	4.00	±0.05%	Yes	
pH (7)	14340057	16.0	7.00	7.13	7.00	±0.15%	Yes	
pH (10)	14320000	11.62	10.00	10.22	10.00	±0.15%	Yes	
ORP (mV)	14460167	8.14	225	246	228	±0.25%	Yes	
DO (%) (Typ. 20% water saturated air sat)			100%	101.25%	100%	±0.5% at 20°C	Yes	
Turbidity (NTU)			0	0.03	0.03	±0.05 NTU	Yes	
Turbidity (NTU)			1	1.08	1.03	±0.05 NTU	Yes	
Turbidity (NTU)			10	10.16	9.71	±0.05 NTU	Yes	

January 2021

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 1/19/2021

Time (Start): 1030

Time (End): 1105

Asset ID: 728L34

Turbidity Meter Type: Lanrite 2020w

S/N: 2289-2612

Weather Conditions: ~~Hot~~ 40 F cloudy

Facility and Unit: Hammord

Project No.: (13658)

Calibration Log

	Standard Lot # - Date of Expiration	Temp. of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2001005 8/2021	9.22	4490	4683	4490	±5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (6)			4	3.94	4	±0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	17340057 8/2021	9.28	7	7.07	7	±0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)		10.72	4	4.05	4.05	±0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check		10.49	7	7.65	7.05	±0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (8)	1926102 8/2021	9.22	10	10.12	10	±0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (8) check		10.39	10	10.04	10.04	±0.15	<input type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	17460167 8/2021	8.94	228	247	228	±2mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (mg/L) (E.g., 100% water saturated air cell)			100	102.04	100	±5% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity # NTU			0	0.45	0.45	±0.2 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1	0.76	0.76	±0.2 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10	10.13	10.13	±0.2 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	



EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 1/20/21

Time Start: 0845

Time/Date: 0910

Smart Call ID: 728474

Today Meter Type: LaMotte 2020w

SN: 2289-2612

Weather Conditions: 70°F sunny

Facility and Use: Hammond

Project No.: 606554

Calibration log

	Standard Lot # - Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	22051 & 025 8/21	12.87	4496	4514.5	4496	- ± 5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4	4.05	4	- ± 0.15U	<input type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check		19.28	4	4.09	4.09	- ± 0.15U	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	19346057 8/21	12.52	7	7.02	7	- ± 0.15U	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check		15.69	7	7.06	7.06	- ± 0.15U	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	1732102 8/21	12.25	10	10.08	10	- ± 0.15U	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check		13.85	13.85 10	10.07	10.07	- ± 0.15U	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19760167 8/21	12.2	228	243.7	226	- ± 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (Type, 100% water saturated air call)			100	99.18	100	- ± 5% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity FNTL			0	0.46	0.46	- ± 0.5NTL	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity I NTL			1	0.77	0.77	- ± 0.5NTL	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTL			10	9.83	9.83	- ± 0.5NTL	<input checked="" type="radio"/> Yes <input type="radio"/> No	

February 2021

EQUIPMENT CALIBRATION LOG

Field Location Thomas Kessler

Date 2/8/21

Time (start) 1425

Time (stop) 1500

Site ID / SN 728541

Tablet Meter Type LaMotte 2120-4

SN: 2280-2612

Weather Conditions sunny, 55°

Facility and Unit Plant Hamilton 2010

Project No. GW 018

Calibration Log

	Standard Lot #: Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	25°	4490	4689.8	4490	±0.5%	Yes No	
pH (4)	08/21	21.32	4.00	4.09	4.00	±0.15%	Yes No	
Mid-Day pH (4) check		22.0	4.00	4.03		±0.15%	Yes No	
pH (7)	19340057 08/21	21.10	7.00	7.44	7.00	±0.15%	Yes No	
Mid-Day pH (7) check		21.83	7.00	7.02		±0.15%	Yes No	
pH (10)	19320162 06/21	21.83	10.00	10.44	10.00	±0.15%	Yes No	
Mid-Day pH (10) check		22.0	10.00	9.96		±0.15%	Yes No	
ORP (mV)	194160167 08/21	21.82	228	221.9	228	±2.0mV	Yes No	
DO (%) (19% - 194% water site tested air cell)			100	103.15	100%	±0.5% saturation	Yes No	
Turbidity 0 NTU			0	0.27	0	±0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.81	0.93	±0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	12.3	9.64	±0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Messler

Date: 2/19/21

Time Start: 0812

Time Finish: 0900

Site Location: 728541

Turbidity Meter Type: LaMotte 2020a

SN: 2192-6822

Weather Conditions: cloudy, 45°

Factory and Lot: Part Number: NPI 2

Project No: GW058

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)	20010095 08/21	9.05	1490	45539	4490	- ± 5%	Yes	
pH (4)			4.00	4.01	4.00	- ± 0.1 SU	Yes	
Mid-Day pH (4) check	✓	9.05	4.00	4.01 4.06 7.02	✓	- ± 0.1 SU	Yes	good temp = 12.2
pH (7)	14340057 08/21	9.71	7.00	7.02	7.00	- ± 0.1 SU	Yes	
Mid-Day pH (7) check	✓	11.3	7.00	7.01		- ± 0.1 SU	Yes	good
pH (10)	14330102 08/21	10.16	10.00	10.14	10.00	- ± 0.1 SU	Yes	
Mid-Day pH (10) check	✓	12.8	10.00	9.96		- ± 0.1 SU	Yes	good
ORP (mV)	14760167 08/21	10.24	228	251.2	228	- ± 20 mV	Yes	
DO (%) (1 pt, 100% water saturated air cal)			100	96.7	100	- ± 0% saturation	Yes	
Turbidity 0 NTU			0	0.067 0.08	0.08	- ± 0.5 NTU	Yes	
Turbidity 1 NTU			1.00	0.63	0.74	- ± 0.5 NTU	Yes	
Turbidity 10 NTU			10.00	10.94	10.95	- ± 0.5 NTU	Yes	

EQUIPMENT CALIBRATION LOG

For Technician: Thomas Kessler

Date: 9/10/21

Instrument: 0806

Time: 0900

Serial No: 728541

Turbidity Meter Type: 1 Plus 2.0 m

SN: 2289-2612

Weather Conditions: Sunny, 36°

Factory Use Limit: Part Number: AP-10

Project No: GW458

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)	193410017	8.47	4490	4500.9	4460	-0.5%	Yes	✓
pH (4)	08/21		4.00	4.11	4.00	-0.15%	Yes	✓
Mid-Day pH (4) check	✓	9.98	4.00	3.96	—	-0.1 SL	Yes	✓
pH (7)	20010025	8.62	7.00	7.01	7.00	-0.0 SL	Yes	✓
Mid-Day pH (7) check	08/21		10.3	7.00	7.06	—	-0.1 SL	Yes
pH (10)	19320102	8.57	10.00	10.06	10.00	-0.1 SL	Yes	✓
Mid-Day pH (10) check	08/21		10.2	10.00	10.01	—	-0.1 SL	Yes
ORP (mV)	1446047	8.61	228	228.5	228	-0.2%	Yes	✓
DO (%) (1pt, 100% water saturated air cal)	08/21		100	99.17	100	—	-0.1% separator	Yes
Turbidity < NTE			0	0.52	0.00	-0.15 NTU	Yes	✓
Turbidity 1 NTU			1.00	0.45	0.55 1.0	+0.05 NTU	Yes	✓
Turbidity 20 NTU			10.00	11.69	10.16	-0.05 NTU	Yes	✓

EQUIPMENT CALIBRATION LOG

Field Number: Thomas Kessler

Date: 2/11/21

Time Start: 0815

Time Finish: 0840

Field Station: 72541

Turnup Meter Type: LAURE 2000

SN: 2289-2617

Weather Conditions: cloudy 50°

Equipment ID: Fluorometer AP-1

Project Name: EW65

Calibration log

	Standard Lot # Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	14.90	4490	4516.0	4490	±0.5%	Yes	
pH (4)	08121		4.00	4.06	4.00	±0.05	Yes	
Mid-Day pH (4) check	↓	16.09	4.00	4.09	---	±0.05	Yes	good
pH (7)	19340059 08121	14.90 7.88	7.00	7.04	4.00	±0.05	Yes	
Mid-Day pH (7) check	↓	16.01	7.00	7.07	---	±0.05	Yes	good
pH (10)	19320102 08121	15.12	10.00	10.65	10.00	±0.05	Yes	
Mid-Day pH (10) check	↓	16.21	10.00	9.99	---	±0.05	Yes	good
ORP (mV)	19460167 08121	15.22	228	215.9	228	±0.5%	Yes	
DO (4%) (dpt. 100% water saturated air cal)			100	98.99/67	100	±0.5% saturation	Yes	
Turbidity 0 NTU			0	0.66	0.01	±0.5NTU	Yes	
Turbidity 1 NTU			1.00	0.34	1.00	±0.5NTU	Yes	
Turbidity 10 NTU			10.00	11.46	9.89	±0.5NTU	Yes	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Messler

Date: 2/12/20

Time (start): 0810

Time (finish): 0830

Site/Location: 7 28541

Turbidity Meter Type: LaMotte 2020ac

SV: 229-2612

Weather/Conditions: Cloudy, 50°

Facility and Unit: Park Boulevard AP# 2

Project No.: GW428

Calibration log

	Standard Lot # - Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Perm-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	200K0025		4490	4452.0	4490	±0.5%	Yes No	
pH (4)	08121	13.34	4.00	3.92	4.00	±0.1 SU	Yes No	
Mid-Day pH (4) check	↓	14.00 13.36	4.00	3.92 3.96	4.00	±0.1 SU	Yes No	good
pH (7)	14340057 08112	13.13	7.00	7.01	7.00	±0.1 SU	Yes No	
Mid-Day pH (7) check	↓	14.12	7.00	7.06	—	±0.1 SU	Yes No	good
pH (10)	14320102 08121	13.05	10.00	10.00	10.00	±0.1 SU	Yes No	
Mid-Day pH (10) check	↓	14.6	10.00	10.07	—	±0.1 SU	Yes No	good
ORP (mV)	14400067 08121	12.40	228	232.4	228	±0.6mV	Yes No	
DO (mg/l) (Ept, 100% water saturated air cal)			100	98.96	100	±0.5% saturation	Yes No	
Turbidity 4 NTU			0	0.86	0	±0.32 NTU	Yes No	
Turbidity 1 NTU			1.00	0.39	1	±0.05 NTU	Yes No	
Turbidity 10 NTU			10.00	10.45	9.93	±0.05 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 2/11/21
15

Lot #/ID: 0835

Time/Date: 0910

Make/Model: 728541

Calibration Method: Self-Check

S/N: 2289-2612

Measurement: Seepage, 380

Facility and Location: Par. Hammond A-1-2

Project No.: GW011

Calibration log

	Standard Lot # - Date of Expiration	Temp of Standard (°F)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 08/21	5.18	4490	4548.7 4548.7	4490	+/- 5%	Yes No	
pH 4			4.00	4.02	4.00	+/- 0.1 pH	Yes No	
Mid-Day pH (4) check		6.91	4.00	3.91	-	+/- 0.1 pH	Yes No	good
pH 7	8340057 08/21	5.51	7.00	7.10	7.00	+/- 0.1 pH	Yes No	
Mid-Day pH (7) check		7.10	7.00	6.97	-	+/- 0.1 pH	Yes No	good
pH 10	1432002 08/21	6.03	10.00	10.16	10.00	+/- 0.1 pH	Yes No	
Mid-Day pH (10) check		7.06	10.00	10.02	-	+/- 0.1 pH	Yes No	good
ORP (mV)	1926067 08/21	6.34	228	239.0	228	+/- 2mV	Yes No	
DO (%) (1% 100% water saturated air cal)			100	109.43	100	+/- 2% saturation	Yes No	
Turbidity 0 NTU			0	0.00	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.24	1.00	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	11.61	10.00	+/- 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 2/16/21

Case No: 0904

Time of Day: 0956

Instrument SN: 7285411

Manufacturer Model Type: HiMeta 2010w

SN: 2289-2612

Weather Conditions: Snowing, 20°

Facility and Location: Port Hammond AP-10

Project No: GW020

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°F)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	5.44	4490	4477.9	4490	±0.5%	Yes No	
pH (4)	08/21		4.00	4.05	4.00	±0.05	Yes No	
Mid-Day pH (4) check	✓	20.99	4.00	4.00	—	±0.05	Yes No	good
pH (7)	1934005 08/21	3.55	7.00	7.08	7.00	±0.05	Yes No	
Mid-Day pH (7) check	✓		20.89	7.00	7.09	—	±0.05	Yes No
pH (10)	19320102 12/20	3.40	10.00	10.12	10.0	±0.1%	Yes No	
Mid-Day pH (10) check	✓		20.70	10.00	10.01	—	±0.1%	Yes No
ORP (mV)	19460167 08/21	3.30	228	232.1	228	±20mV	Yes No	
DO (%) (Up to 100% water saturated air @C)			100	100.30	100	±0.5% saturation	Yes No	
Turbidity 1 NTU			0	0.00	0.00	±0.05 NTU	Yes No	
Turbidity 1 NTU			1.00	1.85	1.00	±0.05 NTU	Yes No	
Turbidity 10 NTU			10.00	8.28	9.63	±0.05 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Ross Date: 4/8/14 Time (GMT): 1420 Location: 1450
 Site ID: 728439 Turbidity Meter Type: LaMotte 2120e SN: 4283-2612
 Weather Conditions: 50°F Sunny Facility and Location: Plant Hill Road AP# 1 Project No.: 0W0581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	200100-5	19.71	4490	4693.2	4490	-+ 5%	Yes No	
pH (4)	8/21		4.00	3.93	4	-+ 0.1 SL	Yes No	
Mid-Day pH (4) check	19340057 8/20/11	17.31	4.00	7.38		-+ 0.1 SL	Yes No	
pH (7)			7.00	7.38	7	-+ 0.1 SL	Yes No	
Mid-Day pH (7) check			7.00			-+ 0.1 SL	Yes No	
pH (14)	14320162 8/21	17.49	10.00	10.43	10	-+ 0.1 SL	Yes No	
Mid-Day pH (14) check			10.00			-+ 0.1 SL	Yes No	
ORP (mV)	19446016 8/21	17.58	228	224.3	228	-+ 2.0%	Yes No	
DO (% @100% water saturated air cal)			100	99.63	100	-+ 0.5% saturation	Yes No	
Turbidity 0 NTU			0	0	0	-+ 0.1 NTU	Yes No	
Turbidity 1 NTU			1.00	0.82	0.82	-+ 0.1 NTU	Yes No	
Turbidity 10 NTU			10.00	9.14	9.81	-+ 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 2/19/2021

Station: 0835

Tube Code: 0900

Field ID: SN: 728634

Factory Model Code: LabOne 2100ve

SN: 2283-2612

Weather/Conditions: 45°F cloudy

Factory serial #: Plant Hammond AP10

Project Name: GR155

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20018025 8/2021	14.09	4490	4460.1	4490	±0.5%	Yes No	
pH (4)	8/2021		4.00	4.04	4	±0.1 SL	Yes No	
Mid-Day pH (4) check	20018025 8/2021	17.18	4.00	4.06	4.06	±0.1 SL	Yes No	
pH (7)	19740057 8/2021	14.40	7.00	7.06	7	±0.1 SL	Yes No	
Mid-Day pH (7) check	19740057 8/2021	19.15	7.00	7.07	7.07	±0.1 SL	Yes No	
pH (10)	19320102 8/2021	14.58	10.00	10.11	10	±0.1 SL	Yes No	
Mid-Day pH (10) check	19320102 5/2021	18.02	10.00	10.03	10.03	±0.1 SL	Yes No	
ORP (mV)	19466167 8/2021	14.70	228	235.1	228	±2.0%	Yes No	
DO (%) (@pt. 100% water saturated air cell)			100	100.45	100	±0.5% ±0.0010	Yes No	
Turbidity 0 NTU			0	0	0	±0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.01	1.01	±0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.05	10.05	±0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician Chad Russo

Date: ~~2/14/21~~ 2/10/2021

Time (min) 0900

Time (cost) 0930

Site No. 728634

Tuned to Meter Type LaMotte 2009e

SN 2283-246

Weather Conditions 40°F overcast

Field ID and Location Plant Hammond A2-1

Project No. GA655

Calibration log

	Standard Lot #: Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2001005 8/2021	12.11	4490	4562	4490	±0.5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	4.10	4	±0.15U	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	2001005 8/2021	25.77	4.00	4.06	4.06	±0.15U	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	1934005 8/2021	12.38	7.00	7.07	7	±0.15U	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	1934005 8/2021	23.32	7.00	7.02	7.02	±0.15U	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	19320102 8/2021	12.52	10.00	10.67	10	±0.15U	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	19320102 8/2021	21.82	10.00	9.93	9.93	±0.15U	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 3/2021	12.68	228	2453	228	±0.2mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (4) (100% water saturated air cal)			100	100.22	100	±0.1% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity (NTU)			0	0	0	±0.5NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity (NTU)			1.00	1.09	1	±0.35NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity (10 NTU)			10.00	9.87	9.87	±0.5NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 2/11/2021 Time of Day: 0845 Location: 0710
 SmartTroll SN: 728634 Turbidity Meter Type: 1-MV2-D-2000 SN: 2203-2612
 Weather Conditions: 50°F raining Facility and Use: Plant Hammond AP-1 Project Name: GW038

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	15.74	4490	4546.9	4490	± 5%	<input checked="" type="checkbox"/> No	
pH (4)			4.00	4	4	± 0.1 SU	<input checked="" type="checkbox"/> No	
Mid-Day pH (4) check	19340057 8/16		4.00			± 0.1 SU	Yes No	
pH (7)	19340057 8/2021	16.45	7.00	7.02	7	± 0.1 SU	<input checked="" type="checkbox"/> No	
Mid-Day pH (7) check			7.00			± 0.1 SU	Yes No	
pH (10)	19320102 8/2021	16.9	10.00	9.98	10	± 0.1 SU	<input checked="" type="checkbox"/> No	
Mid-Day pH (10) check			10.00			± 0.1 SU	Yes No	
ORP (mV)	19460161 8/2021	17.17	228	237.4	228	± 2% mV	<input checked="" type="checkbox"/> No	
DO (mg/l) 11 pc, 100% water saturated air cal.			100	99.26	100	± 0.5 mg/l saturation	<input checked="" type="checkbox"/> No	
Turbidity 0 NTU			0	0	0	± 0.5 NTU	<input checked="" type="checkbox"/> No	
Turbidity 1 NTU			1.00	1.26	1.26	± 0.5 NTU	<input checked="" type="checkbox"/> No	
Turbidity 10 NTU			10.00	9.70	9.70	± 0.5 NTU	<input checked="" type="checkbox"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician Chad Russo Date 2/12/21 Time Start 0830 Location 0400
 Instrument ID 728634 Turbidity Meter Type 1-Meter 2020w SN 2287-2612
 Weather Conditions 50°F rain Facility and Location Parish Health CLAPC Project No. GA055

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)	20016005 8/1/2021	14.62	4490	5472.3	4490	±1.5%	Yes	No
pH (4)			4.00	4	4	±0.1 SL	Yes	No
Mid-Day pH (4) check	19340057 3/21	14.96	4.00	7.01	7	±0.1 SL	Yes	No
pH (7)	20010008 8/1/21	13.00	7.00	4.10	4.10	±0.1 SL	Yes	No
Mid-Day pH (7) check	19340057 4/21	12.66	7.00	7.04	7.04	±0.1 SL	Yes	No
pH (10)	19320102 8/1/2021	15.36	10.00	10.65	10	±0.1 SL	Yes	No
Mid-Day pH (10) check	19320102 8/1/2021	12.75	10.00	10.08	10.08	±0.1 SL	Yes	No
ORP (mV)	14460367 8/1/2021	14.89	228	242	228	±0.1mV	Yes	No
DO (%) (1pt, 100% water saturated air cal)			100	99.15	100	±0.1%	Yes	No
Turbidity 0 NTU			0	0	0	±0.05 NTU	Yes	No
Turbidity 1 NTU			1.00	1.18	1.18	±0.05 NTU	Yes	No
Turbidity 10 NTU			10.00	9.74	9.74	±0.05 NTU	Yes	No

EQUIPMENT CALIBRATION LOG

Field Technician Chad Russo

Date 2/15/2024

Time Start 0845

Time Finish 0900

Job Title SN 928634

Calibrating Meter Type 1-Mate 2000-4

SN 2183-2612

Means Conditions 45°F Overcast

Facility and Client Port Harbors of APAC

Project No. GW558

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°F)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	2001005 8/12/24	2.02	4490	4444.1	4490	± 5%	Yes No	
pH (4)			4.00	4.05	4	± 0.05	Yes No	
Mid-Day pH (4) check	1934005 8/12/24	6.27	4.00	7.03	7	± 0.05	Yes No	
pH (7)	2001005 8/12/24	9.47	7.00	4.06	4.06	± 0.05	Yes No	
Mid-Day pH (7) check	1934005 8/12/24	9.89	7.00	7.06	7.06	± 0.05	Yes No	
pH (10)	1934005 8/12/24	6.77	10.00	10.16	10	± 0.05	Yes No	
Mid-Day pH (10) check	19320102 8/12/24	9.96	10.00	10.04	10.04	± 0.05	Yes No	
ORP (mV)	19460167 8/12/24	6.82	228	225.5	228	± 2.0V	Yes No	
DO (mg/l) (8pt, 100% water saturated air cal)			100	100.46	100	± 0.5% or 2.0mg/l	Yes No	
Turbidity 1 NTU			0	0.83	0	± 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.32	1.32	± 0.25 NTU	Yes No	
Turbidity 10 NTU			10.00	9.46	10	± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician Chad Russo Date 2/14/2021 Meter # 0930 Test # 1000
 Instrument SN# 728634 Calibration Meter Type YSI 6022A SN# 2283-2612
 Weather Conditions 20 degrees, Snowing Facility and Use Black Mountain AP# 1 Project No. GW05E

Calibration log

	Standard Lot # - Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/20/21	10.06	4490	4534	4410	±0.5%	Yes	
pH (4)	6		4.00	4.03	4	±0.1 SU	Yes	
Mid-Day pH (4) check		7.62	4.00	3.99		±0.1 SU	Yes	
pH (7)	19340057 8/20/21	9.59	7.00	7.04	7	±0.1 SU	Yes	
Mid-Day pH (7) check		7.91	7.00	6.87		±0.1 SU	Yes	
pH (10)	19320062 8/20/21	9.17	10.00	10.09	10	±0.1 SU	Yes	
Mid-Day pH (10) check	19460067 8/20/21	9.02	10.00	244.2	225	±0.1 SU	Yes	
ORP (mV)		7.0	228	10.02		±22mV	Yes	
DO (%, 100% water saturated air cal)			100	96.06	100	±0.5% saturation	Yes	
Turbidity 0 NTU			0	0	0	±0.5 NTU	Yes	
Turbidity 1 NTU			1.00	1.25	1.25	±0.5 NTU	Yes	
Turbidity 10 NTU			10.00	9.56	9.56	±0.5 NTU	Yes	

EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Reeder

Date: 2-8-2021

Tube (Start): 1415

Tube (End): 1453

smarTroll SN: 728623

Turbidity Meter Type: Lamotte 2020vc

SN: 6411-1416

Weather Conditions: Sunny 59/43

Facility and Unit: Plant Hammond

Project No.: 6V6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	201# 20010025	22.11	4490	4412.2	4490	- ± 5%	Yes No	
pH (4)	08/2021		4.00	3.98	4.0	- ± 0.1 SL	Yes No	
Mid-Day pH (4) check	19340057 08/2021	19.59	7.00	7.45	7.00	- ± 0.1 SL	Yes No	
pH (7)	19340057 8/2021	18.63	7.00	7.45	7.00	- ± 0.1 SL	Yes No	
Mid-Day pH (7) check	19340057 08/21	18.50	7.00	7.03		- ± 0.1 SL	Yes No	
pH (E0)	19320102 08/2021	18.63	10.00	10.40	10.00	- ± 0.1 SL	Yes No	
Mid-Day pH (E0) check	19320102 08/21	18.60	10.00	10.02		- ± 0.1 SL	Yes No	
ORP (mV)	19460147 08/2021	18.70	+228	+225	+228	- ± 20mV	Yes No	
D/D (%) (1pt, 100% water saturated air cal)			100%	113.97	100%	- ± 5% saturation	Yes No	
Turbidity 0 NTU			0	0.03	0	- ± 0.5 NTU	Yes No	
Turbidity 1 NTE			1	1.02	1.00	- ± 0.5 NTU	Yes No	
Turbidity 10 NTU			10	10.05	10.00	- ± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Reeder

Date: 2-9-2021

Time (start): 0804

Time (finish): 0835

smarTroll SN: 728623

Turbidity Meter Type: Lamotte 2020ve

SN: 6411-1416

Weather Conditions: Cloudy Drizzle

Facility and Unit: Plant Hammond

Project No. 646581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8-2021	6.51	4490	4543.7	4490	--5%	Yes No	
pH (4)		6.59	4.00	3.85	4.00	--0.1 SU	Yes No	
Mid-Day pH (4) check	↓	8.70	4.00	3.96		--0.1 SU	Yes No	
pH (7)	19340057 08/2021	8.32	7.00	6.93	7.00	--0.1 SU	Yes No	
Mid-Day pH (7) check	↓	8.75	7.00	7.02		--0.1 SU	Yes No	
pH (10)	19320102 8-2021	8.78	10.00	10.11	10.00	--0.1 SU	Yes No	
Mid-Day pH (10) check	↓	8.69	10.00	10.03		--0.1 SU	Yes No	
ORP (mV)	19460167 8-2021	8.76	+228	253.0	228.0	--20mV	Yes No	
DO (%) (1 pt, 100% water saturated air cal)			100%	97.63	100	--5% saturation	Yes No	
Turbidity 0 NTU			0	0	0	--0.5 NTU	Yes No	
Turbidity 1 NTU			1	1.34	1.0	--0.5 NTU	Yes No	
Turbidity 10 NTU			10	9.45	10	--0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Reeder

Date: 2-10-2021

Time Start: 0820

Time Finish: 0843

SmartTroll SN: 728623

Turbidity Meter Type: Lamotte 2090 VE

SN: 6411-1416

Weather Conditions: mostly cloudy Hi 70°/Lo 38°

Facility and Use: Plant Hammond

Project No.: GW6581

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 08/2021	13.40	4490	4454.4	4490	- ± 5%	Yes No	
pH (4)	↓	12.5	4.00	4.06	4.00	- ± 0.1 SE	Yes No	
Mid-Day pH (4) check	↓	12.5	4.00	4.00		- ± 0.1 SE	Yes No	
pH (7)	19340057 08/2021	13.00 12.76	7.00	7.05	7.00	- ± 0.1 SE	Yes No	
Mid-Day pH (7) check	↓	12.6	7.00	7.06		- ± 0.1 SE	Yes No	
pH (10)	19320102 08/2021	12.97	10.00	10.07	10.00	- ± 0.1 SE	Yes No	
Mid-Day pH (10) check	↓	12.55	10.00	9.98		- ± 0.1 SE	Yes No	
ORP (mV)	19460167 08/2021	11.43	+228	221.8	228.0	- ± 2mV	Yes No	
DO (%) (1 pt, 100% water saturated air cal)			100%	104.38	100%	- ± 5% reference	Yes No	
Turbidity @ NTU			0	-0.02	0	- ± 0.5 NTU	Yes No	
Turbidity 1 NTU			1	0.84	1	- ± 0.5 NTU	Yes No	
Turbidity 10 NTU			10	8.87	10	- ± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Breder

Date: 2-11-2021

Time start: 0831

Time finish: 0900

Field Station: 728623

Field by Meter Type: LaMotte 2200s

SN: 6411-1416

Weather Conditions: Cloudy Pm. Rain

Factory serial #: Part Number AP110

Project No: GW655

Calibration log

	Standard Lot #: Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	10.69	4190	4454.4	4490	± 5%	Yes No	
pH (4)	08/2021	10.73	4.00	4.00	4.00	± 0.01	Yes No	
Mid-Day pH (4) check	↓	12.6	4.00	4.08		± 0.01	Yes No	
pH (7)	19340057 6/8/2021	12.03 7.07	7.00	7.07	7.00	± 0.01	Yes No	
Mid-Day pH (7) check	↓	11.9	7.00	7.03		± 0.01	Yes No	
pH (0)	19320102 08/2021	12.54	10.00	10.09	10.00	± 0.1	Yes No	
Mid-Day pH (0) check	↓	12.4	10.00	9.94		± 0.1	Yes No	
ORP (mV)	19460167 08/2021	12.50	228	226.3	228	± 20mV	Yes No	
DOP (%) (ppt, 100% water saturated air cal)			100	100.32	100	± 0.5% saturation	Yes No	
Turbidity 0 NTU			0	0.10	0.00	± 0.05 NTU	Yes No	
Turbidity 1 NTU			1.00	0.67	1.00	± 0.05 NTU	Yes No	
Turbidity 10 NTU			10.00	9.35	10.00	± 0.05 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Aaron Reeder

Date: 2-12-2021

Time Start: 0812

Time Finish: 0835

Serial No. SN: 728623

Label or Meter Type: Custom Calibrator

SN: 6411-1416

Weather Conditions: Rain Hi: 52°/Lo: 40°

Facility and Unit: Plant Hammond AP-11

Project No.: GM55

Calibration Log

	Standard Lot # + Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 08/2021	10.3 23.0	1490	4555.3	4440	± 5%	Yes No	
pH (4)	↓	9.94	4.00	4.05	4.00	± 0.05	Yes No	
Mid-Day pH (4) check	↓	10.68	4.00	4.05 4.00		± 0.05	Yes No	
pH (7)	19340057 08/2021	10.23	7.00	7.10	7.00	± 0.05	Yes No	
Mid-Day pH (7) check	↓	10.73	7.00	7.00 6.93		± 0.05	Yes No	
pH (10)	19320102 08/2021	10.36	10.00	10.20	10.00	± 0.05	Yes No	
Mid-Day pH (10) check	↓	10.92	10.00	10.02		± 0.05	Yes No	
ORP (mV)	19480167 08/2021	10.52	228	228.6	228	± 0.5%	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	100.44	100	± 0.5% saturation	Yes No	
Turbidity 0 NTU			0	0	0	± 0.05 NTU	Yes No	
Turbidity 1 NTU			1.00	0.43	1.00	± 0.05 NTU	Yes No	
Turbidity 10 NTU			10.00	10	10	± 0.05 NTU	Yes No	

March 2021

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo

Date: 3/10/2021

Time (start): 12:15

Time (finish): 1:40

Sample ID: 728550

Turbidity Meter Type: LaMotte 2006c

SN: 0411-1416

Weather Conditions: 70°F Sunny

Facility and Unit: Plant - Farmore LAFCO

Project No.: 14W081

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	19.77	4490	4449.5	4490	± 0.5%	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
pH (4)			4.00	3.9	4	± 0.1 pH	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Mid-Day pH (4) check	20010025 8/2021	21.23	4.00	4.02	4.02	± 0.1 pH	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
pH (7)	19350057 8/2021	19.11	7.00	6.92	7	± 0.1 pH	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Mid-Day pH (7) check	19346057 8/2021	22.04	7.00	7.05	7.05	± 0.1 pH	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
pH (10)	19320102 8/2021	18.50	10.00	9.98	10	± 0.1 pH	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Mid-Day pH (10) check	19320102 8/2021	21.87	10.00	10.01	10.01	± 0.1 pH	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
ORP (mV)	19460167 8/2021	18.15	228	221.9	228	± 20mV	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	96.77	100	± 0.5% at 20°C	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Turbidity 0 NTU			0	6.39	0.39	± 0.05 NTU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Turbidity 1 NTU			1.00	0.52	0.52	± 0.05 NTU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Turbidity 10 NTU			10.00	9.94	9.94	± 0.05 NTU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 3/11/2021 Time (start): 0730 Time (finish): 0755
 Serial/Prod. No.: 728550 Conductivity Meter Type: LAQUA 2020w SN: 644-1416
 Weather: 45°F clear Facility and Unit: Plant Operational AP-12 Project Name: CWSS1

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	14.95	4490	4582.2	4490	± 5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	4.03	4	± 0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Water pH (7) check	19340057 8/2021	15.67	4.00	7.03	7	± 0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	20010025 8/2021	25.97	7.00	4.05	4.05	± 0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	19340057 8/2021	26.07	7.00	6.95	6.95	± 0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	19320102 8/2021	15.96	10.00	10.04	10	± 0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	19320102 8/2021	25.6	10.00	9.95	9.95	± 0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 8/2021	16.07	228	231.4	220	± 20 mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1 pt. 100% water saturated air cal)			100	92.09	100	± 6% ± 0.500	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity (NTU)			0	0	0	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity (1 NTU)			1.00	0.58	0.58	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity (10 NTU)			10.00	10.68	9.75	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Tech/Technician: Chad Russo Date: 3/12/21 Time (start): 0835 Time (end): 0855
 Contact No: 728550 Conductivity Meter (type): 1: Mole 2020ve SN: 6411-1116
 Weather Conditions: 50°F partly cloudy Facility and Unit: Plant - Johnson - AP 1.1 Project No.: 1306581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	19.51	4490	4520	4490	± 5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	4.02	4	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	20010025 8/2021	25.4	4.00	3.96	3.96	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	19340057 8/2021	19.55	7.00	6.95	7	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	19340057 8/2021	24.87	7.00	7.02	7.02	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	19320102 8/2021	19.49	10.00	9.98	10	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	19320102 8/2021	25.18	10.00	10.04	10.04	± 0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 8/2021	19.29	228	222.7	228	± 2% V	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1 pt. 100% water saturated air cal)			100	99.82	100	± 0.6% sat. (60)	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0	0	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	1.03	1.03	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	9.62	9.62	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Chris Russo Date: 3/15/2021 Time (start): 0740 Time (finish): 0800
 SmartTroll SN: 728550 Turbidity Meter Type: LA-MOQU 2070 SN: 6411-1416
 Weather Conditions: 60°F cloudy Facility and Unit: Plant: Deerwood - NY Project No.: GW2581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20016625 8/2021	19.11	4490	4576	4490	± 5%	Yes No	
pH (4)			4.00	4.03	4	± 0.1 SU	Yes No	
Mid-Day pH (4) check	20010025 8/2021	20.16	4.00	4.19	4	± 0.1 SU	Yes No	
pH (7)	19340057 8/2021		7.00	7.00	7	± 0.1 SU	Yes No	
Mid-Day pH (7) check	19340057 8/2021	24.37	7.00	7.11	7	± 0.1 SU	Yes No	
pH (10)	19320102 8/2021	19.77	10.00	10.03	10	± 0.1 SU	Yes No	
Mid-Day pH (10) check	19320102 8/2021	20.16	10.00	10.04	10	± 0.1 SU	Yes No	
ORP (mV)	191461167 8/2021	19.77	228	225.2	228	± 2mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	85.39	100	± 6% (± 1.00%)	Yes No	
Turbidity 0 NTU			0	0.03	0.03	± 0.05 NTU	Yes No	
Turbidity 1 NTU			1.00	0.69	0.69	± 0.1 NTU	Yes No	
Turbidity 10 NTU			10.00	7.89	10.14	± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Chad Russo Date: 3/16/2021 Time (start): 0745 Time (finish): 0815
 Serial/ID No: 228550 Turbidity Meter Type: LaMotte 2025cc SS: 6911-1416
 Weather Conditions: 50°F raining Facility and Unit: Tr 14, 100100, AP 1.2 Project No.: 626658

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 8/2021	18.21	4490	4405	4490	±0.5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	3.92	4	±0.1M	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	19340057 8/2021	18	4.00	6.95	7	±0.1M	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	20010025 8/2021	18.5 19.21 6.8	7.00	6.98 4.02	6.48 4.02	±0.1SD	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	19340057 8/2021	19.21	7.00	6.98	6.98	±0.1M	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	1932002 8/2021	12.99	10.00	9.99	10	±0.1M	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	1932002 8/2021	18.34	10.00	10.03	10.03	±0.1M	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460067 8/2021	17.81	228	230.8	228	±0.3mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1 pt, 100% water saturated air cal)			100	94.10	100	±0.2% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0	0	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.22	6.71	±0.05 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	7.85	10.25	±0.05 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: CHAD RUSSE Date: 3/10/2021 Forecast: 0715 Time (finish): 0735
 SmartTroll SN: 728550 Turbidity Meter Type: LaMotte 2130ce SN: 6411-1416
 Weather/Conditions: 50°F cloudy Facility/Well ID: 25 and 26 new at AP# 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)	2000025 8/1/02	15.75	4490	4506.5	4490	± 0.5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (9)			4.00	4	4	± 0.050	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	2000025 8/2/02	16.5	4.00	4.01	4.01	± 0.050	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	19340057 8/1/02	15.73	7.00	7	7	± 0.150	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	19340057 8/2/02	16.21	7.00	6.93	6.93	± 0.150	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (10)	19320102 8/1/02	15.69	10.00	10.02	10	± 0.150	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	19320102 8/2/02	16.04	10.00	10.05	10.05	± 0.150	<input checked="" type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19466167 8/2/02	15.59	228	221.3	228	± 2 mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt. 100% water saturated air cal)			100	88.06	100	± 6% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0	0	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.94	0.94	± 0.05 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	9.61	9.61	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: YASHISH TAUKOOR

Date: 3-10-2021

Time (start): 11:20

Time (finish): 11:30

Serial #/ID #: 728 563

Turbidity Meter Type: LaMotte 2000c

SN: 710-0711

Weather/Conditions: SUNNY, 55°F

Facility and Unit: Plant II, Inland AP, CA

Project No.: GW0581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	18.38	4490	4665	4490	±0.5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	08/21		4.00	3.96	4.00	±0.1%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
3-Min. Day pH (4) check			4.00		4.00	±0.1%	<input type="radio"/> Yes <input type="radio"/> No	
pH (7)	19340057 8/21	19.08	7.00	6.99	7.00	±0.1%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
3-Min. Day pH (7) check			7.00		7.00	±0.1%	<input type="radio"/> Yes <input type="radio"/> No	
pH (10)	19320102 8/21	18.96	10.00	10.05	10.00	±0.1%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
4-Min. Day pH (10) check			10.00		10.00	±0.1%	<input type="radio"/> Yes <input type="radio"/> No	
ORP (mV)	19460167 8/21	19.08	228	234.6	228	±0.5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	105.21	100	±0.6% saturated	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	-0.06	0	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.92	1.00	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	10.40	1.00	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH TAVKOR Date: 3-11-2021 Time (start): 08:04 Time (finish): 08:19
 Serial No.: 728563 Frequency Meter Type: LAQUA 2010w SN: 710-0711
 Weather Conditions: SUNNY, 49°F Location and Unit: Flow Bank and W-117 Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (uS/cm)	20610025	14.88	4490	4437	4490	±0.5%	Yes No	
pH (4)	08/2021		4.00	4.01	4.00	±0.05M	Yes No	
Mid-Day pH (4) check	"	24.19	4.00	4.05	4.00	±0.05M	Yes No	
pH (7)	19340057 08/2021	15.50	7.00	6.88	7.00	±0.1M	Yes No	
Mid-Day pH (7) check	"	23.10	7.00	7.03	7.00	±0.1M	Yes No	
pH (10)	19320102 08/2021	15.31	10.00	10.06	10.00	±0.1M	Yes No	
Mid-Day pH (10) check	"	21.96	10.00	9.98	10.00	±0.1M	Yes No	
ORP (mV)	19460167 08/2021	14.94	228	240.8	228	±20mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	91.19	100	±0.5 saturation	Yes No	
Turbidity 0 NTU			0	0.00	0	±0.05 NTU	Yes No	
Turbidity 1 NTU			1.00	1.17	1.00	±0.05 NTU	Yes No	
Turbidity 10 NTU			10.00	10.45	10.00	±0.05 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH TAVKOR

Date: 3-12-2021

Time (start): 0823

Time (in site): 0837

Contract ID No: 728 563

Calibration Meter Type: 1-Wire 2025w

SS: 710-0711

Weather Conditions: SONNY, 50°F

Facility and Unit: Plant Entrance at AP 1.2

Project No: GW0501

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/2024	20.57	4490	4492.6 4392.6 (JT)	4490	± 0.5%	Yes No	
pH (4)	"	"	4.00	3.97	4.00	± 0.1 M	Yes No	
Mid-Day pH (4) check	"	23.92	4.00	4.04	4.00	± 0.1 M	Yes No	
pH (7)	19340057 08/2024	19.53	7.00	7.01	7.00	± 0.1 M	Yes No	
Mid-Day pH (7) check	"	22.74	7.00	7.06	7.00	± 0.1 M	Yes No	
pH (10)	19320102 08/2024	18.78	10.00	10.05	10.00	± 0.1 M	Yes No	
Mid Day pH (10) check	"	21.91	10.00	9.98	10.00	± 0.1 M	Yes No	
ORP (mV)	19460167 08/2024	18.26	228	238.2	228	± 0.5%	Yes No	
DO (%) (2 pr. 100% water saturated air cal)			100	96.86	100	± 0.5% saturation	Yes No	
Turbidity 0 NTU			0	-0.01	0	± 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.11	1.00	± 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.45	10.00	± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: VASHISH THAKUR Date: 3-15-2024 Time (start): 08:13 Time (finish): 08:24
 Phone/FAX: 728 563 Turbidity Meter Type: LaMotte 2022bce SW: 710-0711
 Weather Conditions: CLOUDY, 60°F Facility and Unit: FL - Environmental AP 1.2 Project No.: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/21	15.74	4490	4662.8	4490	±3%	Yes No	
pH (4)	"	"	4.00	3.96	4.00	±0.10	Yes No	
Mid-Day pH (4) check	"	18.52	4.00	4.05	4.00	±0.05	Yes No	
pH (7)	19390057 08/2024	16.72	7.00	6.99	7.00	±0.10	Yes No	
Mid-Day pH (7) check	"	18.26	7.00	7.07	7.00	±0.10	Yes No	
pH (10)	19320102 08/2024	16.87	10.00	10.08	10.00	±0.10	Yes No	
Mid-Day pH (10) check	"	17.86	10.00	10.02	10.00	±0.10	Yes No	
ORP (mV)	1946267 08/2024	16.87	228	238.8	228	±2mV	Yes No	
DO (%) (1 pt, 100% water saturated air cal)			100	93.38	100	±0.5% saturation	Yes No	
Turbidity @ NTU			0	0.02	0.02	±0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.24	1.00	±0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	9.54	10.00	±0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Location: VASHISH TANKOR

Date: 3-16-2021

Time (Start): 0750

Time (End): 0810

Instrument SN: 728 563

Instrument Model Type: LAURE 2020w

SN: 710-0711

Weather/Conditions: RAIN, 50°F

Location and Use: Blue Hill Ground Water

Project No: 416651

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/21	16.97	4490	4395.8	4490	± 5%	Yes No	
pH (4)	"	"	4.00	3.99	4.00	± 0.1 pH	Yes No	
Mid-Day pH (4) check	"	15.21	4.00	4.08	4.00	± 0.15 pH	Yes No	
pH (7)	19340057 08/21	17.01	7.00	6.95	7.00	± 0.1 pH	Yes No	
Mid-Day pH (7) check	"	15.93	7.00	7.05	7.00	± 0.1 pH	Yes No	
pH (10)	19320102 08/21	17.01	10.00	9.98	10.00	± 0.15 pH	Yes No	
Mid-Day pH (10) check	"	16.28	10.00	10.04	10.00	± 0.15 pH	Yes No	
ORP (mV)	19460167 08/21	16.93	228	238.7	228	± 10 mV	Yes No	
DO (%) (1 pt, 100% water saturated air cal)			100	99.79	100	± 0.2% saturation	Yes No	
Turbidity 0 NTU			0	0.03	0	± 0.05 NTU	Yes No	
Turbidity 1 NTU			1.00	1.07	1.00	± 0.15 NTU	Yes No	
Turbidity 10 NTU			10.00	9.62	10.00	± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: VASHISHA TANKOR

Date: 3-17-2021

Time Start: 07:30

Time Finish: 07:39

SmartTroll SN: 728563

Factory Model Type: LAUSE 2020w2

SN: 710-0711

Weather Conditions: SHOWERS/THUNDERSTORMS, 50°F

Facility: allison Plant Location: AP-17

Project No.: 664581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20610025 08/21	16.07	4490	4469.2	4490	-5%	Yes No	
pH (4)	"	"	4.00	3.95	4.00	±0.1 M	Yes No	
Mid-Day pH (4) check	"	18.91	4.00	4.07	4.00	±0.1 M	Yes No	
pH (7)	19340057 08/21	16.02	7.00	7.00	7.00	±0.1 M	Yes No	
Mid-Day pH (7) check	"	19.50	7.00	6.99	7.00	±0.1 M	Yes No	
pH (10)	19320102 08/21	15.76	10.00	10.09	10.00	±0.1 M	Yes No	
Mid-Day pH (10) check	"	19.28	10.00	10.01	10.00	±0.1 M	Yes No	
ORP (mV)	19460167 08/21	15.06	228	240.2	228	±20mV	Yes No	
DO (%) (1pt, 100% water saturated air sat)			100	95.73	100	±1% saturation	Yes No	
Turbidity 0 NTU			0	<0.01	0	±0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	1.10	1.00	±0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.87	10.00	±0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician Thomas Kessler

Date: 3/10/21

Time started: 1130

Time finished: 1240

Instrument SN: 728566

Instrument Make/Type: LAONG 20/06c

SW: 12289-2617

Weather Conditions: Sunny 70

Locality and Date: 25031 (Pond) 3/10/21

Project No.: GW558

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010075	15.96	4490	4368.3	4490	±5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	08/21		4.00	4.08	4.0	±0.05	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check			4.00			±0.15	Yes No	
pH (7)	14310057 8/21	15.43	7.00	7.04	7.0	±0.05	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check			7.00			±0.05	Yes No	
pH (10)	1432902 08/21	14.89	10.00	9.94	10.00	±0.05	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check			10.00			±0.05	Yes No	
ORP (mV)	14460167 08/21	14.39	228	214	228	±5mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (Typ. 100% water saturated air sat)			100	101.73	100	±0.5% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity @ 0 NTU			0	1.07	0.00	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	1.03	1.03	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	8.23	10.03	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kesch

Date: 3/11/21

Time (start): 0740

Time (finish): 0810

SmartTroll SN: 728566

Industry Meter Type: 1.5Mg 2015w

SN: 2289-2612

Weather / Conditions: Sunny, 70°

Facility and Unit: PL 4 - Inman, Inc. MP-2

Project No: 46W0581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20016025	15	4490	4332.5	4440	± 2%	Yes No	
pH (4)	08121		4.00	3.98	4.00	± 0.10	Yes No	
Mid-Day pH (4) check			4.00	3.98 ^{4.10} 4.09	/	± 0.10	Yes No	within range
pH (7)	19340057	15	7.00	7.04	7.04	± 0.10	Yes No	
Mid-Day pH (7) check			7.00	6.98	/	± 0.10	Yes No	within Range
pH (10)	1932402 08121	15	10.00	10.17	10.00	± 0.10	Yes No	
Mid-Day pH (10) check			10.00	9.92	/	± 0.10	Yes No	within Range
ORP (mV)	1446067 08121	15	228	237.6	228	± 3mV	Yes No	
DO (%) (1pt, 100% water saturated air cal)			100	93.07	100	± 1% saturation	Yes No	
Turbidity 0 NTU			0	0.19	0.00	± 0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.93	1.00	± 0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	10.45	10.00	± 0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler

Date: 3/12/21

Time (Start): 0715

Time (End): 0900

Site Tool SN: 708566

Calibration Meter Type: 1-Meter 30300

SN: 12889262

Weather Conditions: Sunny, 70°

Facility and Unit: Plant Eastwood AP-1-2

Project No.: 41W058

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	13.18	4490	4471.9	4490	±0.5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	08/21		4.00	4.05	4.00	±0.05	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	/	/	4.00	4.07	/	±0.05	Yes No	within Range
pH (7)	08/21 100340057	13.10	7.00	6.99	7.00	±0.05	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	/		/	7.00	7.02	/	±0.05	Yes No
pH (10)	1432902 08/21	13.09	10.00	9.98	10.00	±0.15	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	/		/	10.00	10.9	/	±0.15	Yes No
ORP (mV)	102460167 08/21	13.33	228	243.5	228	±20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	96.39		±0.5% saturation	Yes No	
Turbidity (0 NTU)			0	0.89	0.00	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	1.31	1.05	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU		10.00	7.99	10.00	±5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No		

EQUIPMENT CALIBRATION LOG

Doc. Technician: Thomas Keady

Date: 3/15/21

Time Start: 7:15

Time Finish: 7:45

Serial Test SN: 728502

Turbidity Meter Type: LaMotte 2200w

SN: 122892612

Weather Conditions: _____

Facility and Unit: Plant Hazardous W- 2

Project No: GW6581

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025	15.35	4490	4530.3	4490	± 0.5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)	08/21		4.00	3.99	4.00	± 0.05 pH	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	/	/	4.00	4.02	/	± 0.1 pH	<input checked="" type="radio"/> Yes <input type="radio"/> No	within range
pH (7)	14340057	15.71	7.00	7.04	7.00	± 0.1 pH	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	/	/	7.00	6.99	/	± 0.1 pH	<input checked="" type="radio"/> Yes <input type="radio"/> No	within range
pH (10)	14350002	15.84	10.00	10.01	10.00	± 0.1 pH	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	/	/	10.00	10.00	/	± 0.1 pH	<input checked="" type="radio"/> Yes <input type="radio"/> No	within range
ORP (mV)	14460067	15.80	228	227.22	228	± 20mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1 pt, 200% water saturated air cell)			100	95.71	100	± 6% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.00	0.00	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	0.17	1.05	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	10.34	10.00	± 0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Date/Technician: Thomas Wessler

Date: 3/16/21

Time (start): 0730

Time (finish): 0810

Sample No.: 728502

Turbidity Meter type: LA-More 9200w

SN: 17289-2612

Weather/Conditions: cloudy/foggy Romy

Facility and Unit: Plant Hammond AP-2

Project No.: 40W081

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20010025 08/21	12.99	4490	4523.2	4490	±0.5%	Yes No	
pH (4)			4.00	3.94 ↑	/	±0.05	Yes No	
Mid-Day pH (4) check	/	/	4.00	4.07	4.00	±0.05	Yes No	
pH (7)	19310057 08/21	13.23	7.00	7.04	7.00	±0.050	Yes No	
Mid-Day pH (7) check			/	/	7.00	7.01	/	Yes No
pH (10)	1932902 08/21	13.46	10.00	10.06	10.00	±0.05	Yes No	
Mid-Day pH (10) check			/	/	10.00	9.97	/	Yes No
ORP (mV)	19460167 08/21	13.35	228	230.9	228	±0.7mV	Yes No	
DO (%) (1pt. 100% water unbuffered air sat)			100	95.73	100	±0.5 sat. dep.	Yes No	
Turbidity 0 NTU			0	0.00	0.00	±0.5 NTU	Yes No	
Turbidity 1 NTU			1.00	0.27	1.00	±0.5 NTU	Yes No	
Turbidity 10 NTU			10.00	11.29	10.00	±0.5 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Location: Thomas Wilson Date: 3/1/17 Time (start): 7:20 Time (finish): 08:00
 Grant/Well ID #: 728586 Unit/Day Meter Type: LaMotte 3030a SN: 12289-2612
 Weather Conditions: cloudy/rainy 50° Facility and Unit: Plant 1 and pond AP 1-2 Project No.: CAW551

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)	20060025 08/21	11.21	4490	4435.6	4490	± 5%	<input checked="" type="radio"/> Yes	
pH (4)			4.00	3.99	4.00	± 0.1 M	<input checked="" type="radio"/> Yes	
Mid-Day pH (4) check			4.00	4.00		± 0.1 M	<input checked="" type="radio"/> Yes	within range
pH (7)	09340057 08/21	11.23	7.00	7.05	7.00	± 0.1 M	<input checked="" type="radio"/> Yes	
Mid-Day pH (7) check			7.00	7.02		± 0.1 M	<input checked="" type="radio"/> Yes	
pH (10)	1032402 12/10	11.23	10.00	10.02		± 0.1 M	<input checked="" type="radio"/> Yes	
Mid-Day pH (10) check		11.29	10.00	10.06	10.00	± 0.1 M	<input checked="" type="radio"/> Yes	
ORP (mV)	12160167 08/21	11.34	228	247.8	228	± 20mV	<input checked="" type="radio"/> Yes	
DO (%) (1 pr. 100% water saturated air cal)			100	95.72	100	± 2% saturation	<input checked="" type="radio"/> Yes	
Turbidity 1 NTU			0	1.10	0.00	± 0.5 NTU	<input checked="" type="radio"/> Yes	
Turbidity 1 NTU			1.00	0.27	1.00	± 0.5 NTU	<input checked="" type="radio"/> Yes	
Turbidity 10 NTU			10.00	9.02	10	± 0.5 NTU	<input checked="" type="radio"/> Yes	

August 2021

EQUIPMENT CALIBRATION LOG

Field Technician: C. CAIN

Date: 8/11/21

Time Start: 1255

Time End: 1322

smarTroll SN: 728541

Turbidity Meter Type: 2250r0220w

SN: 2953

Weather/Conditions: Sunny 96°F

Facility and Lot: Plant Hammond

Project No.: GW5591

Calibration log

	Standard Lot # - Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20440203 2/22	30.72	4490	4374	4490	- ± 5%	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
pH (4)			4.00	4.01	4.0	- ± 0.1 SL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Mid-Day pH (4) check			4.00			- ± 0.1 SL	Yes No	
pH (7)	19450117 2/22	30.85	7.00	6.97	7.0	- ± 0.1 SL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Mid-Day pH (7) check			7.00			- ± 0.1 SL	Yes No	
pH (10)	2010067 2/22	30.43	10.00	9.92	10.0	- ± 0.1 SL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Mid-Day pH (10) check			10.00			- ± 0.1 SL	Yes No	
ORP (mV)	19460167 2/22	29.73	228	219.7	228	- ± 20mV	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
DO (1%) (1pt. 100% water saturated air cell)			100	102.06	100	- ± 5% saturation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Turbidity 0 NTU			0	0.11	0.08	- ± 0.5 NTU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Turbidity 1 NTU			1.00	0.75	1.00	- ± 0.5 NTU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Turbidity 10 NTU			10.00	11.67	10.00	- ± 0.5 NTU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler Date: 8/11/2021 Time: 1252 Time of Day: 1210
 SmartTroll SN: 728654 Turbidity Meter Type: LaMotte 2000 SN: 5573-1515
 Weather Conditions: Sunny Facility and Unit: Farm Road Road AP# 0 Project No.: 04555

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20440203 20440203 2/22	53.29	4490	4373.6	4496	±0.5%	Yes No	
pH (4)	" "	/	4.00	4.08	4.00	±0.05L	Yes No	
Mid-Day pH (4) check	" "	/	4.00	4.05	/	±0.05L	Yes No	
pH (7)	21660186 6/22	51.37	7.00	7.01	7.00	±0.05L	Yes No	
Mid-Day pH (7) check	" "	/	7.00	6.98	/	±0.05L	Yes No	
pH (10)	21660189 6/22	30.34	10.00	9.98	10.00	±0.05L	Yes No	
Mid-Day pH (10) check	" "	/	10.00	9.92	/	±0.05L	Yes No	
ORP (mV)	19400067 2/22	29.89	228	241.2	228	±0.5%	Yes No	
DO (%) (typ. 100% water saturated air sat)			100	107.43	100	±0.5% saturation	Yes No	
Turbidity 0 NTU			0	0.00	0.00	±0.05 NTU	Yes No	
Turbidity 1 NTU			1.00	1.57	1.11	±0.05 NTU	Yes No	
Turbidity 10 NTU			10.00	7.29	9.64	±0.05 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: C. CAIN Date: 8/12/21 Time start: 0720 Time finish: 0751
 Serial Tag ID #: 728541 Turbidity Meter Type: LaMotte 2020sc SN: 2453
 Weather Conditions: Cloudy, 75°F Facility and Unit: Plant Hammond Project No.: 604551

Calibration log

	Standard Lot # - Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20440203 02/22	23.79	4490	4511.8	4490	± 5%	<input checked="" type="checkbox"/> No	
pH (4)			4.00	3.98	4.0	± 0.1 SL	<input checked="" type="checkbox"/> No	
Mid-Day pH (4) check	20440203 2/22	29.16	4.00	4.03	4.0	± 0.1 SL	<input checked="" type="checkbox"/> No	
pH (7)	19450117 2/22	25.45	7.00	6.95	7.0	± 0.1 SL	<input checked="" type="checkbox"/> No	
Mid-Day pH (7) check	19450117 2/22	28.69	7.00	7.0	7.0	± 0.1 SL	<input checked="" type="checkbox"/> No	
pH (10)	21010067 2/22	25.36	10.00	10.02	10	± 0.1 SL	<input checked="" type="checkbox"/> No	
Mid-Day pH (10) check	21010067 2/22	28.25	10.00	10.0	10.0	± 0.1 SL	<input checked="" type="checkbox"/> No	
ORP (mV)	19460167 2/22	25.57	228	229.4	228	± 20mV	<input checked="" type="checkbox"/> No	
DO (%) (3pL 100% = air saturated air sat)			100	99.16	100	± 2% saturation	<input checked="" type="checkbox"/> No	
Turbidity NTU			0	0.08	0.08	± 0.5 NTU	<input checked="" type="checkbox"/> No	
Turbidity 1 NTU			1.00	0.73	1.0	± 0.5 NTU	<input checked="" type="checkbox"/> No	
Turbidity 10 NTU			10.00	12.56	10.0	± 0.5 NTU	<input checked="" type="checkbox"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: A. Ramsay Date: 8/12/21 Time (start): 0720 Time (finish): 0745
 smarTroll SN: 728623 Turbidity Meter Type: LA5100-0224c SN: 1859-0412
 Weather Conditions: Sunny, 91 Facility and Use: Plant Hammond Project No.: GW555

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)	2014023 2/22	23.48	4490	4421.8	4490.0	±0.5%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	3.97	4.00	±0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check		31.76	4.00	3.97		±0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	21030188 6/22	23.70	7.00	6.97	7.00	±0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check				7.00	7.02		±0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No
pH (10)	21030189 6/22	23.54	10.00	9.99	10.00	±0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check				10.00	9.98		±0.1 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No
ORP (mV)	1946967 2/22	23.43	228	234.7	228.0	±0.25mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1pt, 100% water saturated air cal)			100	100.00	100.00	±0.4% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity @ NTU			0	0.85	0.00	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	2.32	1.00	±0.3 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	7.62	10.00	±0.5 NTU	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Kessler Date: 8/13/21 Title Issued: 075 Total Hours: 0755
 Serial No.: 725634 Turbidity Meter Type: CalMax 2000ve SN: 5593-1545
 Weather Conditions: Sunny 80° Facility and City: Flux Hammond AP-13 Project No.: GW555

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)	2044203	25.93	4.490	4.4758	4.490	±0.1%	<input checked="" type="checkbox"/> Yes	
pH (4)	7/22		4.00	4.04	4.00	±0.1 SL	Yes No	
Mid-Day pH (4) check	" "	/	4.00	4.01	/	±0.1 SL	Yes No	
pH (7)	2650188 6/22	26.09	7.00	7.02	7.00	±0.1 SL	<input checked="" type="checkbox"/> Yes	
Mid-Day pH (7) check	" "		/	7.00	6.99	/	±0.1 SL	Yes No
pH (10)	2106067 6/22	25.95	10.00	9.99	10.00	±0.1 SL	<input checked="" type="checkbox"/> Yes	
Mid-Day pH (10) check	" "		/	10.00	10.05	/	±0.1 SL	Yes No
ORP (mV)	1976067 2/17	25.84	228	225.5	228	±20mV	<input checked="" type="checkbox"/> Yes	
DO (%) (1pc. 100% water saturated air sat)			100	96.43	100	±0.5% saturation	<input checked="" type="checkbox"/> Yes	
Turbidity 0 NTU			0	0.62	0.00	±0.05 NTU	Yes No	
Turbidity 1 NTU			1.00	0.96	1.00	±0.05 NTU	Yes No	
Turbidity 10 NTU			10.00	10.16	9.98	±0.05 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Thomas Keaster Date: 8/16/2021 Time: 0745 Timezone: 0805
 Station ID: 228634 Turbidity Meter Type: LaMotte 2020e SN: 5573-1315
 Weather Conditions: cloudy, 80° Facility and Unit: Parkland APIC Project No.: 64418

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)	20140203	24.23	4490	4565.1	4490	-1.5%	Yes No	
pH (4)	02/22		4.00	4.12	4.00	-1.2 SL	Yes No	
Mid-Day pH (4) check	" "	/	4.00	4.04	/	-0.1 SL	Yes No	
pH (7)	21080188 01/22	25.34	7.00	6.94	7.00	-0.9 SL	Yes No	
Mid-Day pH (7) check	" "	/	7.00	7.03	/	-0.4 SL	Yes No	
pH (10)	21080189 6/22	25.40	10.00	9.98	10.00	-0.2 SL	Yes No	
Mid-Day pH (10) check	" "	/	10.00	9.97	/	-0.3 SL	Yes No	
ORP (mV)	1446067 2/22	25.41	228	228.1	228	-0.04	Yes No	
DO (%) (1pc, 100% water saturated air call)			100	100.48	100.00	-0.5% saturation	Yes No	
Turbidity 0 NTU			0	0.92	0.00	-1.25 NTU	Yes No	
Turbidity 1 NTU			1.00	0.80	1.05	-0.25 NTU	Yes No	
Turbidity 10 NTU			10.00	10.04	10.00	-0.45 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: A. Ramsay

Date: 8/16/21

Time (start): 0735

Time (finish): 0805

Station No: 128623

Factory Model Type: LaMotte 210 Drive

S/N: 1459-0412

Weather Conditions: Cloudy, 88

Field Operator: plaut hammond

Project No: DM 0591

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)	2044205 2/22	26.15	4490	4384.9	4490.0	±0.5%	Yes No	
pH (1)			4.00	4.02	4.00	±0.05	Yes No	
Mid-Day pH (1) check	21080188 6/22	26.18	4.00	4.03	-	±0.05	Yes No	
pH (7)	↓	↓	7.00	6.95	7.00	±0.05	Yes No	
Mid-Day pH (7) check	" "	30.44	7.00	7.03	-	±0.05	Yes No	
pH (10)	21080188 6/22	26.15	10.00	9.91	10.00	±0.05	Yes No	
Mid-Day pH (10) check	" "	30.49	10.00	9.96	-	±0.05	Yes No	
ORP (mV)	19460162 2/22	26.10	228	225.0	228.0	±20mV	Yes No	
DO (%) (1pt, 300% water saturated air cal)			100	99.83	100.0	±0.5% saturation	Yes No	
Turbidity 0 NTU			0	1.00	0.00	±0.05 NTU	Yes No	
Turbidity 1 NTU			1.00	1.47	1.00	±0.05 NTU	Yes No	
Turbidity 10 NTU			10.00	6.84	10.00	±0.05 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: C. CAIN Date: 8/17/21 Time (start): 0735 Time (end): 0800
 smartroll SN: 728541 Curdity Meter Type: LA400e X200e SN: 2953
 Weather Conditions: Rainy 74°F Facility and Unit: Plant Hammond Project No.: GW 554

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass*	Comments
Specific Conductance (µS/cm)	20440203 2/22	24.61	4490	4556	4490	± 5%	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
pH (4)			4.00	3.74	4.0	± 0.1 SL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Mid-Day pH (4) check	20440203 2/22	34.22	4.00	4.54	4.0	± 0.1 SL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
pH (7)	19450117 2/22	24.52	7.00	6.92	7.0	± 0.1 SL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Mid-Day pH (7) check	19450117 2/22	31.44	7.00	7.19	7.0	± 0.1 SL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
pH (10)	21010067 2/22	24.79	10.00	10.17	10.0	± 0.1 SL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Mid-Day pH (10) check	21010067 2/22	30.56	10.00	9.78	10.0	± 0.1 SL	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
ORP (mV)	19460167 2/22	24.54	228	228.4	228	± 0.5%	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
DO (%) (1 pt, 100% water saturated air sat)			100	97.28	100	± 0.5% saturation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Turbidity 0 NTU			0	0.08	0.08	± 0.5 NTU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Turbidity 1 NTU			1.00	0.72	1.0	± 0.5 NTU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Turbidity 10 NTU			10.00	12.38	10.0	± 0.5 NTU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician Chris Heasler

Date 8/17/2021

Time (start) 0730

Time (finish) 0810

smarTroll SN: 724634

Factory Meter Type LabUse 2729a

SN: 557-1515

Weather Conditions Sunny

Facility and Unit Plant Hammond AP12

Project No. GW5581

Calibration log

	Standard Lot #/ Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20440203 2122	24.7	4490	4483.0	4490	- ±1%	Yes No	
pH (4)			4.00	3.94	4.00	- ±0.1 SU	Yes No	
Mid-Day pH (4) check	" "		4.00	4.02		- ±0.1 SU	Yes No	
pH (7)	21080188 6122	25.13	7.00	7.02	7.00	- ±0.1 SU	Yes No	
Mid-Day pH (7) check	" "		7.00	6.99		- ±0.1 SU	Yes No	
pH (10)	21080188 6122	25.18	10.00	9.95	10.00	- ±0.1 SU	Yes No	
Mid-Day pH (10) check	" "		10.00	10.03		- ±0.1 SU	Yes No	
ORP (mV)	19410167 6122	25.01	228	228.0	228	- ±20mV	Yes No	
DO (1%) (1pt, 100% water saturated air cal)			100	100.99	100	- ±0.1% saturation	Yes No	
Turbidity 0 NTU			0	0.00	0.00	- ±0.25 NTU	Yes No	
Turbidity 1 NTU			1.00	0.30	1.09	- ±0.25 NTU	Yes No	
Turbidity 10 NTU			10.00	10.09	10.00	- ±0.25 NTU	Yes No	

557-1515
+1515
Adj

EQUIPMENT CALIBRATION LOG

Field Technician: A. Ramsey

Date: 8/17/21

Time start: 0735

Time (local): 0810

smarTroll SN: 728623

Turbidity Meter Type: LaMotte 2020we

SN: 1851-04112

Weather Conditions: rain, 79°

Facility and Unit: Plant Hammond

Project No.: GW556

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20440203 2/22	24.40	4490	4537.2	4490.0	±0.1%	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (4)			4.00	4.01	4.00	±0.01 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (4) check	" "	30.22	4.00	4.02		±0.01 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
pH (7)	21080184 6/22	24.51	7.00	7.01	7.00	±0.01 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check			" "	30.27	7.00	7.03		±0.01 SU
pH (10)	21080194 4/22	24.47	10.00	9.97	10.00	±0.01 SU	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check			" "	30.49	10.00	9.91		±0.01 SU
ORP (mV)	19460167 2/22	24.54	228	229.3	228.0	±0.2mV	<input checked="" type="radio"/> Yes <input type="radio"/> No	
DO (%) (1 pt. 100% water saturated air sat)			100	101.9	100.0	±0.2% saturation	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 0 NTU			0	0.73	0.00	±0.03 NTU	<input type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU			1.00	2.20	1.00	±0.03 NTU	<input type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU			10.00	7.84	10.00	±0.25 NTU	<input type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: C. CAIN

Date: 8/18/21

Title/Station: 0723

Time/Location: 0745

Serial No.: 728541

Labeling Meter Type: LaMotte 2000w

SN: 2993

Weather Conditions: Sunny 75°F

Facility and Unit: Plant Hammond

Project No.: GW554

Calibration log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20440203 2/22	20.97	4490	4386.8	4490	± 5%	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
pH (4)			4.00	4.01	4.0	± 0.1 SU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Mid-Day pH (4) check	20440203 2/22		4.00	4.01	—	± 0.1 SU	<input type="checkbox"/> Yes <input type="checkbox"/> No	
pH (7)	19450117 2/22	21.85	7.00	6.99	7.0	± 0.1 SU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Mid-Day pH (7) check	19450117 2/22		7.00	6.99	—	± 0.1 SU	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Mid day pH (10)	2010067 2/22		10.00	9.96	—	± 0.1 SU	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Mid-Day pH (10) check	2010067 2/22	22.07	10.00	10.03	10.0	± 0.1 SU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
ORP (mV)	19460167 2/22	22.08	228	233.7	228	± 2mV	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
DO (%) (1pt, 140% water saturated air cal)			100	100.33	100	± 5% saturation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Turbidity 0 NTU			0	0.11	0.04	± 0.5 NTU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Turbidity 1 NTU			1.00	0.62	0.93	± 0.5 NTU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Turbidity 10 NTU			10.00	12.8	10.0	± 0.5 NTU	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: A. Ramsky

Date: 8/18/21

Time (start): 0730

Time (finish): 0755

smarTroll SN: 725613

Turbidity Meter Type: LabUse 2021-16

SN: 1859-0412

Weather Conditions: Sunny, 91

Facility and Loc.: Plant Hammond

Project No.: GR05E

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)	20440205 2/22	21.28	4490	4521.3	4490.0	±0.5%	Yes No	
pH (4)			4.00	4.02	4.00	±0.01 SU	Yes No	
Mid-Day pH (4) check			" "	4.00	4.00	—	±0.01 SU	Yes No
pH (7)	21080183 6/22	21.75	7.00	7.00	7.00	±0.01 SU	Yes No	
Mid-Day pH (7) check			" "	7.00	7.02	—	±0.01 SU	Yes No
pH (10)	21080189 6/22	21.32	10.00	10.01	10.00	±0.01 SU	Yes No	
Mid-Day pH (10) check			" "	10.00	10.04	—	±0.01 SU	Yes No
ORP (mV)	13460147 2/22	21.91	228	224.2	228.0	±0.2mV	Yes No	
DO (%) (1 pt. 100% water saturated air sat.)			100	101.24	100.00	±0.5% saturated	Yes No	
Turbidity 0 NTU			0	0.80	0.00	±0.05 NTU	Yes No	
Turbidity 1 NTU			1.00	0.65	1.00	±0.05 NTU	Yes No	
Turbidity 10 NTU			10.00	10.95	10.00	±0.05 NTU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Co CAIN Date: 8/19/21 Time (start): 0730 Time (finish): 0800
 Station ID: 728541 Turbidity Meter Type: 1400000000 SN: 2953
 Weather Conditions: Sunny 72°F Facility and Location: Plant Hammond Project No.: GW-551

Calibration log

	Standard Lot # - Date of Expiration	Temp of Standard (°C)	Value of Standard	Initial Reading	Post-Cal Reading	Acceptable Range	Pass?	Comments
Specific Conductance (µS/cm)	20440203 2/22	26.91	4490	4360.6	4490	±0.5%	Yes No	
pH (4)			4.00	3.42	4.0	±0.1 SU	Yes No	
Mid-Day pH (4) check	20440203 2/22	29.70	4.00	4.07	4.0	±0.1 SU	Yes No	
pH (7)	19450117 2/22	27.04	7.00	6.79	7.0	±0.1 SU	Yes No	
Mid-Day pH (7) check	19450117 2/22	29.16	7.00	7.01	7.0	±0.1 SU	Yes No	
pH (10)	21010067 2/22	27.57	10.00	10.14	10.0	±0.1 SU	Yes No	
Mid-Day pH (10) check	21010067 2/22	28.83	10.00	9.92	10.0	±0.1 SU	Yes No	
ORP (mV)	19460167 2/22	26.93	228	223.5	228	±0.20mV	Yes No	
DO (%) (Lpt. 100% water saturated air sat)			100	100.82	100.0	±0.5% saturation	Yes No	
Turbidity 0 NTU			0	0.11	0.10	±0.02 NTU	Yes No	
Turbidity 1 NTU			1.00	0.72	1.00	±0.02 NTU	Yes No	
Turbidity 10 NTU			10.00	13.11	10.0	±0.02 NTU	Yes No	

APPENDIX C

Semiannual Remedy Selection and Design Progress Report



Prepared for

Georgia Power Company
241 Ralph McGill Blvd NE
Atlanta, Georgia 30308

SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT

PLANT HAMMOND ASH POND 1 (AP-1)

Prepared by

Geosyntec 
consultants

engineers | scientists | innovators

1255 Roberts Boulevard, Suite 200
Kennesaw, Georgia 30144

Project Number GW6581B

January 2022

SEMIANNUAL REMEDY SELECTION AND DESIGN PROGRESS REPORT
PLANT HAMMOND ASH POND 1 (AP-1)

This *Semiannual Remedy Selection and Design Progress Report, Plant Hammond Ash Pond 1 (AP-1)* has been prepared in accordance with the United States Environmental Protection Agency Coal Combustion Residual Rule, specifically 40 Code of Federal (CFR) 257.97(a) and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10(6)(a). This report describes the progress made during the second semiannual period of 2021 in selecting and designing a remedy previously documented in the *Assessment of Corrective Measures Report – Plant Hammond Ash Pond 1 (AP-1)*.

Report Prepared by:



Whitney B. Law, P.E.
Georgia Professional Engineer No. 036641

January 31, 2022
Date

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LIST OF ACRONYMS AND ABBREVIATIONS

%	percentage
ACM	Assessment of Corrective Measures
AEC	anion exchange capacity
Al	aluminum
AP	ash pond
As	arsenic
CCR	coal combustion residuals
CEC	cation exchange capacity
CFR	Code of Federal Regulations
Co	cobalt
CSM	conceptual site model
DPT	direct-push technology
EDXA	energy dispersive x-ray analysis
Fe	iron
GA EPD	Georgia Environmental Protection Division
Georgia Power	Georgia Power Company
Geosyntec	Geosyntec Consultants, Inc.
gpm	gallons per minute
GWPS	Groundwater Protection Standard
H ₂	hydrogen
K _d	distribution coefficient
L/kg	liters per kilogram
Li	lithium
M	molar
MDL	method detection limit
µg/g	micrograms per gram
meq/100 g	milliequivalents per 100 grams
meq/L	milliequivalents per liter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
Mn	manganese
MNA	monitored natural attenuation
Mo	molybdenum
ORP	oxidation reduction potential
PRB	permeable reactive barrier
SEM	scanning electron microscopy

SEP	sequential extraction procedure
SGU	Geological Survey of Sweden
SiREM	SiREM laboratories
SSI	statistically significant increase
SSL	statistically significant level
TOC	total organic carbon
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
v/v	volume per volume
WRA	Whole Rock Analysis
XRD	x-ray diffraction
XRF	x-ray fluorescence

1.0 INTRODUCTION

1.1 Purpose

This *Semiannual Remedy Selection and Design Progress Report* (the semiannual progress report) was prepared by Geosyntec Consultants, Inc. (Geosyntec) for Georgia Power Company (Georgia Power) Plant Hammond Ash Pond 1 (AP-1 or Site) in accordance with the United States Environmental Protection Agency (USEPA) Coal Combustion Residual Rule (federal CCR Rule) (40 Code of Federal Regulations [CFR] 257 Subpart D), specifically 40 CFR 257.97(a), and the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10(6)(a). This semiannual progress report describes the progress made since the issuance of the prior semiannual progress report in selecting and designing a remedy. Potentially applicable groundwater corrective measures were previously described in the *Assessment of Corrective Measures Report – Plant Hammond Ash Pond 1 (AP-1)* (Geosyntec, 2019b) (ACM Report).

The purpose of the ACM Report (and subsequent semiannual progress reports) is to document the process of evaluating and selecting corrective measure(s) to improve groundwater quality. This process is typically iterative and may be composed of multiple steps to analyze the effectiveness of corrective measures. Once potential corrective measures are identified, they are further evaluated using the criteria outlined in § 257.96(c) and Rule 391-3-4-.10(6)(a). The selected corrective measure must meet the additional protection criteria outlined in § 257.97 and corresponding Rule 391-3-4-.10(6)(a). Pursuant to § 257.97(a) and Rule 391-3-4-.10(6)(a), semiannual progress reports have been regularly submitted to document the efforts of evaluating and progressing toward selecting a groundwater corrective measure (Geosyntec, 2020a, 2020b, 2021c, 2021e).

1.2 Site Background and Overview of AP-1 Pond Closure

Plant Hammond is located in Floyd County, Georgia, approximately 10 miles west of Rome and is bordered by Georgia Highway 20 (GA-20) on the north, the Coosa River on the south, Cabin Creek and industrial land on the east, and sparsely populated, forested, rural and industrial land on the west (**Figure 1**). The four coal-fired electric generating units at Plant Hammond are decommissioned and electricity is no longer produced at the Site.

AP-1 is a 35-acre surface impoundment that received CCR materials from its commission in 1952 until 1969. After 1969, AP-1 was utilized as a co-treatment pond to handle return

water flows from the other ponds and for recycling of process water for plant operations. Georgia Power will close AP-1 through removal of the CCR materials from the CCR unit; closure activities will be conducted in accordance with § 257.102 and corresponding Rule 391-3-4-.10(7)(b). The proposed closure by removal approach provides a source control measure that reduces the potential for migration of CCR constituents to groundwater. Details of the closure approach are provided in the Initial Written Closure Plan, published in 2016 to Georgia Power's CCR compliance website. Closure permit No. 057-023D(CCR) was approved by GA EPD on June 22, 2020.

1.3 Regulatory Program Status and Nature and Extent

CCR compliance groundwater monitoring-related activities have been performed for AP-1 since May 2016 pursuant to the federal CCR Rule. Georgia Power initiated an assessment monitoring program in January 2018 after identifying statistically significant increases (SSIs) of Appendix III constituents in groundwater.

Statistical analyses of the Appendix IV assessment monitoring groundwater data collected in 2018 identified statistically significant levels (SSLs) of molybdenum (Mo) and arsenic (As) at concentrations exceeding the state and/or federal Groundwater Protection Standards (GWPS). Pursuant to § 257.96, Georgia Power initiated an ACM for AP-1 in January 2019. The ACM Report was submitted to GA EPD in June 2019 and posted to the CCR compliance website in July 2019. Since July 2019, an SSL of lithium (Li) at concentrations above the state and federal GWPS was identified in August 2020, in addition to the Mo and As SSLs.

Since the ACM was initiated, delineation monitoring wells have been installed and incorporated into the assessment network to horizontally and vertically delineate As, Li, and Mo SSLs downgradient of AP-1. Additionally, two compliance monitoring wells (HGWA-43D and HGWA-44D) were installed in August 2020 to provide additional data to characterize background groundwater quality and flow conditions in deeper zones of the aquifer. The well network is shown on **Figure 2**; **Table 1** provides well construction details.

Statistical analysis of the August 2021 semiannual assessment monitoring groundwater data identified SSLs of the below Appendix IV constituents at concentrations exceeding the noted state or federal GWPS. Details are provided in the *2021 Annual Groundwater Monitoring and Corrective Action Report (2021 Annual Report)* (Geosyntec, 2022).

AP-1 (Federal CCR Rule):

- As: HGWC-13;
- Li: MW-25D;
- Mo: HGWC-8

AP-1 (GA EPD CCR Rule):

- As: HGWC-13;
- Li: MW-25D;
- Mo: HGWC-7, HGWC-8, HGWC-9, HGWC-11, HGWC-12, HGWC-13, and MW-19.

Based on the groundwater data reported in the 2021 Annual Report, identified SSLs have been horizontally and vertically delineated to below the state and federal GWPS as determined by confidence intervals (statistical analysis) in the listed delineation wells. The groundwater data from the August 2021 semiannual assessment monitoring event were used to generate the As, Li, and Mo iso-concentration maps presented on **Figures 3, 4, and 5**, respectively.

- HGWC-7 – Mo is horizontally delineated by MW-29 and vertically by MW-28D.
- HGWC-8 – Mo is horizontally delineated by MW-20 and vertically by MW-27D.
- HGWC-9 – Mo is horizontally delineated by MW-5 and vertically by MW-26D.
- HGWC-11 – Mo is horizontally delineated by MW-7 and vertically by MW-25D.
- HGWC-12 – Mo is horizontally delineated by MW-7 and vertically by MW-25D.
- HGWC-13 – Mo is horizontally delineated by MW-7 and vertically by MW-24D; As is horizontally delineated by MW-19 and vertically by MW-24D.

The Mo and Li SSLs identified in MW-19 and MW-25D, respectively, are horizontally delineated to below the state and federal GWPS by MW-7. Vertical delineation of these constituents may require the installation of additional wells adjacent to MW-19 and MW-25D and is currently under evaluation. However, based on findings related to deep wells

on the Site as presented in the *Alternate Source Demonstration – Fluoride, Lithium, Molybdenum*, submitted with the *2020 Annual Groundwater Monitoring and Corrective Action Report* (Geosyntec, 2021a), it is also recommended to collect additional data and continue to evaluate these findings prior to installing additional deeper vertical delineation well(s) near MW-25D. A preliminary evaluation of the geochemical conditions in MW-25D suggested that this well is not affected by AP-1 and appeared to show geochemical conditions similar to other deep wells with low recharge.

Monitoring well HGWC-13 historically exhibited a state SSL for lithium. However, concentrations of lithium have decreased to less than the state GWPS and the statistical analysis of the historical data set no longer indicates an SSL. HGWC-13 for lithium will continue to be listed in the remedy selection and design progress reports and considered in the assessment of corrective measures.

Based on EPD guidance, wells with SSLs were further evaluated by Groundwater Stats using the Sen's Slope/Mann Kendall trend test (**Appendix A**). The full report generated from the analyses is provided in Appendix E of the 2021 Annual Report. Statistically significant trends were identified for the following well/constituent pairs:

- Increasing trends: HGWC-7 (Mo) and HGWC-9 (Mo)

Pursuant to § 257.96, groundwater in the vicinity of AP-1 continues to be monitored during the ACM phase in accordance with the established assessment monitoring program.

1.4 Corrective Measures Evaluated

As discussed in the ACM Report, the following corrective measures were initially considered to be potentially feasible for use at AP-1. A comparative screening of the corrective measures is provided in **Table 2**.

1. Geochemical Manipulation (In-Situ Injection)
2. Hydraulic Containment (Pump and Treat)
3. Monitored Natural Attenuation (MNA)
4. Permeable Reactive Barrier (PRB)
5. Phytoremediation
6. Subsurface Vertical Barrier Walls

The PRB and vertical barrier wall corrective measures have since been removed from consideration based on data evaluations presented in the August 2020 semiannual progress report (Geosyntec, 2020b).

Georgia Power proactively initiated adaptive site management as outlined in the ACM Report to support the groundwater remedy selection process and address potential changes in site conditions (e.g., successful reduction of constituent concentrations or changing trends) as appropriate during the ash pond closure. The adaptive site management approach will take existing site conditions, including natural attenuation mechanisms, into account.

Characterization activities to evaluate attenuation mechanisms at the Site include collection of data necessary to progressively evaluate the existing and long-term effectiveness of these processes in the aquifer and reduce uncertainty for decision making at each screening step as listed in the USEPA guidelines for MNA of inorganic constituents (USEPA, 1999, 2007, and 2015). The 1999 MNA guidance originally introduced the “tiered approach” with three tiers of site-specific information, or lines of evidence, to evaluate the appropriate use of MNA at certain sites (USEPA, 1999). In 2007, the USEPA issued MNA technical guidance specific to inorganic contaminants (USEPA, 2007) that contained four “tiers.” The 2015 MNA guidance retains these four “tiers,” but describes them as “phases” as described below (USEPA, 2015). This 2015 MNA document for inorganic contaminants expands on and is designed to be a companion to the 1999 and 2007 MNA guidance.

- Phase I: Demonstration that the groundwater plume is *not expanding*.
- Phase II: Determination that the *mechanism and rate* of the attenuation process are sufficient.
- Phase III: Determination that the *capacity* of the aquifer is sufficient to attenuate the mass of contaminant within the plume and the *stability* of the immobilized contaminant is sufficient to resist re-mobilization.
- Phase IV: Design of a *performance monitoring program* based on an understanding of the mechanism of the attenuation process, and establishment of contingency remedies tailored to site-specific characteristics.

Georgia Power will address Phase IV, as appropriate, during the development of the future corrective action monitoring plan, after the final remedy selection report.

The data collection approach and the data interpretation presented within this semiannual progress report are informed by this phased MNA guidance. It is noted, however, that the characterization data collected under this approach are also used to refine the conceptual site model (CSM) and evaluate other retained potential corrective measures.

1.5 Risk Evaluation

In addition to the assessment monitoring program at the Site, Georgia Power conducted a human health and ecological risk evaluation to evaluate As, Li, and Mo SSLs in groundwater at AP-1. The results of the risk evaluation were presented in the *2020 Risk Evaluation Report – Georgia Power Company – Plant Hammond Ash Pond 1*, submitted to GA EPD in January 2021 (Geosyntec, 2021b). The evaluation provides one of many lines of evidence that will be evaluated and factored into the remedy selection process, which will be completed in accordance with § 257.97. Based upon this evaluation, concentrations of As, Li, and Mo detected in groundwater at AP-1 between May 2016 and June 2020 are not expected to pose a risk to human health or the environment (Geosyntec, 2021b). Data collected since June 2020 are consistent with data used in the risk evaluation; therefore, the conclusion provided in the *2020 Risk Evaluation Report* are supported by current conditions reported during the 2021 reporting period.

As requested by GA EPD, an updated potable well survey of potential groundwater wells within a two-mile radius of AP-1 was conducted in December 2021 through January 2022 and consisted of reviewing federal, state, county records, and online sources. A survey conducted by Environmental Data Resources (EDR) is included in **Appendix B**. Additional federal, state, county records and online sources outside of the EDR survey were also reviewed. The Floyd County Health Department declined Geosyntec's request for information due to department security protocol. The findings from the 2021-2022 well survey are consistent with the 2020 well survey (NewFields, 2020).

2.0 SUMMARY OF WORK COMPLETED

The following summarizes the field investigations and data evaluations completed in support of the ACM program since the issuance of the prior semiannual progress report in August 2021 (Geosyntec, 2021d). The routine monitoring events associated with the assessment monitoring program are discussed in the 2021 Annual Report (Geosyntec, 2022).

2.1 Field Activities

No additional field investigation activities were conducted since submitting the previous semiannual progress report in August 2021. The field efforts associated with the data analyses presented herein, including collecting groundwater samples and aquifer solids samples, were discussed in previously submitted semiannual progress reports (Geosyntec, 2021c, 2021e). The locations of direct push technology (DPT) boreholes and the monitoring well network associated with AP-1 are shown on **Figure 2**.

2.2 Data Analysis Activities

2.2.1 **Baseline Characterization and Sequential Extraction Procedure of Select Borings**

2.2.1.1 *Baseline Characterization*

The baseline characterization results, which include cation exchange capacity (CEC), anion exchange capacity (AEC), total sulfur and total sulfite content, total organic carbon (TOC) content, total metals concentrations and whole rock analyses, and mineralogical characterization using X-ray diffraction (XRD), scanning electron microscopy (SEM) and energy dispersive X-ray analysis (EDXA), were reported for aquifer solids collected from borings DPT-01 through DPT-07 in the previous progress reports (Geosyntec, 2021c, 2021e). However, one additional aquifer solids sample from boring DPT-04 XRF_AP-1 was shipped in May 2021 to SiREM laboratories (SiREM) located in Guelph, Ontario, for baseline characterization. The sample was collected in October 2018 from a depth increment coinciding with the screened interval of HGWC-13 that exhibited an elevated As concentration based on field screening using an x-ray fluorescence (XRF) spectrometer. The location of DPT-04 XRF_AP-1 is shown on **Figure 2**. The rationale for using these analytical tests has been provided in prior semiannual progress reports and is not repeated herein (Geosyntec, 2021c).

2.2.1.2 Sequential Extraction Procedure

Aquifer solids collected from DPT-02 (located downgradient of HGWC-8), DPT-06 (background location), and DPT-04 XRF_AP-1 (near HGWC-13) were submitted for a sequential extraction procedure (SEP) at the Eurofins/TestAmerica laboratory in Knoxville, Tennessee to assess the geochemical fractionation of trace elements within aquifer solids. SEPs are chemical extractions used to remove metals from specific solid-associated phases. SEPs use progressively stronger reagents to solubilize metals from increasingly recalcitrant phases. Although these procedures do not identify the specific metal phases in a soil/aquifer matrix, they do provide a means to evaluate the class of solids and relative stability in relation to oxidation/reduction (redox) potential and pH fluctuations (Tessier et al, 1979; Kuo et al., 1983; Sposito et al., 1984; Hickey and Kittrick, 1984; Gruebel et al., 1988).

SEP data can be used to interpret the mechanism and potential reversibility of attenuation processes, consistent with Phases II and III of the MNA guidance. These data also supplement information collected during the baseline characterization, such as CEC and AEC, as well as the presence of certain minerals and/or metal oxyhydroxides. Eurofins/TestAmerica uses a 7-step extraction procedure as described below.

- Step 1 (Exchangeable Phase): This extraction includes trace elements that are reversibly sorbed to soil minerals, amorphous solids, and/or organic material by electrostatic forces. These forces may be overcome by exposing the soil to a concentrated electrolyte solution, such as 1 molar (M) magnesium sulfate (MgSO_4) that displaces the trace elements from solid surfaces.
- Step 2 (Carbonate Phase): This extraction targets trace elements that are sorbed or otherwise bound to carbonate minerals. This phase is soluble in a mild acid solution (1M sodium acetate [NaOAc] solution in 25% acetic acid [HOAc] at pH 5).
- Step 3 (Non-Crystalline Materials Phase): This extraction targets trace elements that are complexed by, and co-precipitated with, amorphous solids (e.g. iron (Fe)/manganese (Mn)/aluminum (Al) oxyhydroxides). This phase is extracted with 25 milliliter (mL) of 0.2M ammonium oxalate (pH 3) and can provide significant attenuation capacity.
- Step 4 (Metal Hydroxide Phase): Trace elements bound to crystalline hydroxides of Fe, Mn, and/or Al are extracted using a solution of 1M hydroxylamine

hydrochloride (HONH₂-HCl) in 25% volume per volume (v/v) acetic acid. This phase often provides significant attenuation capacity.

- Step 5 (Organic Phase): This extraction targets trace elements strongly bound via chemisorption to organic material. Oxidation of soil organic matter (using pH 9.5; at 5% sodium hypochlorite [NaOCl]), will bring into solution metals bound to organic functional groups.
- Step 6 (Acid/Sulfide Fraction): The extraction is used to identify trace elements precipitated as sulfide minerals. Metals associated with sulfide minerals will be extracted by leaching the soils with a 3:1:2 v/v solution of hydrochloric acid-nitric acid-water [HCl-HNO₃-H₂O] to dissolve the metal sulfide minerals. Sulfide phases are fairly stable in the groundwater environment and can provide non-reversible attenuation under most conditions.
- Step 7 (Residual Fraction): Trace elements remaining in the soil after the previous extractions will be distributed between silicates, phosphates, and refractory oxides. These residual metals can be removed from the soil through total dissolution with hydrofluoric acid [HF], HNO₃, HCl and boric acid [H₃BO₃]. These are stable, but usually are the naturally occurring fraction and not attenuated trace elements from a CCR release.

2.2.2 Sorption and Desorption Studies

Aquifer solids and groundwater samples were shipped to SiREM for laboratory treatability studies to assess the sorption and desorption behavior of As, Mo, and Li, as further described below. In general, sorption studies use soils collected from background locations and groundwater with constituent concentrations above GWPSs to evaluate attenuation mechanisms and capacity, consistent with Phases II and III of the MNA guidance. Desorption studies can be used to assess attenuation stability of the constituents of interest, and generally utilize soils collected proximal to areas with exceedances of GWPSs and groundwater with background constituent concentrations. Sorption tests are used to calculate a site-specific distribution coefficient (K_d) between the solid phase and the aqueous phase. The K_d values can be used in a fate and transport model to estimate future groundwater concentrations and evaluate potential corrective actions at the Site.

2.2.2.1 Sorption Studies

Prior to selecting aquifer solids for the sorption studies, the lithology as well as the chemical and mineralogical characterization data for the samples previously collected from DPT-01 through DPT-07 borings were evaluated for potential differences in characteristics. The baseline characterization study and associated results were presented in a previous semiannual progress report (Geosyntec, 2021c, 2021e). Please refer to the SiREM report included as **Appendix C** for a summary of all characterization results obtained to date. Both the lithology and the characterization data were generally consistent among the seven DPT locations and therefore, the background location DPT-06 was selected for the sorption studies. Unimpacted groundwater from background well HGWA-1 was used together with unimpacted aquifer solids from DPT-06 to construct batch reactors to evaluate sorption of As, Mo, and Li.

Groundwater from HGWA-1 was spiked with As, Mo, and Li at six concentration levels. The highest spike concentration level (Level 6) of each constituent was at least twice as high as the highest As, Mo, or Li concentration observed at the Site, either within CCR pore water or groundwater, whichever was higher. Reactors were constructed in duplicate and incubated for seven days under ambient (i.e., aerobic) conditions consistent with conditions in the aquifer downgradient of AP-1. Samples were collected from the reactors at the beginning of the study (i.e., Day 0) and at the end of the study (Day 7). The samples were analyzed for dissolved As, Li, and Mo, pH, and oxidation-reduction potential (ORP). The concentrations of As, Li, and Mo sorbed to the aquifer solids was calculated based on the concentration difference in the aqueous phase of the initial spike and Day 7 and the mass of aquifer solids in each reactor. A detailed description of the methods and materials used to complete the sorption study is included in the SiREM report provided in **Appendix C**.

Based on the results of the laboratory batch testing, the concentrations of sorbed constituents (in milligrams per kilogram (mg/kg)) and dissolved constituents remaining in aqueous solution (in milligrams per liter (mg/L)) were plotted for each spiked concentration level. These graphs represent sorption isotherms that can be used to calculate site-specific K_d values. Linear regression lines were fit to the data using the method of least squares in Microsoft Excel, and the slopes of these regression lines represent the K_d values for each constituent (USEPA, 2008).

2.2.2.2 *Desorption Studies*

Similar to the sorption studies, the lithology as well as the chemical and mineralogical characterization data of the eight DPT borings were assessed to evaluate which aquifer solids sample should be used for the desorption studies. One of the important characteristics for this evaluation was the total concentration of the constituents of interest reported in the aquifer solids collected from these borings. The highest As concentration (i.e., 13 mg/kg) was detected in aquifer solids from DPT-04 XRF_AP-1, near HGWC-13, and therefore this sample was selected to evaluate desorption behavior of As. The As concentrations of the six other DPT borings located downgradient of AP-1 (DPT01 through DPT-05, DPT-07) were generally consistent with background conditions, represented by DPT-06. To assess the desorption behavior of Mo, a boring downgradient of HGWC-8 was selected for these studies. DPT-02 contained 6.2 mg/kg of Mo, which was substantially higher than the 0.4 mg/kg of Mo detected in background location DPT-06. Additionally, DPT-02 is located downgradient of HGWC-8 which continues to be associated with groundwater samples reporting the highest Mo concentration for AP-1. Lithium was included as an analyte in both desorption batch study samples but did not warrant the selection of a separate core/boring. First, based on the ASD briefly described in Section 1.3, Li is not believed to be associated with CCR management at AP-1, and second, Li concentrations in aquifer solids materials were pretty consistent within downgradient borings and lower compared to the background boring DPT-06. Therefore, selection of a separate sample to test Li desorption was not deemed necessary.

Batch reactors were constructed in duplicate using these aquifer solids, which were combined with background groundwater from HGWA-1 to evaluate desorption behavior. The desorption reactors for Mo were tested under ambient (aerobic) conditions only, while the desorption reactors for As were tested under ambient (aerobic) as well with the amendment of hydrogen gas (H₂) to promote anerobic (reducing) conditions by removing all dissolved oxygen. Reducing conditions generally result in higher As mobility and would represent “worst-case scenario” aquifer conditions within the vicinity of HGWC-13 following the closure of AP-1. Groundwater conditions currently fluctuate between mildly reducing and mildly oxidizing (field ORP approximately between -80 mV and +80 mV) in this well, while other wells around AP-1 exhibit aerobic conditions. As noted previously, more detailed descriptions of the methods and materials are included in the SiREM report provided in **Appendix C**.

2.2.3 Hydraulic Capture Zone Analyses

In addition to the baseline characterization and batch studies, Geosyntec evaluated conceptual layouts of hydraulic containment and phytoremediation corrective measures to assess hydraulic capture zones downgradient of wells HGWC-8 and HGWC-13 reporting federal SSLs of Mo and As, respectively. Capture zones were assessed using a calibrated three-dimensional, steady-state, numerical groundwater flow model that utilizes United States Geological Survey (USGS) created finite-difference flow modeling code (MODFLOW). The hydraulic containment corrective measure was simulated as a linear array of extraction wells, whereas the phytoremediation corrective measure was simulated as a rectangular array of engineered (proprietary) TreeWell® phytoremediation system units downgradient of HGWC-8 and HGWC-13.

Simulated groundwater elevations were evaluated to assess whether an inward hydraulic gradient can be achieved in select locations with the addition of corrective measures. Pumping rates for groundwater extraction wells were varied between 0.25 and 10 gallons per minute (gpm). The *TreeWell* units were modeled as individual pumping wells extracting groundwater at 0.03 gpm per unit (consistent with long-term average extraction rates and based on experience with this technology) arrayed in a field. The numerical groundwater model developed for the AP-1 area and the results of hydraulic capture zone analyses will be described in detail in the forthcoming comprehensive Remedy Selection Report. Further modeling is recommended to refine the constituent distribution in the subsurface to target specific zones for pumping for improved mass recovery efficiency/effectiveness and to further evaluate the potential remedy performance.

3.0 SUMMARY OF RESULTS

The following presents the results of the data analysis efforts outlined in Section 2.

3.1 Summary of Unconsolidated Aquifer Solids Analysis

A brief summary of the aquifer solids results for sample DPT-04 XRF_AP-1 is provided below, and the complete SiREM report is included in **Appendix C** of this report. Refer to previous progress reports for a detailed discussion of baseline characterization results of aquifer solids from DPT-01 through DPT-07 (Geosyntec, 2021c, 2021e). All baseline characterization results, as of the submittal of this report, are included in **Table 3** through **Table 6** for clarity and comparison purposes.

3.1.1 Anion and Cation Exchange Capacity

The CEC of soils is dependent on the amount and type of clay minerals, organic matter, and amorphous minerals, while the sources of AEC in soils include clay minerals (primarily 1:1 clays such as kaolinite), metal oxides, and amorphous materials. In general, the CEC of a soil is higher than the AEC, but highly weathered and acidic soils can have substantial AEC (Sparks, 1995).

As summarized in **Table 3**, the CEC for sample DPT-04 XRF_AP-1 is 3.10 milliequivalents per 100 grams (meq/100 g) and the AEC is 5.52 meq/100 g. Given the low TOC content of this sample, reported as a percentage (i.e., 0.05%), the ion exchange capacities appear to be mostly dominated by clay minerals and metal oxides (likely both crystalline and amorphous; discussed further in Section 3.1.4 and 3.1.5). While all samples exhibited a range of CECs indicative of natural attenuation capacity, the lower CEC observed in DPT-04 XRF_AP-1 is likely due to the higher percentage of quartz in this particular sample (i.e., almost 92%).

3.1.2 Total Sulfur, Total Sulfide, and Total Organic Carbon

The presence of sulfur, and especially sulfide in the aquifer materials may give an indication whether metals prone to precipitation as sulfides or co-precipitation with sulfidic minerals, might be present in the aquifer matrix. Organic carbon, if present, can contribute to the CEC and AEC of a soil.

As summarized in **Table 3**, the total sulfur content, reported as a percentage (%), in sample DPT-04 XRF_AP-1 is low at 0.007% and total sulfide was non-detect (<0.04%). The TOC content of this sample is also low at 0.05%. This observation is not unexpected

given that the materials were collected at depth within the aquifer matrix composed of residuum (i.e., clays) and partially weathered bedrock. Similar to other locations on Site, organic carbon is not expected to play a major role in the attenuation of site-specific constituents.

3.1.3 Total Metals and Whole Rock Analyses

The total metals results for sample DPT-04 XRF_AP-1 are summarized in **Table 4**. The metals include the site-specific constituents of interest Mo, Li, and As. In addition, Fe, Al, and Mn were also analyzed to give an indication whether oxides/oxyhydroxides of these metals may be present, since these mineral phases can be a significant source of attenuation capacity for metal(loid)s.

As can be seen in **Table 4**, sample DPT-04 XRF_AP-1 contains relatively low concentrations of site-specific constituents of interest, except for As. Molybdenum was detected at 1.4 mg/kg¹, Li was detected at 12 mg/kg, and As was detected at 13 mg/kg. With exception to As, concentrations of Mo and Li in boring DPT-04 XRF_AP-1 are generally consistent with, or lower than, background conditions (i.e., represented by boring DPT-06). The concentration of As was the highest concentration detected among the aquifer solids samples submitted for analyses.

As expected for residuum and highly weathered bedrock materials, and similar to other aquifer solid samples collected at the Site, the Fe and Al concentrations are substantial, with an Fe concentration of 14,000 mg/kg (1.4%) and an Al concentration of 13,000 mg/kg (1.3%). This observation is indicative of the abundant presence of Fe- and Al-oxides and hydroxides as well as clay minerals, which provide substantial attenuation capacity for site-specific constituents reporting SSLs. The Mn concentration in boring DPT-04 XRF_AP-1 was low at 120 mg/kg.

Whole Rock Analysis (WRA) was included as a chemical assay to confirm and reconcile the quantitative mineral analysis obtained through XRD. The analysis was conducted on the unconsolidated DPT boring, and not competent bedrock as the analysis name may imply. The WRA of these aquifer materials summarized in **Table 5** confirms the presence of major mineral phases. Quartz was the most abundant mineral phase detected in sample DPT-04 XRF_AP-1 at 91.9%, with Al-oxide and Fe-oxide concentrations coming in as

¹ Milligrams per kilogram (mg/kg) is equivalent to micrograms per gram (µg/g). The SiREM report provided in Appendix C presents select data in µg/g, however, the applicable data are presented within this semiannual progress report as “mg/kg” for easier comparison with the results of the sorption and desorption studies.

the second most abundant mineral phases at 2.69% and 2.41%, respectively. Other oxides, especially containing potassium and titanium, were detected at concentrations of less than 1%.

3.1.4 XRD and SEM/EDXA Analyses

XRD and SEM/EDXA analyses were completed to characterize both the crystalline and non-crystalline phases of the unconsolidated aquifer matrix. Overall, the mineralogy of the aquifer matrix reflects the abundance of quartz, muscovite, microcline, and includes minerals that provide ample surface area and ion exchange capacities to attenuate both cationic as well as anionic constituents.

As expected (and confirmed through WRA), the quantitative XRD analysis (see **Table 6**) indicated that the largest percentage of the aquifer matrix in sample DPT-04 XRF_AP-1 is made up of quartz at 91.7% (by weight). The second-highest percentage of the mineralogy was characterized as the 2:1 clay mineral muscovite at 3.80% (by weight) followed by the feldspar mineral microcline at 2.40% (by weight), and the 1:1 clay mineral kaolinite at 1.80% (by weight).

The SEM/EDXA images and results for sample DPT-04 XRF_AP-1 are included as pages XX through XX in the SiREM report (**Appendix C**). SEM/EDXA has the advantage of also identifying amorphous (i.e., non-crystalline) phases that cannot be identified using XRD. It therefore supplements the XRD results.

The main minerals identified include quartz, the clay minerals kaolinite, muscovite, and other silicates such as zircon, titanium-containing minerals such as rutile and ilmenite, and mixtures of Fe-oxides and oxyhydroxides. Although the contents of mineral phases which provide reactive surfaces are generally lower than other previously reported samples, the presence of these mineral and amorphous phases suggest that ample attenuation sites are potentially available within the aquifer matrix for site-specific constituents.

3.1.5 Sequential Extraction Procedure

As described in Section 2.2.1.2, aquifer solids from DPT-02, DPT-06, and DPT-04_XRF_AP-1 were submitted to Eurofins/ TestAmerica, to evaluate the fractionation of As, Li, and Mo using the 7-step SEP analysis method. The results are summarized in **Table 7**, as well as provided in the included SiREM report (**Appendix C**).

As a first step to evaluate data quality in an SEP analysis, the concentration obtained from the total metals analysis for a constituent of interest should be compared with the sum of metal concentrations reported from the individual SEP steps. While not expected to be exactly the same, these results should be consistent with each other. As can be seen in **Table 7**, the totals analyses for As, Li, and Mo, and the sum of these individual metals from extraction steps 1 through 7 match reasonably well, indicating good metal recovery in the SEP steps and data quality. One notable exception is the As result for sample DPT-04 XRF_AP-1, where the sum of SEP steps yielded a result of 12 mg/kg, while the total As analyses indicated a concentration of 59 mg/kg. Considering As was detected at 13 mg/kg in a prior total metals analysis for an aliquot extracted from sample DPT-04 XRF_AP-1 (described in Section 3.1.3, shown on **Table 4**), the 59 mg/kg result appears to be an outlier possibly related to incomplete sample homogenization conducted by the laboratory.

Arsenic was not recovered in the first two extraction steps, which include the Exchangeable Phase (Step 1) and the Carbonate Phase (Step 2), in any of the samples. The bulk of As concentrations was associated with the Non-Crystalline Phase (Step 3), the Metal Hydroxide Phase (Step 4), and the Acid/Sulfide Phase (Step 6) indicating that As is mostly associated with amorphous and crystalline metal oxides and oxyhydroxides as well as As sulfides. This suggests sorption and, to a lesser degree, coprecipitation mechanisms for As in the subsurface, especially for sample DPT-04 XRF_AP-1 near HGWC-13, which recovered the largest As fraction in Step 4.

Minimal lithium was recovered in Steps 1 through 3, but some Li was recovered in Step 4 (Metal Hydroxide Phase) and Step 5 (Organic Phase), suggesting that some Li can go into solution through weathering/dissolution of metal oxyhydroxides and organic carbon, and/or that some Li sorption may occur onto these phases. However, the bulk of Li was recovered in Steps 6 (Acid/Sulfide Phase) and 7 (Residual Phase), indicating a fairly recalcitrant fraction of Li that can only be liberated through weathering of the rock/mineral matrix containing the Li.

Total Mo concentrations were non-detect in background sample DPT-06 and estimated at 1.5 mg/kg in sample DPT-04 XRF_AP-1. Boring DPT-02, downgradient of HGWC-8, had a slightly higher total Mo concentration of 3.2 mg/kg. The SEP analysis of the DPT-02 sample resulted in non-detect and estimated values in each phase. However, Mo was mostly associated with the Non-Crystalline Phase (Step 3) and the Metal Hydroxide Phase (Step 4) of sample DPT-02, suggesting that Mo may be sorbed to these amorphous and crystalline metal oxide and oxyhydroxide phases.

3.2 Sorption and Desorption Study Results

3.2.1 Sorption Results

The results of the batch sorption tests are summarized in **Tables 8A** through **8C** and are included in the SiREM Report as **Appendix C**.

As can be seen in **Table 8A**, all six spiked concentration levels for As (target spiking concentrations between 0.05 mg/L and 1.7 mg/L) were completely sorbed by the aquifer materials since all dissolved As concentrations were non-detect (i.e., <0.0002 mg/L) after seven days of incubation. Moreover, sorption kinetics were very fast given that samples collected on Day 0, which were collected approximately one hour after reactor setup, already indicated As concentrations several times lower than the spiked concentrations. The results are also depicted on **Figure 6A**, with dissolved concentrations (in mg/L) plotted on the x-axis and the sorbed concentrations (in mg/kg) plotted on the y-axis. Since all of the As was sorbed, no sorption isotherm can be plotted, and no K_d value can be calculated. Under these experimental conditions, sorption of As is infinite. This observation is consistent with groundwater monitoring results since elevated As in HGWC-13 is limited to this location and has not been observed to migrate away from this well, suggesting strong sorption/attenuation of As downgradient of this well.

Molybdenum sorption results are summarized in **Table 8B** and depicted on **Figure 6B**. The Mo results suggest a linear sorption isotherm with a calculated K_d value of approximately 175 liters per kilogram (L/kg). This value is within the range of K_d values reported by USEPA (2005) for Mo in soil/water systems and suggests strong sorption of Mo in the subsurface downgradient of AP-1. This observation is also consistent with groundwater monitoring results reported in delineation well MW-20, downgradient of HGWC-8, which indicates Mo attenuates prior to migrating offsite.

Lithium sorption results are summarized in **Table 8C** and depicted on **Figure 6C**. The Li results indicate some sorption onto aquifer materials and suggest a linear sorption isotherm with a calculated K_d value of approximately 33 L/kg. While the USEPA (2005) report does not include K_d values for Li, the Geological Survey of Sweden (SGU) has published K_d values for Li for seven selected soils and sediments that ranged between 190 L/kg and 370 L/kg (SGU, 2009). Therefore, the calculated Li K_d value of 33 L/kg appears to be reasonable, but on the lower end of what may be observed in surface soils that contain more organic matter compared to the aquifer materials from AP-1 that are low in organic matter.

3.2.2 Desorption Results

The results of the desorption batch study are summarized in **Table 9A** through **9C**. As described in Section 2.2.2.2, aquifer solids from boring DPT-02 located downgradient of HGWC-8 were used to evaluate desorption behavior of Mo under ambient (aerobic) conditions, while aquifer solids from boring DPT-04 XRF_AP-1 were used to assess desorption behavior of As under ambient (aerobic) and H₂-amended (anaerobic) conditions. Note that all three constituents of interest (i.e., As, Li, and Mo) were analyzed in these samples. Furthermore, the total concentrations of these elements obtained through the baseline characterization of these samples and the background concentration from groundwater from HGWA-1 are included in **Tables 9A** through **9C** to provide some context for the desorption results.

As can be seen in **Table 9A** through **9C**, non-detect to low concentrations of the constituents of interest were reported after a minimum of seven days of incubation with background groundwater. The H₂-amended treatment reactors were incubated for 15 days to promote anaerobic/reducing conditions. While samples were presumed anoxic, reducing conditions were not achieved based on ORP readings presented in this table.

Molybdenum concentrations in DPT-02 only increased from 0.0074 mg/L to 0.0096 mg/L after seven days of incubation, suggesting that Mo is fairly strongly sorbed and does not desorb to a significant extent. These results are consistent with the SEP results as well as with groundwater monitoring results that indicate Mo attenuation along the groundwater flow path. Similarly, As concentrations were non-detect at the start and the end of the desorption study, and Li appeared to slightly decrease from 0.0013 mg/L to 0.0006 mg/L after seven days of incubation, suggesting that Li is not available for desorption.

Arsenic concentrations in DPT-04 XRF_AP-1 remained low under both ambient and H₂-amended conditions. Concentrations only increased from 0.0007 mg/L at the beginning of the study to 0.0031 mg/L and 0.0012 mg/L, respectively, at the end of the study. This observation suggests minimal desorption of As, which is consistent with the strong (i.e., infinite) sorption of As demonstrated through the sorption study described above as well as groundwater monitoring results at AP-1. Despite lower concentrations of Mo in sample DPT-04 XRF_AP-1 compared to DPT-02, Mo concentrations increased slightly higher in this sample from 0.0066 mg/L at the beginning of the study to 0.0119 mg/L at the end of the study under ambient conditions. Under H₂-amended conditions, Mo results remained essentially unchanged between the start and the end of the 15-day incubation period. Similarly, Li concentrations in DPT-04 XRF_AP-1 remained either unchanged under ambient conditions or slightly decreased under H₂-amended conditions between

the beginning and the end of the incubation period. Again, Li does not appear to be available for desorption under these laboratory conditions.

While the H₂-amendment did not result in the creation of reducing conditions under this experimental setup, the aquifer downgradient and upgradient of AP-1 is oxidizing. Furthermore, closure by removal of AP-1 is anticipated to create conditions consistent with ambient conditions within the footprint of the pond, thus minimizing the need to evaluate potential As migration under reducing conditions. Therefore, the data generated from the H₂-amended reactors can be interpreted as an additional experimental replicate of the desorption batch study under ambient conditions.

3.3 Hydraulic Capture Zone Analyses

Geosyntec evaluated conceptual layouts of hydraulic containment and phytoremediation corrective measures to assess hydraulic capture zones downgradient of wells HGWC-8 and HGWC-13 reporting federal SSLs of Mo and As, respectively.

A preliminary screening level analysis in vicinity of HGWC-8 indicates that a 150-foot linear array of extraction wells pumping at varying rates is predicted to produce a sufficient hydraulic gradient to control the migration of potentially impacted groundwater downgradient of this well, while a 160-foot linear array at HGWC-13 may achieve similar results. These initial results support the retention of hydraulic capture as a corrective measure and may be appropriate as an interim measure during closure construction activities, if needed. Hydraulic capture zone results will be described in more detail in the forthcoming comprehensive Remedy Selection Report.

A preliminary screening level analysis near HGWC-8 using *TreeWell* units arrayed in a 0.6-acre area suggests that a sufficient hydraulic gradient can be created to control the migration of potentially impacted groundwater. A similar analysis indicates that a 0.4-acre area may be required near HGWC-13. However, the required planting areas at both locations are large and would interfere with the high-voltage power lines and other infrastructure around AP-1, which renders this potential phytoremediation corrective measure infeasible under the current closure design and post-closure conditions at the Site.

4.0 UPDATED CONCEPTUAL SITE MODEL

AP-1 will be closed by removal of CCR materials from the unit, thereby providing a source control measure that reduces potential for migration of CCR-related constituents to groundwater. The CSM indicates that, under current conditions, the groundwater exceedances are contained onsite, and that some of the exceedances are due to source(s) other than AP-1 as briefly referenced in Section 1.3. Data collected since the previous progress report are consistent with and support the CSM described in the August 2021 progress update.

- The characterization of aquifer solids around AP-1 indicates the presence of mineral phases that provide substantial attenuation capacity.
- The SEP conducted for select aquifer solids samples representative of conditions at AP-1 suggests that site-specific constituents appear to be associated with amorphous and crystalline metal oxides and oxyhydroxides and more recalcitrant fractions such as the acid/sulfide fraction and the residual fraction of the SEP. This observation indicates strong sorption and/or incorporation of site-specific constituents into immobile mineral phases.
- The sorption and desorption studies presented herein confirm that site-specific constituents are strongly sorbed and only very limited desorption is occurring under the experimental conditions of these batch studies. Measured partition coefficients for molybdenum (i.e., 175 L/kg) and lithium (33 L/kg) were within the range of values reported in the literature and indicative of aquifer attenuation capacity for these constituents. Moreover, all six concentration levels of As up to 1.7 mg/L were completely removed from the aqueous phase during the batch sorption study. This suggests that As is strongly sorbed to the aquifer matrix and that there is large sorption capacity even when subjected to higher As concentrations than have been observed at the Site.
- The laboratory studies presented to date are consistent with groundwater monitoring results that indicate attenuation of site-specific constituents is occurring downgradient of AP-1.

5.0 UPDATED EVALUATION OF CORRECTIVE MEASURES

Based on the data collected to date, three of the following four potential corrective measures will be retained for further evaluation. As described in more detail below, phytoremediation will no longer be retained as a potential corrective measure.

- Geochemical Injections:
 - Geochemical injections include the use of an injection well network, or other means of introducing reagents or air into the subsurface, to provide suitable reagents for either anaerobic or aerobic attenuation of As and Mo. Under anaerobic conditions, As would be attenuated within sparingly soluble sulfide minerals; this approach might also increase the attenuation of Mo. Under aerobic conditions, soluble Fe or Mn and oxygen (either via air sparging or through a chemical oxidant) would be injected to promote the formation of Fe or Mn (oxy-) hydroxides for subsequent sorption of As (and potentially, Mo) onto these mineral phases. While aerobic approaches involving sorption are somewhat less complex, they may also be more reversible, especially for Mo. Based on the naturally aerobic/oxidizing aquifer conditions at the Site, the use of an aerobic approach appears to be preferable. This corrective measure may not be effective for treating Li in groundwater. This approach would mainly be evaluated for use within a relatively small area around HGWC-13 to potentially address As, which appears to be attenuated within this area as demonstrated by horizontal and vertical delineation wells as well as the sorption and desorption study results presented herein. This area is currently inaccessible due to the operation of a temporary water treatment system that will be in use for the duration of pond dewatering during pond closures at the Site. Logistical arrangements will be required to implement this corrective measure.

- Hydraulic Containment:
 - Hydraulic containment refers to the use of groundwater extraction to induce a hydraulic gradient for hydraulic capture or control the migration of impacted groundwater. This approach uses extraction wells or trenches to capture groundwater, which may subsequently require above-ground treatment and permitted discharge to a receiving water feature, reinjection into the groundwater, or reuse. Groundwater extraction and above-ground

treatment is potentially a viable option within the alluvium as a supplemental or adaptive measure to treat groundwater near compliance wells if warranted by site conditions. However, it may not be suited or effective for extraction to treat groundwater near deeper wells with slow aquifer recharge. A screening-level analysis indicates that hydraulic containment remains a viable corrective measure.

- Monitored Natural Attenuation:
 - MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable time frame relative to more active methods. Under certain conditions (e.g., through sorption, mineral precipitation or oxidation-reduction [redox] reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. The characterization of aquifer solids presented in the previous and the current progress reports as well as the sorption and desorption batch studies presented herein suggest that the aquifer matrix has substantial attenuation capacity for the various constituents of interest at the Site. Therefore, MNA remains a viable corrective measure. MNA may either be a stand-alone corrective measure or be part of a combination of corrective measures to address groundwater impacts.

- Phytoremediation:
 - Phytoremediation uses trees and other plants to uptake or immobilize constituents, including As, Mo, and Li, or achieve hydraulic control without the need for an above-ground water treatment system and infrastructure. Within the context of AP-1, this corrective measure would likely use an engineered (proprietary) *TreeWell* phytoremediation system along the point of compliance or downgradient edge of the impacted groundwater for hydraulic control. The use of an engineered phytoremediation system has been considered and data collected to date have not eliminated the use of this approach. However, its implementation appears to be unlikely under current circumstances, mostly due to logistical challenges with tree plantings. The area downgradient of AP-1 contains high-voltage power lines that will remain in place and would substantially limit the footprint that could be used for tree plantings. A screening-level analysis indicates that any *TreeWell* planting areas sufficient to achieve hydraulic capture would need to be too large based

on access constraints. As such, phytoremediation would not be a viable corrective measure based on access limitations at the Site. Therefore, phytoremediation will not be retained for further evaluation.

Continued groundwater monitoring and updates to the statistical analyses will further refine the CSM and allow for the continued evaluation of an appropriate groundwater corrective measure at the Site.

6.0 PLANNED ACTIVITIES & ANTICIPATED SCHEDULE

The proposed closure by removal approach provides a source control measure that reduces the potential for migration of CCR constituents to groundwater. During the pond closure by removal of CCR, temporary changes in site conditions may occur that must be considered as part of remedy selection. Georgia Power proactively initiated adaptive site management as outlined in the ACM Report (Geosyntec, 2019b) to support the remedial strategy and address potential changes in site conditions as appropriate. The adaptive site management approach may be adjusted over the Site's life cycle as new site information and technologies become available. To this end, Georgia Power will continue its data collection efforts as necessary in support of efforts to refine the CSM and to further evaluate the feasibility of the corrective measures retained for further evaluation. Once sufficient data are available to make technically sound decisions regarding the ability to implement one or more specific corrective measures, necessary steps will be taken to design and implement a remedy for AP-1 in accordance with § 257.98.

Supplementary data collection and evaluation activities proposed to be completed during the next semiannual reporting period include:

- *Continue evaluation of Mo and Li in delineation wells MW-19 and MW-25D, respectively, to evaluate if additional vertical delineation wells are necessary.*
- *Evaluate potential treatability study strategies to support geochemical injection corrective measures.*

Georgia Power will continue to prepare semiannual progress reports to document AP-1 groundwater conditions, results associated with additional data collection, and the progress in selecting and designing a groundwater remedy in accordance with § 257.97(a). Georgia Power will include future semiannual progress reports in routine groundwater monitoring and corrective action reports. Record keeping, notifications, and publicly accessible internet site requirements for the semiannual progress reports will be provided in accordance with § 257.105(h)(12), § 257.106(h)(9), and § 257.107(h)(9), respectively.

7.0 REFERENCES

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TABLES

Table 1
Monitoring Well Network Summary
Plant Hammond AP-1, Floyd County, Georgia

Well ID	Hydraulic Location	Installation Date	Northing ⁽¹⁾	Easting ⁽¹⁾	Ground Surface Elevation (ft)	Top of Casing Elevation ⁽²⁾ (ft)	Top of Screen Elevation ⁽²⁾ (ft)	Bottom of Screen Elevation ⁽²⁾ (ft)	Well Depth (ft BTOC) ⁽³⁾	Screen Interval Length (ft)
Compliance Monitoring Well										
HGWA-1	Upgradient	12/3/2014	1550423.32	1940770.00	592.32	595.21	573.12	563.12	32.49	10
HGWA-2	Upgradient	12/2/2015	1549796.87	1939845.15	585.29	587.92	570.29	560.29	27.95	10
HGWA-3	Upgradient	12/2/2015	1549794.41	1939833.39	585.23	587.74	553.23	543.23	44.51	10
HGWA-43D	Upgradient	8/26/2020	1550422.85	1940753.81	592.08	595.08	544.08	534.08	61.25	10
HGWA-44D	Upgradient	8/25/2020	1550409.13	1940756.19	592.01	594.79	491.76	481.76	113.50	10
HGWC-7	Downgradient	12/3/2015	1549520.67	1942319.75	576.55	579.18	561.55	551.55	27.96	10
HGWC-8	Downgradient	12/8/2015	1549114.61	1942392.56	577.14	579.82	564.64	554.64	25.51	10
HGWC-9	Downgradient	12/9/2015	1548693.30	1942215.03	577.72	580.36	543.72	533.72	46.97	10
HGWC-10	Downgradient	12/8/2015	1548469.25	1941644.43	576.76	579.37	566.76	556.76	22.94	10
HGWC-11	Downgradient	12/15/2015	1548477.91	1941146.79	578.12	580.67	565.19	555.19	25.78	10
HGWC-12	Downgradient	12/9/2015	1548476.53	1941152.34	578.14	580.73	555.64	545.64	35.42	10
HGWC-13	Downgradient	12/10/2015	1548628.03	1940900.60	592.94	595.76	560.94	550.94	45.15	10
Delineation Monitoring Well										
MW-5	Downgradient	11/4/2014	1548436.02	1942448.85	578.00	581.14	560.70	550.70	30.84	10
MW-6	Downgradient	11/4/2014	1548383.12	1941689.01	579.18	581.84	559.28	549.28	32.96	10
MW-7	Downgradient	10/30/2014	1548230.47	1941087.44	574.94	577.73	561.24	551.24	26.89	10
MW-19	Downgradient	9/26/2018	1548422.94	1940943.01	577.46	580.65	561.45	551.45	29.53	10
MW-20	Downgradient	9/27/2018	1549029.68	1942736.85	575.96	579.00	554.96	544.96	34.37	10
MW-24D	Downgradient	11/7/2018	1548638.80	1940900.37	592.91	595.68	532.91	522.91	72.77	10
MW-25D	Downgradient	11/6/2018	1548473.00	1941162.20	577.71	580.59	527.71	517.71	63.21	10
MW-26D	Downgradient	11/14/2018	1548699.91	1942222.36	577.63	580.41	512.63	502.63	78.11	10
MW-27D	Downgradient	11/8/2018	1549103.57	1942390.80	576.84	579.70	526.84	516.84	63.19	10
MW-28D	Downgradient	11/13/2018	1549510.90	1942321.14	576.20	579.08	531.20	521.20	58.21	10
MW-29	Downgradient	11/13/2018	1549437.67	1942633.60	572.14	575.06	557.14	547.14	28.25	10
Piezometer										
APIA-1	Upgradient	12/15/2015	1550080.01	1941614.12	584.78	587.44	575.84	565.84	21.93	10
MW-1	Upgradient	12/2/2014	1549938.24	1941589.06	585.63	588.66	567.93	557.93	31.06	10
MW-8	Downgradient	10/29/2014	1548171.86	1940016.70	584.25	586.93	565.05	555.05	32.28	10
MW-30D	Downgradient	6/19/2019	1549530.00	1942318.45	576.20	578.59	481.20	471.20	107.72	10
MW-40D	Downgradient	4/29/2020	1549542.29	1942316.55	576.41	578.92	450.41	440.41	138.84	10

Notes:

ft = feet

ft BTOC = feet below top of casing

(1) Coordinates in North American Datum (NAD) 1983, State Plane, Georgia-West, feet. Survey completed by GEL Solutions dated May 19, 2020 and September 10, 2020 (for wells HGWA-43D and HGWA-44D).

(2) Elevations referenced to the North American Vertical Datum of 1988 (NAVD88). Survey completed by GEL Solutions dated May 19, 2020 and September 10, 2020 (for wells HGWA-43D and HGWA-44D).

(3) Total well depth accounts for sump if data provided on well construction logs.

Table 2
Evaluation of Remedial Technologies
Plant Hammond AP-1, Floyd County, Georgia

Corrective Measure	Regulatory Citation for Criteria:		
	Description	Performance	40 CFR 257.96(C)(1) Reliability
Geochemical Approaches (In-Situ Injection)	Use of an injection well network, or other means of introducing reagents or air into the subsurface, to provide suitable reagents for either anaerobic or aerobic attenuation of arsenic (As) and molybdenum (Mo). Under anaerobic conditions, As would be attenuated within sparingly soluble sulfide minerals; this approach might also increase the attenuation of Mo. Under aerobic conditions, soluble iron or manganese and oxygen (either via air sparging or through a chemical oxidant) would be injected to promote the formation of iron or manganese (oxy-) hydroxides for subsequent sorption of As (and potentially, Mo) onto these mineral phases. If sufficient iron is present in groundwater, the use of air sparging alone may be considered to precipitate iron (oxy-) hydroxides for sorption. In-situ chemical oxidation (ISCO) or in-situ chemical reduction (ISCR) can be used to chemically alter the redox environment in the subsurface to affect the mobility of certain inorganic compounds, including As. This corrective measure is not effective for treating lithium (Li) in groundwater.	The effective immobilization of As has been shown under aerobic and anaerobic conditions; however, the anaerobic approach (involving the injection of an electron donor together with iron or manganese and sulfur) requires careful study and testing. Based on the lab desorption batch study, the use of an aerobic approach appears to be preferable over an anaerobic approach. While aerobic approaches involving sorption are somewhat less complex, they may also be more reversible, especially for Mo. Sorption and desorption batch studies have demonstrated strong As sorption with minimal desorption of As under experimental conditions tested. Mo attenuation under both aerobic and anaerobic conditions needs to be further evaluated, but data to date have shown sorption of Mo to occur under ambient/aerobic conditions. Mo is more strongly sorbed to aluminum oxides than other metal oxides, and it is generally less sorptive and more mobile compared to As.	Reliability dependent on permeability of the subsurface and the amount and distribution of secondary iron or manganese (oxy-) hydroxides (for aerobic approach), or electron donors and soluble iron or manganese and sulfur that can be consistently distributed (for anaerobic approach). Reliable technology if injected materials can be distributed throughout the impacted aquifer. Bench- and/or pilot-scale treatability testing programs are needed to understand the biogeochemical processes that would effectively reduce migration of As and Mo in groundwater.
Hydraulic Containment ("Pump and Treat")	Hydraulic containment refers to the use of groundwater extraction to induce a hydraulic gradient for hydraulic capture or control the migration of impacted groundwater. This approach uses extraction wells or trenches to capture groundwater, which may subsequently require above-ground treatment and permitted discharge to a receiving water feature, reinjection into the groundwater, or reuse (e.g., land application, CCR conditioning, etc.). It is applicable to a variable mix of inorganic constituents, including dissolved As, Li, and Mo.	Hydraulic containment is effective, but it is unclear whether full groundwater remediation can be achieved. At AP-1, implementation of the corrective measure is contingent on completing additional assessment activities (i.e. high-resolution site characterization, additional pump tests, flow modeling, and capture zone analysis). However, a preliminary screening level analysis indicates that hydraulic containment can be obtained with strategic placement of extraction wells. Further modeling is recommended to refine the constituent distribution in the subsurface to target specific zones for pumping for improved mass recovery efficiency/effectiveness and to refine the data from the screening analysis to evaluate remedy performance.	Generally reliable for hydraulic containment, but uncertainty exists whether groundwater remediation goals can be achieved within a reasonable time frame.
Monitored Natural Attenuation (MNA)	MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable time frame relative to more active methods. Under certain conditions (e.g., through sorption, mineral precipitation or oxidation-reduction reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. Attenuation mechanisms for inorganic constituents at CCR sites, including As, Li, and Mo at AP-1, are either physical (e.g. dilution, dispersion, flushing, and related processes) or chemical (sorption or oxidation reduction reactions). Chemical attenuation processes include precipitation, and sorption reactions such as adsorption on the surfaces of soil minerals, absorption into the matrix of soil minerals, or partitioning into organic matter. Further, oxidation-reduction (redox) reactions, via abiotic or biotic processes, can transform the valence states of some inorganic constituents to less soluble and thus less mobile forms. For As and Mo, the main attenuation processes include sorption to iron and manganese oxides (under aerobic conditions), and formation of sparingly soluble sulfide minerals (under anaerobic conditions). The main attenuation processes for Li include sorption to clay minerals and organic matter as well as dilution and dispersion.	Physical and chemical MNA mechanisms for As and Mo, including dilution, dispersion, sorption, and oxidation reduction reactions can be effective at achieving GWPS within a reasonable time frame. Attenuation processes for As and Mo are already occurring at the site as evidenced by groundwater data from the delineation wells. Pond closure/source control will improve the mass balance such that the buffer capacity of the aquifer is unlikely to be exhausted, and the attenuation processes already at work for As, Li, and Mo at AP-1 will further enhance ongoing MNA. Sorption and desorption laboratory batch studies using site-specific aquifer materials have demonstrated that As, Mo, and Li sorption is occurring under ambient/aerobic conditions downgradient of AP-1, and that downgradient aquifer materials do not desorb/leach these constituents back into groundwater.	Reliable as long as the aquifer conditions that result in As, Li, and Mo attenuation remain favorable and/or are being enhanced and sufficient attenuation capacity is present. Sorption laboratory batch studies of site-specific aquifer materials suggest that sufficient capacity is present, especially for As. MNA may be used as a stand-alone corrective measure for groundwater impacted by dissolved As, Mo, and/or Li, or in combination with other technologies.
Permeable Reactive Barrier	Permeable reactive barrier (PRB) technology typically involves the installation of a permeable subsurface wall constructed with reactive media for the removal of constituents as groundwater passes through. Either ZVI-Carbon matrix or solid carbon (bio-barrier) are currently proposed for the concurrent removal of As and Mo. The carbon could be composed of peat moss, mulch or another carbon source. Exact placement of the PRB is determined by site-specific characterization. PRB walls are typically keyed into the bedrock. While the shallow groundwater in the residuum and fractured bedrock is connected to the groundwater in more competent bedrock, the higher permeability/conductivity of the PRB is not expected to impede groundwater flow. PRBs can also be constructed as "funnel and gate" systems, where a barrier wall directs groundwater to a smaller "treatment gate" filled with reactive media. PRBs are ineffective at treating Li due to the chemistry and the inability for Li to effectively sorb or precipitate.	PRBs have been shown to effectively address As in groundwater, but additional testing is required for Mo to select the appropriate reactive media. The approach is expected to achieve GWPS for both constituents as impacted groundwater passes through the reactive barrier. Mo redox kinetics may be slow and hence a thicker wall might be needed relative to solely treating for As. Furthermore, additional testing is required to select the appropriate sorptive media mix, especially related to Mo. However, PRB media is ineffective for treating Li.	Reliable groundwater corrective measure technology for select inorganics, but loss of reactivity over time may require re-installation depending on the duration of the remedy. Additional data collection, including conducting a bench and/or pilot study, is needed to better characterize current attenuation mechanisms and/or select the appropriate reactive media mix for a PRB wall.
Phytoremediation / TreeWells	Phytoremediation uses trees and other plants to uptake or immobilize constituents or achieve hydraulic control without the need for an above-ground water treatment system and infrastructure. Within the context of AP-1, this corrective measure would likely use an engineered (proprietary) TreeWell® phytoremediation system along the point of compliance or downgradient edge of the impacted groundwater for hydraulic control. The system promotes root development to the targeted groundwater zone (depth), allowing for hydraulic control of impacted groundwater. In addition, immobilization of As, Li, and Mo within the root zone as well as incidental uptake of dissolved As, Li, and Mo with groundwater is expected to occur concurrent with hydraulic control.	Once established (typically at the end of the third growing season), a TreeWell system is effective for providing hydraulic containment of groundwater, and potential reduction of As and Mo concentrations through immobilization and/or uptake and sequestration in the tree biomass; however, the main purpose is to provide hydraulic control. A preliminary screening level capture zone analysis indicates hydraulic containment is feasible but would require a sizeable planting area. Given the large planting areas required to control the groundwater flow velocities, the approach is not considered viable due to access constraints.	Engineered phytoremediation is a proven technology where hydrogeologic factors are taken into account (e.g., hydraulic conductivity, flow velocity, depth to impacted groundwater zone, etc.). This is considered an active remedial approach through the use of trees as the "pumps" driving the system. Careful design will be needed to select the proper species, which will include consideration of groundwater chemistry, plant uptake of constituents, and groundwater flow modeling to evaluate the required number and placement of TreeWell units.
Subsurface Vertical Barrier Walls	This approach involves placing a barrier to groundwater flow in the subsurface, frequently around a source area, to prevent future migration of dissolved constituents in groundwater from beneath the source to downgradient areas. In general, barrier walls are designed to provide containment; localized treatment achieved through the sorption or chemical precipitation reactions from construction of the walls are incidental to the design objective. Barrier walls can also be used in downgradient applications to limit discharge to a surface water feature or to reduce aquifer recharge from an adjacent surface water feature when groundwater extraction wells are placed near one. A variety of barrier materials can be used, including cement and/or bentonite slurries, geomembrane composite materials, or driven materials such as steel or vinyl sheet pile. Groundwater extraction from upgradient of the barrier is required to avoid groundwater mounding behind the barrier.	Barrier walls are a proven technology for seepage control and/or groundwater cutoff at impoundments. Slurry walls are limited by the depth of installation; sheet piling and trenching are typically limited to depths of approximately 50 feet belowground surface (ft bgs); specialty drilling/installation techniques can achieve depths greater up to approximately 90 ft bgs. However, site-specific geologic and technology-specific considerations may limit this depth to shallower installations. Within the context of AP-1, a barrier wall might be used in conjunction with a "funnel and gate" system for a PRB rather than a stand-alone technology. As such, groundwater with As, Li, and Mo above GWPS could either be directed to "treatment gates" for passive treatment (in a PRB) or migration of impacted groundwater could be minimized via barrier wall installation. Additional subsurface investigations, aquifer testing, and compatibility testing with site-specific groundwater will be needed.	Generally reliable as a barrier to groundwater flow; however, treatment of downgradient groundwater is incidental and not the primary objective.

Table 2
Evaluation of Remedial Technologies
Plant Hammond AP-1, Floyd County, Georgia

Corrective Measure	40 CFR 257.96(C)(1) Ease of Implementation	40 CFR 257.96(C)(1) Potential Impacts	40 CFR 257.96(C)(2) Time Requirement to Begin/Complete
Geochemical Approaches (In-Situ Injection)	Moderate. Installation of injection well network or other injection infrastructure would be required. Alternative installation approaches may be considered, such as along the downgradient edge of impacted groundwater, which would function similar to a PRB application. Potential for clogging of aquifer matrix and/or injection well infrastructure. Chemical distribution during injections (i.e., radius of influence) needs to be evaluated.	Minimal impacts are expected if remedy works as designed, based on a thorough pre-design investigation, geochemical modeling, and bench/pilot study results. Redox-altering processes have the potential to mobilize naturally-occurring constituents as an unintended consequence if not properly studied and implemented.	Installation of the injection network can be accomplished relatively quickly (1 to 2 months). However, a thorough pre-design investigation, geochemical modeling, and/or bench- and/or pilot-testing will be required to obtain design parameters prior to design and construction of the corrective measure, which may take up to 24 months. Once installed, the time required to achieve groundwater protection standards (GWPS) within the treatment area may be relatively quick but depends on the attenuation process kinetics of each targeted constituent. The time for complete distribution of the injected materials throughout the treatment area is also variable.
Hydraulic Containment ("Pump and Treat")	Moderate. Proven approach, and supplemental installation of extraction wells/trenches is fairly straightforward. The extracted groundwater may potentially require an above-ground treatment system. A variety of sorption and precipitation approaches exist for ex-situ treatment of As and Mo; currently reported Li groundwater concentrations may not warrant treatment to meet discharge standards. Operation and maintenance (O&M) requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals.	Moderate. The main potential impacts are related to the presence and operation of an on-site above-ground water treatment facility and related infrastructure to convey and treat extracted groundwater. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone.	Installation of extraction wells and/or trenches can be accomplished relatively quickly (1 to 2 months). However, additional aquifer testing, system design and installation, and permit approval may be required, which may take up to 24 months. The initiation of the approach would be contingent on the start-up of the wastewater treatment infrastructure. Hydraulic containment can be achieved relatively quickly after startup of the extraction system, but uncertainty exists with respect to the time to achieve GWPS.
Monitored Natural Attenuation (MNA)	Reasonably implementable with respect to infrastructure, but moderate to complex with respect to documentation. Proven approach, but additional data are needed to show that the existing attenuation capacity is sufficient to meet site objectives within a reasonable timeframe. A monitoring well network already exists to implement future groundwater monitoring efforts.	None. MNA relies on the natural processes active in the aquifer matrix to reduce constituent concentrations without disturbing the surface or the subsurface.	The infrastructure to initiate MNA is already in place. Data to demonstrate attenuation mechanisms and capacity have been collected over the past 18 months and are believed to be sufficient to evaluate MNA as a corrective measure. Under current conditions, MNA appears to already be sufficiently operational to attenuate site-specific constituents, and MNA is expected to continue to be successful following pond closure. Engineering measures will be implemented during closure of AP-1 to minimize potential impacts to the subsurface during closure activities and routine groundwater monitoring will be used to verify that groundwater impacts remain stable or decrease over time. A contingency plan will be developed to address potential impacts during and after pond closure. In addition, it may be needed to supplement MNA with (a) different corrective measure(s) to enhance/accelerate groundwater cleanup.
Permeable Reactive Barrier	Moderate to difficult. Trenching would be required to install a mix of reactive materials in the subsurface. Continuous trenching may be the most feasible construction method. Installation methods and materials are readily available. Once installed, treatment will be passive and O&M requirements are minimal if replacement of the PRB is not necessary. Depth to competent bedrock varies on a small-scale (feet to tens of feet) spatially depending on the weathering characteristics of the fractured bedrock, limiting the feasibility of constructing a PRB along the entire length and depth of the affected areas	Minimal impacts are expected following the construction of the remedy. However, ZVI has the potential to create anaerobic conditions downgradient of the PRB wall that may mobilize redox-sensitive naturally-occurring constituents. These conditions need to be carefully monitored. Short-term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures.	Installation of a PRB can be accomplished relatively quickly (6 to 12 months), depending on the final location and configuration. However, bench- and/or pilot-testing would be required to obtain design parameters prior to design and construction of the remedy, which may take up to 24 months. Once installed, the time to achieve GWPS downgradient of the PRB is anticipated to be relatively quick.
Phytoremediation / TreeWells	Reasonably implementable to moderate. Engineered approach has been proven effective, and specific depth zones can be targeted. Trees are installed as "tree wells" in a large diameter boring to get the roots deep enough to intercept impacted groundwater flow paths. Area must be clear of above and below-ground structures (i.e., power lines), which would be a challenge at AP-1. The system, once established (approximately three growing seasons), is a self-maintaining, sustainable remedial system that has no external energy requirements and little maintenance (i.e., efforts normally associated with landscaping). A preliminary screening level analysis of capture zones indicates that large plantings would be required which would be difficult to implement due to above- and below-ground structures.	Minimal impacts are expected. In fact, there are several positive impacts expected, including enhanced aesthetics, wildlife habitat, and limited energy consumption.	The design phase will require some groundwater modeling for optimal placement of the TreeWell units, which may take up to 6 months. Depending on the number of required units, the installation effort is expected to last several weeks. Hydraulic capture/control is expected approximately three years after planting and system performance is expected to further improve over time.
Subsurface Vertical Barrier Walls	Moderate to difficult. Trenching would be required to fill in the various slurry mixes; alternatively, sheet pile installations could be accomplished without excavation of trenches. The application of barrier walls is limited by the depth of installation, which similar to PRBs, should be keyed into a low permeability layer such as a thick clay layer or bedrock. Installation methods and materials are readily available. Once installed, above-ground infrastructure to pump and treat groundwater will be required. O&M requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals. Depth to competent bedrock varies on a small-scale (feet to tens of feet) spatially depending on the weathering characteristics of the fractured bedrock, limiting the feasibility of constructing a PRB along the entire length and depth of the affected areas	Minimal impacts are expected following the construction of the remedy. Short-term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures. Changes to groundwater flow patterns due to installation of the barrier wall are expected, which can affect other aspects of groundwater corrective action. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone that may result in the mobilization of other constituents that may require treatment.	Installation of a barrier wall can be accomplished relatively quickly (6 to 12 months), depending on the final location and configuration. However, some design phase and additional aquifer and compatibility testing will be required, which may take up to 24 months. Once installed, preventing migration of constituents dissolved in groundwater is anticipated to be relatively quick. Since this approach does not treat the downgradient area of impacted groundwater but prevents migration from a source area, it will likely have to be maintained long-term and coupled with other approaches.

Table 2
Evaluation of Remedial Technologies
Plant Hammond AP-1, Floyd County, Georgia

Corrective Measure	40 CFR 257.96(C)(3)		Relative Costs	Evaluation of Retainage
	Institutional Requirements	Other Env or Public Health Requirements		
Geochemical Approaches (In-Situ Injection)	Deed restrictions may be necessary until in-situ treatment has achieved GWPS. A new UIC permit (for in-situ injections) would be required to implement this corrective measure. No other institutional requirements are expected at this time.	Based on the results of the Risk Evaluation Report (Geosyntec, 2021b), SSL-related constituents (As, Li, Mo) evaluated from AP-1 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Potential for mobilization of redox-sensitive constituents exists during implementation of an anaerobic attenuation approach. Following installation, the remedy is passive.	Medium (depending on expanse of injection network required and injectate volume required per derived design parameters)	Retained for further analysis; feasible around well HGWC-13 to attenuate elevated As concentrations in a localized area through the formation of sparingly soluble minerals under reducing conditions or the creation of enhanced sorption under aerobic conditions; a separate corrective measure would likely need to be used to address Li identified in isolated areas if a successful alternate source demonstration (ASD) cannot be made; Mo concentrations downgradient of HGWC-8 may also be addressed through enhancement of attenuation under oxidizing or reducing conditions.
Hydraulic Containment ("Pump and Treat")	Depending on the effluent management strategy, modifications to the existing NPDES permit may be required, or obtaining a new underground injection control (UIC) permit may be needed if groundwater reinjection is chosen. In addition, deed restrictions may be required as long as groundwater conditions are above regulatory standards for unrestricted use.	Based on the results of the Risk Evaluation Report (Geosyntec, 2021b), SSL-related constituents (As, Li, Mo) evaluated from AP-1 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	Medium to high (depending on remedy duration, complexity of above-ground treatment system, and volume of water processed)	Retained for further analysis; a preliminary capture zone analysis indicates that this could be considered an effective measure to maintain hydraulic control upgradient of the Coosa River and Cabin Creek should closure construction activities require an interim groundwater treatment configuration.
Monitored Natural Attenuation (MNA)	MNA may require the implementation of institutional controls, such as deed restrictions, to preclude potential exposure to groundwater within the footprint of impacted groundwater until GWPS are achieved.	Little to no physical disruption to remediation areas and no adverse construction-related impacts are expected on the surrounding community. Based on the results of the Risk Evaluation Report (Geosyntec, 2021b), SSL-related constituents (As, Li, Mo) evaluated from AP-1 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary.	Low to medium	Retained for further analysis; may be used as a stand-alone corrective measure or in conjunction with other potential groundwater corrective measures.
Permeable Reactive Barrier	Deed restrictions may be necessary for groundwater areas upgradient of the PRB (if not installed along the waste boundary). No other institutional requirements are expected at this time.	Based on the results of the Risk Evaluation Report (Geosyntec, 2021b), SSL-related constituents (As, Li, Mo) evaluated from AP-1 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Following installation, the remedy is passive. However, certain treatment media (such as ZVI) have the potential to mobilize naturally-occurring constituents downgradient of the PRB.	Medium to high (for installation) - minimal O&M requirements if replacement is not necessary	Not retained for further analysis; PRB media is ineffective to treat Li; depth to competent bedrock varies on a small-scale (feet to tens of feet) limiting the feasibility of constructing a PRB along the entire length and depth of the affected areas; does not address downgradient groundwater when installed along the compliance boundary; potential for increased maintenance due to potential biofouling and mineral precipitation.
Phytoremediation / TreeWells	Deed restrictions may be necessary for groundwater areas upgradient of the TreeWell system. No other institutional requirements are expected at this time.	Based on the results of the Risk Evaluation Report (Geosyntec, 2021b), SSL-related constituents (As, Li, Mo) evaluated from AP-1 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Following installation, the remedy is passive and does not require external energy.	Medium (for installation) - minimal O&M requirements	Not retained for further analysis; planting areas required to achieve hydraulic capture are too large based on access constraints associated with existing high-voltage power lines
Subsurface Vertical Barrier Walls	Deed restrictions may be necessary for groundwater areas downgradient of the barrier wall until remedial goals are met. No other institutional requirements are expected at this time.	Based on the results of the Risk Evaluation Report (Geosyntec, 2021b), SSL-related constituents (As, Li, Mo) evaluated from AP-1 are not expected to pose a risk to human health or the environment; therefore, no further risk evaluation for groundwater is warranted based on the current data set. Georgia Power will proactively evaluate the data and update this evaluation, if necessary. Due to the need for groundwater extraction associated with barrier walls, above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	Medium to high (depending on length and depth of wall, remedy duration and complexity of above-ground treatment system)	Not retained for further analysis; depth to competent bedrock varies on a small-scale (feet to tens of feet) limiting the feasibility of constructing a barrier wall along the entire length and depth of the affected areas; does not address downgradient groundwater when installed along the compliance boundary.

Table 3
 Baseline Characterization Results - Ionic Exchange Capacity, Total Sulfur, Total Sulfide, Total Organic Carbon
 Plant Hammond AP-1, Floyd County, Georgia

Sample ID	Sample Collection Date	Anion Exchange Capacity (meq/100g)	Cation Exchange Capacity (meq/100g)	Total Sulfur (%)	Total Sulfide (%)	Total Organic Carbon (%)
DPT01(12-17)	8/5/2020	8.48	15.80	0.018	< 0.04	0.07
DPT02(12-22)	8/4/2020	6.58	19.00	0.008	< 0.04	0.04
DPT03(32-39)	8/4/2020	8.09	19.40	0.005	< 0.04	0.16
DPT04(12-18)	8/4/2020	7.85	20.20	0.006	< 0.04	0.09
DPT05(15-25)	8/4/2020	6.74	15.70	< 0.005	< 0.04	< 0.025
DPT06(15-23)	8/5/2020	4.57	5.70	< 0.005	< 0.04	0.12
DPT07 AP1 012821 32-42	1/28/2021	5.13	7.83	0.022	< 0.04	0.07
DPT04XRF AP1 100418 40-45	10/4/2018	5.52	3.10	0.007	< 0.04	0.05

Notes:

% = percentage

< = Indicates the constituent was not detected above the analytical method detection limit (MDL)

meq/100g = milliequivalents per 100 grams

Table 4
 Baseline Characterization Results - Total Metals
 Plant Hammond AP-1, Floyd County, Georgia

Sample ID	Sample Collection Date	Arsenic (mg/kg)	Molybdenum (mg/kg)	Lithium (mg/kg)	Iron (mg/kg)	Aluminum (mg/kg)	Manganese (mg/kg)
DPT01(12-17)	8/5/2020	4.9	1.2	38	26,000	50,000	710
DPT02(12-22)	8/4/2020	4.7	6.2	33	26,000	33,000	530
DPT03(32-39)	8/4/2020	12	0.54	43	52,000	55,000	1,100
DPT04(12-18)	8/4/2020	3.8	1.4	38	42,000	69,000	2,400
DPT05(15-25)	8/4/2020	4.6	13	36	50,000	75,000	830
DPT06(15-23)	8/5/2020	4.8	0.40	59	41,000	68,000	1,200
DPT07_API_012821_32-42	1/28/2021	7.8	1	24	20,000	42,000	100
DPT04XRF_API_100418_40-45	10/4/2018	13.0	1.40	12	14,000	13,000	120

Notes:

mg/kg = milligrams per kilogram

(1) Milligrams per kilogram (mg/kg) are equivalent to micrograms per gram ($\mu\text{g/g}$). The SiREM report provided in Appendix C presents select data in $\mu\text{g/g}$, however, the applicable data are presented within this Semiannual Progress Report as “mg/kg” for easier comparison with the results of the sorption and desorption studies.

Table 5
 Baseline Characterization Results - Whole Rock Analysis
 Plant Hammond AP-1, Floyd County, Georgia

Sample ID	Sample Collection Date	Quartz (SiO ₂) (%)	Aluminum Oxide (Al ₂ O ₃) (%)	Ferric Oxide (Fe ₂ O ₃) (%)	Magnesium Oxide (MgO) (%)	Calcium Oxide (CaO) (%)	Sodium Oxide (Na ₂ O) (%)	Potassium Oxide (K ₂ O) (%)	Titanium Dioxide (TiO ₂) (%)	Phosphorous Pentoxide (P ₂ O ₅) (%)	Manganese Oxide (MnO) (%)	Chromium (III) Oxide (Cr ₂ O ₃) (%)	Vanadium Oxide (V ₂ O ₅) (%)	Loss on Ignition (%)
DPT01(12-17)	8/5/2020	76.7	9.84	3.73	0.82	0.59	0.36	0.94	0.90	0.11	0.08	< 0.01	0.02	5.66
DPT02(12-22)	8/4/2020	84.1	6.43	3.72	0.58	0.34	0.24	0.79	0.39	0.11	0.06	< 0.01	< 0.01	3.69
DPT03(32-39)	8/4/2020	64.8	11.8	7.30	2.09	2.36	0.64	1.85	0.50	0.29	0.14	0.01	< 0.01	8.23
DPT04(12-18)	8/4/2020	66.7	13.4	5.99	1.63	1.03	0.64	1.95	0.64	0.22	0.29	< 0.01	0.01	7.36
DPT05(15-25)	8/4/2020	64.7	14.6	7.24	1.75	0.47	0.15	2.63	0.63	0.13	0.10	0.01	< 0.01	7.98
DPT06(15-23)	8/5/2020	52.5	16.3	6.12	1.78	6.37	0.10	2.40	0.70	0.17	0.14	0.01	0.01	13.5
DPT07_API_012821_32-42	1/28/2021	80.8	9.02	3.21	0.29	0.12	0.10	1.07	0.90	0.04	0.01	< 0.01	0.02	4.02
DPT04XRF_API_100418_40-45	10/4/2018	91.9	2.69	2.41	0.08	0.08	0.08	0.46	0.38	0.04	0.02	< 0.01	< 0.01	1.5

Notes:

% = percentage

< = Indicates the constituent was not detected above the analytical method detection limit (MDL)

Table 6
 Baseline Characterization Results - Reitveld Quantitative X-Ray Diffraction
 Plant Hammond AP-1, Floyd County, Georgia

Sample ID	Sample Collection Date	Quartz (wt%)	Albite (wt%)	Microcline (wt%)	Muscovite (wt%)	Mullite (wt%)	Chlorite (wt%)	Kaolinite (wt%)	Anatase (wt%)	Rutile (wt%)	Nontronite (wt%)	Calcite (wt%)	Goethite (wt%)
DPT01(12-17)	8/5/2020	70.3	4.87	2.07	10.25	--	4.06	5.63	0.68	--	2.15	--	--
DPT02(12-22)	8/4/2020	82.0	3.21	1.18	6.96	--	2.46	3.81	0.13	--	0.23	--	--
DPT03(32-39)	8/4/2020	64.7	6.0	1.46	13.08	--	6.26	3.37	0.21	--	1.82	3.07	--
DPT04(12-18)	8/4/2020	55.8	8.5	3.26	20.46	--	--	7.33	0.58	--	4.09	--	--
DPT05(15-25)	8/4/2020	44.9	3.4	7.87	26.07	--	--	--	1.18	--	0.41	--	16.19
DPT06(15-23)	8/5/2020	34.4	4.5	4.60	23.98	--	--	--	1.68	--	4.86	15.01	10.9
DPT07 AP1 012821 32-42	1/28/2021	68.9	1.8	1.90	10.90	--	--	15.8	0.20	0.40	--	--	--
DPT04XRF AP1_100418_40-45	10/4/2018	91.7	--	2.40	3.80	0.30	--	1.80	--	--	--	--	--

Notes:
 -- = Not identified by analyst
 wt % = weight percent

Table 7
Sequential Extraction Procedure Results
Plant Hammond AP-1, Floyd County, Georgia

Arsenic										
Sample ID	Sample Collection Date	SEP Step 1 (Exchangeable Phase) ⁽²⁾	SEP Step 2 (Carbonate Phase) ⁽²⁾	SEP Step 3 (Non-Crystalline Materials Phase) ⁽²⁾	SEP Step 4 (Metal Hydroxide Phase) ⁽²⁾	SEP Step 5 (Organic Phase) ⁽²⁾	SEP Step 6 (Acid/Sulfide Fraction) ⁽²⁾	SEP Step 7 (Residual Fraction) ⁽²⁾	Sum of SEP Steps 1-7	Total Metals Concentration ⁽³⁾
DPT02 (15-23)	8/4/2020	<0.65	<0.48	0.42 J	1.5	<2.4	2.1	1.2	5.2	6
DPT06 (12-22)	8/5/2020	<0.43	<0.51	0.36 J	0.56 J	<2.5	2.2	0.77 J	3.9	7
DPT04XRF AP1 100418 40-45	10/4/2018	<0.54	<0.40	2.2	5.7	2.4 J	1.5	0.46 J	12.0	59.0

Molybdenum										
Sample ID	Sample Collection Date	SEP Step 1 (Exchangeable Phase) ⁽²⁾	SEP Step 2 (Carbonate Phase) ⁽²⁾	SEP Step 3 (Non-Crystalline Materials Phase) ⁽²⁾	SEP Step 4 (Metal Hydroxide Phase) ⁽²⁾	SEP Step 5 (Organic Phase) ⁽²⁾	SEP Step 6 (Acid/Sulfide Fraction) ⁽²⁾	SEP Step 7 (Residual Fraction) ⁽²⁾	Sum of SEP Steps 1-7	Total Metals Concentration ⁽³⁾
DPT02 (15-23)	8/4/2020	<0.41	<0.31	1.6 J	1.2 J	<1.6	0.21 J	<0.10	3.0	3.2
DPT06 (12-22)	8/5/2020	<0.43	<0.32	<0.11	<0.11	<1.6	<0.13	<0.11	<0.082	<0.54
DPT04XRF AP1 100418 40-45	10/4/2018	<0.34	<0.25	0.46 J	0.85 J	<1.3	0.13 J	<0.085	1.4 J	1.5 J

Lithium										
Sample ID	Sample Collection Date	SEP Step 1 (Exchangeable Phase) ⁽²⁾	SEP Step 2 (Carbonate Phase) ⁽²⁾	SEP Step 3 (Non-Crystalline Materials Phase) ⁽²⁾	SEP Step 4 (Metal Hydroxide Phase) ⁽²⁾	SEP Step 5 (Organic Phase) ⁽²⁾	SEP Step 6 (Acid/Sulfide Fraction) ⁽²⁾	SEP Step 7 (Residual Fraction) ⁽²⁾	Sum of SEP Steps 1-7	Total Metals Concentration ⁽³⁾
DPT02 (15-23)	8/4/2020	<0.75	<0.56	0.52 J	6.4	8.5 J	12.0	23.0	50.0	44.0
DPT06 (12-22)	8/5/2020	<0.79	<0.59	<0.20	4.2	7.5 J	8.6	21.0	41.0	56
DPT04XRF AP1 100418 40-45	10/4/2018	<0.62	<0.46	<0.15	1.9 J	5.6 J	3.0	4.9	15.0	12.0

Notes:

< = Indicates the constituent was not detected above the analytical method detection limit (MDL)

J = Indicates the constituent was estimated and detected between the MDL and the reporting limit (RL)

mg/kg = milligrams per kilogram

SEP = Sequential extraction procedure

(1) All results are reported in mg/kg

(2) SEP Steps include:

- 1: Exchangeable Fraction: addition of 1M MgSO₄ to extract elements reversibly bound to mineral surfaces by ion exchange;
 - 2: Carbonate Fraction: addition of mild acidic solution (1 M acetate in 25% acetic acid at pH 5) to extract elements bound to carbonate minerals;
 - 3: Non-crystalline Fraction: addition of 25 ml of 0.2M ammonium oxalate (pH 3) to extract elements complexed by, and co-precipitated with amorphous solids (e.g. iron oxides);
 - 4: Metal Hydroxide Fraction: addition of 1M HONH₂-HCL in 25% acetic acid to extract elements bound to crystalline hydroxides;
 - 5: Organic-bound Fraction: addition of 5% Nicoll (pH 9.5) to extract elements strongly bound to organic functional groups;
 - 6: Acid/Sulfide Fraction: addition of 3:1:2 v/v solution of HCl:HNO₃:H₂O solution to dissolve metal sulfide minerals;
 - 7: Residual Fraction: total dissolution of sample in HF, HCl, HNO₃ and H₃BO₃ to remove remaining elements distributed between silicates, phosphates, and refractory oxides.
- (3) Total Metals: separate aliquot digested using HF, HCl, HNO₃ and H₃BO₃.

Table 8A
Summary of Sorption Test Results: Arsenic
Plant Hammond AP-1, Floyd County, Georgia

Groundwater Sample ID	Site Material Sample ID	Treatment ⁽¹⁾	Date	Day ⁽²⁾	Replicate	Dissolved Arsenic (mg/L)	Mass of Aquifer Solids in Reactor (g)	Mass of Water in Reactor (g)	Sorbed Arsenic (mg/kg) ⁽³⁾	pH (s.u.)	ORP (mV)
HGWA-1	DPT06(15-23)	Concentration Level 1	6/29/2021	0	Spiked Aqueous Concentration	0.0631	--	--	--	--	--
					HAP1DPT06_1a	0.0068	100.49	148.58	0.08	7.44	175
					HAP1DPT06_2a	0.0071	100.55	148.53	0.08	7.41	174
			Average Concentration (mg/L)	0.0070	100.52	148.56	0.08	7.43	175		
			7/6/2021	7	HAP1DPT06_1b	< 0.0002	101.96	150.94	0.09	7.38	169
					HAP1DPT06_2b	< 0.0002	99.65	147.98	0.09	7.36	172
		Average Concentration (mg/L)			< 0.0002	100.81	149.46	0.09	7.37	171	
		Concentration Level 2	6/29/2021	0	Spiked Aqueous Concentration	0.112	--	--	--	--	--
					HAP1DPT06_3a	0.0260	99.83	146.45	0.13	7.46	199
					HAP1DPT06_4a	0.0097	98.73	144.25	0.15	7.42	198
			Average Concentration (mg/L)	0.0179	99.28	145.35	0.14	7.44	199		
			7/6/2021	7	HAP1DPT06_3b	< 0.0002	100.85	146.11	0.16	7.39	161
					HAP1DPT06_4b	< 0.0002	96.14	150.53	0.18	7.38	156
		Average Concentration (mg/L)			< 0.0002	98.50	148.32	0.17	7.39	159	
		Concentration Level 3	7/30/2021	0	Spiked Aqueous Concentration	0.280	--	--	--	--	--
					HAP1DPT06_5a	0.0673	101.03	147.04	0.31	7.49	205
					HAP1DPT06_6a	0.0805	99.92	150.01	0.30	7.50	203
			Average Concentration (mg/L)	0.0739	100.48	148.53	0.30	7.50	204		
			7/7/2021	7	HAP1DPT06_5b	< 0.0002	98.69	142.40	0.40	7.38	182
					HAP1DPT06_6b	< 0.0002	98.67	150.35	0.43	7.44	174
		Average Concentration (mg/L)			< 0.0002	98.68	146.38	0.42	7.41	178	
		Concentration Level 4	7/30/2021	0	Spiked Aqueous Concentration	0.560	--	--	--	--	--
					HAP1DPT06_7a	0.245	97.69	149.78	0.48	7.52	203
					HAP1DPT06_8a	0.199	100.25	147.34	0.53	7.56	203
			Average Concentration (mg/L)	0.222	98.97	148.56	0.51	7.54	203		
			7/7/2021	7	HAP1DPT06_7b	< 0.0002	101.10	146.34	0.81	7.48	167
					HAP1DPT06_8b	< 0.0002	100.34	146.30	0.82	7.47	162
		Average Concentration (mg/L)			< 0.0002	100.72	146.32	0.81	7.48	165	
		Concentration Level 5	7/30/2021	0	Spiked Aqueous Concentration	1.12	--	--	--	--	--
					HAP1DPT06_9a	0.442	99.17	149.75	1.02	7.51	208
HAP1DPT06_10a	0.456				99.92	148.47	0.99	7.55	208		
Average Concentration (mg/L)	0.449		99.55	149.11	1.01	7.53	208				
7/7/2021	7		HAP1DPT06_9b	< 0.0002	100.19	149.52	1.67	7.49	157		
			HAP1DPT06_10b	< 0.0002	98.59	147.47	1.68	7.52	153		
		Average Concentration (mg/L)	< 0.0002	99.39	148.50	1.67	7.51	155			
Concentration Level 6	7/30/2021	0	Spiked Aqueous Concentration	1.70	--	--	--	--	--		
			HAP1DPT06_11a	0.805	101.25	149.37	1.32	7.37	207		
			HAP1DPT06_12a	0.791	99.14	145.56	1.33	7.42	202		
	Average Concentration (mg/L)	0.798	100.20	147.47	1.33	7.40	205				
	7/7/2021	7	HAP1DPT06_11b	< 0.0002	100.32	146.46	2.48	7.48	149		
			HAP1DPT06_12b	< 0.0002	99.85	147.62	2.51	7.45	150		
Average Concentration (mg/L)			< 0.0002	100.09	147.04	2.50	7.47	150			

Notes:

-- = Not applicable

< = Indicates the constituent was not detected above the analytical method detection limit (MDL)

g = grams

mg/L = milligrams per liter

mg/kg = milligrams per kilogram

ORP = oxidation reduction potential

s.u. = standard units

(1) The highest spike concentration (Level 6) of arsenic was at least two times greater than the highest arsenic concentration observed in either coal combustion residue pore water or groundwater at the Site.

(2) Day 0 samples were collected approximately one hour after reactor setup.

(3) The sorbed concentration per unit mass of aquifer solids is calculated as shown in the equation below. Non-detect concentrations were assumed to be equal to ½ of the MDL for calculating sorbed mass.

$$S_{Solids} = \frac{(C_{Spike} - C_{Final}) \times M_{Water}}{M_{Solids} \times \rho_{Water}}$$

Where:

S_{Solids} = sorbed concentration per unit mass of aquifer solids (mg/kg)

$C_{Spike,Final}$ = dissolved concentration of the initial spike or final dissolved concentration at Day 0 or Day 7 (mg/L)

$M_{Solids,Water}$ = mass of water or aquifer solids in reactor (g)

ρ_{Water} = density of water (equal to 1 L/kg)

Table 8B
Summary of Sorption Test Results: Molybdenum
Plant Hammond AP-1, Floyd County, Georgia

Groundwater Sample ID	Site Material Sample ID	Treatment ⁽¹⁾	Date	Day ⁽²⁾	Replicate	Dissolved Molybdenum (mg/L)	Mass of Aquifer Solids in Reactor (g)	Mass of Water in Reactor (g)	Sorbed Molybdenum (mg/kg) ⁽³⁾	pH (s.u.)	ORP (mV)
HGWA-1	DPT06(15-23)	Concentration Level 1	6/29/2021	0	Spiked Aqueous Concentration	0.014	--	--	--	--	--
					HAP1DPT06 1a	0.00763	100.49	148.58	0.01	7.44	175
					HAP1DPT06 2a	0.00713	100.55	148.53	0.01	7.41	174
			Average Concentration (mg/L)	0.00738	100.52	148.56	0.01	7.43	175		
			7/6/2021	7	HAP1DPT06 1b	0.00024	101.96	150.94	0.021	7.38	169
					HAP1DPT06 2b	0.00019	99.65	147.98	0.021	7.36	172
		Average Concentration (mg/L)			0.00022	100.81	149.46	0.021	7.37	171	
		Concentration Level 2	6/29/2021	0	Spiked Aqueous Concentration	0.052	--	--	--	--	--
					HAP1DPT06 3a	0.0380	99.83	146.45	0.02	7.46	199
					HAP1DPT06 4a	0.0292	98.73	144.25	0.03	7.42	198
			Average Concentration (mg/L)	0.0336	99.28	145.35	0.03	7.44	199		
			7/6/2021	7	HAP1DPT06 3b	0.00035	100.85	146.11	0.08	7.39	161
					HAP1DPT06 4b	0.00034	96.14	150.53	0.08	7.38	156
		Average Concentration (mg/L)			0.00035	98.50	148.32	0.08	7.39	159	
		Concentration Level 3	7/30/2021	0	Spiked Aqueous Concentration	0.105	--	--	--	--	--
					HAP1DPT06 5a	0.0709	101.03	147.04	0.05	7.49	205
					HAP1DPT06 6a	0.0759	99.92	150.01	0.04	7.50	203
			Average Concentration (mg/L)	0.0734	100.48	148.53	0.05	7.50	204		
			7/7/2021	7	HAP1DPT06 5b	0.00064	98.69	142.40	0.15	7.38	182
					HAP1DPT06 6b	0.00055	98.67	150.35	0.16	7.44	174
		Average Concentration (mg/L)			0.00060	98.68	146.38	0.15	7.41	178	
		Concentration Level 4	7/30/2021	0	Spiked Aqueous Concentration	0.251	--	--	--	--	--
					HAP1DPT06 7a	0.208	97.69	149.78	0.07	7.52	203
					HAP1DPT06 8a	0.196	100.25	147.34	0.08	7.56	203
			Average Concentration (mg/L)	0.202	98.97	148.56	0.07	7.54	203		
			7/7/2021	7	HAP1DPT06 7b	0.00157	101.10	146.34	0.36	7.48	167
					HAP1DPT06 8b	0.00145	100.34	146.30	0.36	7.47	162
		Average Concentration (mg/L)			0.00151	100.72	146.32	0.36	7.48	165	
		Concentration Level 5	7/30/2021	0	Spiked Aqueous Concentration	0.587	--	--	--	--	--
					HAP1DPT06 9a	0.421	99.17	149.75	0.25	7.51	208
					HAP1DPT06 10a	0.435	99.92	148.47	0.23	7.55	208
			Average Concentration (mg/L)	0.428	99.55	149.11	0.24	7.53	208		
			7/7/2021	7	HAP1DPT06 9b	0.00379	100.19	149.52	0.87	7.49	157
					HAP1DPT06 10b	0.00431	98.59	147.47	0.87	7.52	153
		Average Concentration (mg/L)			0.00405	99.39	148.50	0.87	7.51	155	
		Concentration Level 6	7/30/2021	0	Spiked Aqueous Concentration	1.20	--	--	--	--	--
HAP1DPT06 11a	0.879				101.25	149.37	0.47	7.37	207		
HAP1DPT06 12a	0.880				99.14	145.56	0.47	7.42	202		
Average Concentration (mg/L)	0.880		100.20	147.47	0.47	7.40	205				
7/7/2021	7		HAP1DPT06 11b	0.00845	100.32	146.46	1.74	7.48	149		
			HAP1DPT06 12b	0.0125	99.85	147.62	1.76	7.45	150		
		Average Concentration (mg/L)	0.0105	100.09	147.04	1.75	7.47	150			

Notes:

-- = Not applicable

< = Indicates the constituent was not detected above the analytical method detection limit (MDL)

g = grams

mg/L = milligrams per liter

mg/kg = milligrams per kilogram

ORP = oxidation reduction potential

s.u. = standard units

(1) The highest spike concentration (Level 6) of molybdenum was at least two times greater than the highest molybdenum concentration observed in either coal combustion residue pore water or groundwater at the Site.

(2) Day 0 samples were collected approximately one hour after reactor setup.

(3) The sorbed concentration per unit mass of aquifer solids is calculated as shown in the equation below. Non-detect concentrations were assumed to be equal to ½ of the MDL for calculating sorbed mass.

$$S_{Solids} = \frac{(C_{Spike} - C_{Final}) \times M_{Water}}{M_{Solids} \times \rho_{Water}}$$

Where:

S_{Solids} = sorbed concentration per unit mass of aquifer solids (mg/kg)

$C_{Spike,Final}$ = dissolved concentration of the initial spike or final dissolved concentration at Day 0 or Day 7 (mg/L)

$M_{Solids,Water}$ = mass of water or aquifer solids in reactor (g)

ρ_{Water} = density of water (equal to 1 L/kg)

Table 8C
Summary of Sorption Test Results: Lithium
Plant Hammond AP-1, Floyd County, Georgia

Groundwater Sample ID	Site Material Sample ID	Treatment ⁽¹⁾	Date	Day ⁽²⁾	Replicate	Dissolved Lithium (mg/L)	Mass of Aquifer Solids in Reactor (g)	Mass of Water in Reactor (g)	Sorbed Lithium (mg/kg) ⁽³⁾	pH (s.u.)	ORP (mV)
HGWA-1	DPT06(15-23)	Concentration Level 1	6/29/2021	0	Spiked Aqueous Concentration	0.0074	--	--	--	--	--
					HAP1DPT06 1a	0.0048	100.49	148.58	0.00	7.44	175
					HAP1DPT06 2a	0.0049	100.55	148.53	0.00	7.41	174
			Average Concentration (mg/L)	0.0049	100.52	148.56	0.004	7.43	175		
			7/6/2021	7	HAP1DPT06 1b	0.0012	101.96	150.94	0.01	7.38	169
					HAP1DPT06 2b	0.0015	99.65	147.98	0.01	7.36	172
		Average Concentration (mg/L)			0.0014	100.81	149.46	0.01	7.37	171	
		Concentration Level 2	6/29/2021	0	Spiked Aqueous Concentration	0.0131	--	--	--	--	--
					HAP1DPT06 3a	0.0098	99.83	146.45	0.005	7.46	199
					HAP1DPT06 4a	0.0066	98.73	144.25	0.01	7.42	198
			Average Concentration (mg/L)	0.0082	99.28	145.35	0.01	7.44	199		
			7/6/2021	7	HAP1DPT06 3b	0.0013	100.85	146.11	0.02	7.39	161
					HAP1DPT06 4b	0.0014	96.14	150.53	0.02	7.38	156
		Average Concentration (mg/L)			0.0014	98.50	148.32	0.02	7.39	159	
		Concentration Level 3	7/30/2021	0	Spiked Aqueous Concentration	0.0283	--	--	--	--	--
					HAP1DPT06 5a	0.0135	101.03	147.04	0.022	7.49	205
					HAP1DPT06 6a	0.0163	99.92	150.01	0.02	7.50	203
			Average Concentration (mg/L)	0.0149	100.48	148.53	0.02	7.50	204		
			7/7/2021	7	HAP1DPT06 5b	0.0016	98.69	142.40	0.04	7.38	182
					HAP1DPT06 6b	0.0016	98.67	150.35	0.04	7.44	174
		Average Concentration (mg/L)			0.0016	98.68	146.38	0.04	7.41	178	
		Concentration Level 4	7/30/2021	0	Spiked Aqueous Concentration	0.0412	--	--	--	--	--
					HAP1DPT06 7a	0.0288	97.69	149.78	0.019	7.52	203
					HAP1DPT06 8a	0.0254	100.25	147.34	0.02	7.56	203
			Average Concentration (mg/L)	0.0271	98.97	148.56	0.02	7.54	203		
			7/7/2021	7	HAP1DPT06 7b	0.0015	101.10	146.34	0.06	7.48	167
					HAP1DPT06 8b	0.0015	100.34	146.30	0.06	7.47	162
		Average Concentration (mg/L)			0.0015	100.72	146.32	0.06	7.48	165	
		Concentration Level 5	7/30/2021	0	Spiked Aqueous Concentration	0.0569	--	--	--	--	--
					HAP1DPT06 9a	0.0327	99.17	149.75	0.037	7.51	208
HAP1DPT06 10a	0.0332				99.92	148.47	0.04	7.55	208		
Average Concentration (mg/L)	0.0330		99.55	149.11	0.04	7.53	208				
7/7/2021	7		HAP1DPT06 9b	0.0019	100.19	149.52	0.08	7.49	157		
			HAP1DPT06 10b	0.0018	98.59	147.47	0.08	7.52	153		
		Average Concentration (mg/L)	0.0019	99.39	148.50	0.08	7.51	155			
Concentration Level 6	7/30/2021	0	Spiked Aqueous Concentration	0.0709	--	--	--	--	--		
			HAP1DPT06 11a	0.0506	101.25	149.37	0.030	7.37	207		
			HAP1DPT06 12a	0.0480	99.14	145.56	0.03	7.42	202		
	Average Concentration (mg/L)	0.0493	100.20	147.47	0.03	7.40	205				
	7/7/2021	7	HAP1DPT06 11b	0.0022	100.32	146.46	0.10	7.48	149		
			HAP1DPT06 12b	0.0025	99.85	147.62	0.10	7.45	150		
Average Concentration (mg/L)			0.0024	100.09	147.04	0.10	7.47	150			

Notes:

-- = Not applicable

< = Indicates the constituent was not detected above the analytical method detection limit (MDL)

g = grams

mg/L = milligrams per liter

mg/kg = milligrams per kilogram

ORP = oxidation reduction potential

s.u. = standard units

(1) The highest spike concentration (Level 6) of lithium was at least 1.5 times greater than the highest lithium concentration observed in either coal combustion residue pore water or groundwater at the Site.

(2) Day 0 samples were collected approximately one hour after reactor setup.

(3) The sorbed concentration per unit mass of aquifer solids is calculated as shown in the equation below. Non-detect concentrations were assumed to be equal to ½ of the MDL for calculating sorbed mass.

$$S_{Solids} = \frac{(C_{Spike} - C_{Final}) \times M_{Water}}{M_{Solids} \times \rho_{Water}}$$

Where:

S_{Solids} = sorbed concentration per unit mass of aquifer solids (mg/kg)

$C_{Spike,Final}$ = dissolved concentration of the initial spike or final dissolved concentration at Day 0 or Day 7 (mg/L)

$M_{Solids,Water}$ = mass of water or aquifer solids in reactor (g)

ρ_{Water} = density of water (equal to 1 L/kg)

Table 9A
 Summary of Desorption Test Results: Dissolved Arsenic
 Plant Hammond AP-1, Floyd County, Georgia

Groundwater Sample ID	Site Material Sample ID	Chemical Characteristics (Baseline Characterization) ⁽¹⁾	Treatment	Date	Day ⁽²⁾	Replicate	Dissolved Arsenic (mg/L)	pH (s.u.)	ORP (mV)
HGWA-1	DPT02	Aquifer Solids: Arsenic: 4.7 mg/kg Groundwater: Arsenic: <0.00078 to <0.0011 mg/L pH: 6.88 s.u. ORP: 66.4 mV	Ambient Conditions	8/31/2021	0	HAP1DPT02_1a	< 0.0002	7.16	160
						HAP1DPT02_2a	< 0.0002	7.26	158
				Average Concentration (mg/L)		< 0.0002	7.21	159	
				9/15/2021	7	HAP1DPT02_1b	< 0.0002	6.87	122
	HAP1DPT02_2b	< 0.0002	6.90			121			
	Average Concentration (mg/L)		< 0.0002	6.89	122				
	DPT04XRF	Aquifer Solids: Arsenic: 13 mg/kg Groundwater: Arsenic: <0.00078 to <0.0011 mg/L pH: 6.88 s.u. ORP: 66.4 mV	Ambient Conditions	8/31/2021	0	HAP1DPT04XRF_3a	0.0007	7.23	160
						HAP1DPT04XRF_4a	0.0007	7.24	159
				Average Concentration (mg/L)		0.0007	7.24	160	
				9/15/2021	7	HAP1DPT04XRF_3b	0.0031	6.98	121
			HAP1DPT04XRF_4b			0.0030	6.97	120	
			Average Concentration (mg/L)		0.0031	6.98	121		
Hydrogen Amended			8/31/2021	0	HAP1DPT04XRF_5a	0.0007	7.23	160	
					HAP1DPT04XRF_6a	0.0007	7.24	159	
	Average Concentration (mg/L)				0.0007	7.24	160		
	9/15/2021	15			HAP1DPT04XRF_5b	0.0012	6.82	122	
HAP1DPT04XRF_6b			0.0012	6.67	124				
Average Concentration (mg/L)		0.0012	6.75	123					

Notes:

< = Indicates the constituent was not detected above the analytical method detection limit (MDL)

mg/kg - milligrams per kilogram

mg/L = milligrams per liter

mV = millivolts

ORP = oxidation reduction potential

s.u. = standard units

(1) Reported total arsenic concentrations in HGWA-1 groundwater were measured during the 2021 semiannual sampling events. Reported pH and ORP values were measured during batch sample collection on 5/26/21 and are consistent with values observed during the 2021 semiannual sampling events.

(2) Day 0 samples were collected approximately one hour after reactor setup.

Table 9B
 Summary of Desorption Test Results: Dissolved Molybdenum
 Plant Hammond AP-1, Floyd County, Georgia

Groundwater Sample ID	Site Material Sample ID	Chemical Characteristics (Baseline Characterization) ⁽¹⁾	Treatment	Date	Day ⁽²⁾	Replicate	Dissolved Molybdenum (mg/L)	pH (s.u.)	ORP (mV)	
HGWA-1	DPT02	Aquifer Solids: Molybdenum: 6.2 mg/kg Groundwater: Molybdenum: <0.00069 to <0.00089 mg/L pH: 6.88 s.u. ORP: 66.4 mV	Ambient Conditions	8/31/2021	0	HAP1DPT02_1a	0.00725	7.16	160	
						HAP1DPT02_2a	0.00752	7.26	158	
						Average Concentration (mg/L)	0.00739	7.21	159	
				9/15/2021	7	HAP1DPT02_1b	0.00956	6.87	122	
	HAP1DPT02_2b	0.00967	6.90			121				
			Average Concentration (mg/L)	0.00962	6.89	122				
	DPT04XRF	Aquifer Solids: Molybdenum: 1.4 mg/kg Groundwater: Molybdenum: <0.00069 to <0.00089 mg/L pH: 6.88 s.u. ORP: 66.4 mV	Ambient Conditions	8/31/2021	0	HAP1DPT04XRF_3a	0.00658	7.23	160	
						HAP1DPT04XRF_4a	0.00656	7.24	159	
						Average Concentration (mg/L)	0.00657	7.24	160	
				9/15/2021	7	HAP1DPT04XRF_3b	0.0124	6.98	121	
			HAP1DPT04XRF_4b			0.0113	6.97	120		
					Average Concentration (mg/L)	0.0119	6.98	121		
Hydrogen Amended					8/31/2021	0	HAP1DPT04XRF_5a	0.00658	7.23	160
							HAP1DPT04XRF_6a	0.00656	7.24	159
					Average Concentration (mg/L)	0.00657	7.24	160		
	9/15/2021	15			HAP1DPT04XRF_5b	0.00896	6.82	122		
HAP1DPT04XRF_6b			0.00414	6.67	124					
		Average Concentration (mg/L)	0.00655	6.75	123					

Notes:

< = Indicates the constituent was not detected above the analytical method detection limit (MDL)

mg/kg - milligrams per kilogram

mg/L = milligrams per liter

mV = millivolts

ORP = oxidation reduction potential

s.u. = standard units

(1) Reported total molybdenum concentrations in HGWA-1 groundwater were measured during the 2021 semiannual sampling events. Reported pH and ORP values were measured during batch sample collection on 5/26/21 and are consistent with values observed during the 2021 semiannual sampling events.

(2) Day 0 samples were collected approximately one hour after reactor setup.

Table 9C
 Summary of Desorption Test Results: Dissolved Lithium
 Plant Hammond AP-1, Floyd County, Georgia

Groundwater Sample ID	Site Material Sample ID	Chemical Characteristics (Baseline Characterization) ⁽¹⁾	Treatment	Date	Day ⁽²⁾	Replicate	Dissolved Lithium (mg/L)	pH (s.u.)	ORP (mV)
HGWA-1	DPT02	<u>Aquifer Solids:</u> Lithium: 33 mg/kg <u>Groundwater:</u> Lithium: 0.00078 J to 0.0009 J mg/L pH: 6.88 s.u. ORP: 66.4 mV	Ambient Conditions	8/31/2021	0	HAP1DPT02_1a	0.0012	7.16	160
						HAP1DPT02_2a	0.0013	7.26	158
						Average Concentration (mg/L)	0.0013	7.21	159
				9/15/2021	7	HAP1DPT02_1b	0.0005	6.87	122
						HAP1DPT02_2b	0.0007	6.90	121
						Average Concentration (mg/L)	0.0006	6.89	122
	DPT04XRF	<u>Aquifer Solids:</u> Lithium: 12 mg/kg <u>Groundwater:</u> Lithium: 0.00078 J to 0.0009 J mg/L pH: 6.88 s.u. ORP: 66.4 mV	Ambient Conditions	8/31/2021	0	HAP1DPT04XRF_3a	0.0043	7.23	160
						HAP1DPT04XRF_4a	0.0046	7.24	159
						Average Concentration (mg/L)	0.0045	7.24	160
				9/15/2021	7	HAP1DPT04XRF_3b	0.0048	6.98	121
						HAP1DPT04XRF_4b	0.0040	6.97	120
						Average Concentration (mg/L)	0.0044	6.98	121
			Hydrogen Amended	8/31/2021	0	HAP1DPT04XRF_5a	0.0043	7.23	160
						HAP1DPT04XRF_6a	0.0046	7.24	159
				9/15/2021	15	HAP1DPT04XRF_5b	0.0015	6.82	122
						HAP1DPT04XRF_6b	0.0008	6.67	124
						Average Concentration (mg/L)	0.0012	6.75	123

Notes:

< = Indicates the constituent was not detected above the analytical method detection limit (MDL)

J = Indicates the constituent was estimated and detected between the MDL and the reporting limit (RL)

mg/kg - milligrams per kilogram

mg/L = milligrams per liter

mV = millivolts

ORP = oxidation reduction potential

s.u. = standard units

(1) Reported total lithium concentrations in HGWA-1 groundwater were measured during the 2021 semiannual sampling events. Reported pH and ORP values were measured during batch sample collection on 5/26/21 and are consistent with values observed during the 2021 semiannual sampling events.

(2) Day 0 samples were collected approximately one hour after reactor setup.

FIGURES



Notes:
 1. Aerial photograph source: Google Earth Pro, August 2019.



SITE LOCATION MAP

GEORGIA POWER COMPANY
 PLANT HAMMOND AP-1
 FLOYD COUNTY, GEORGIA

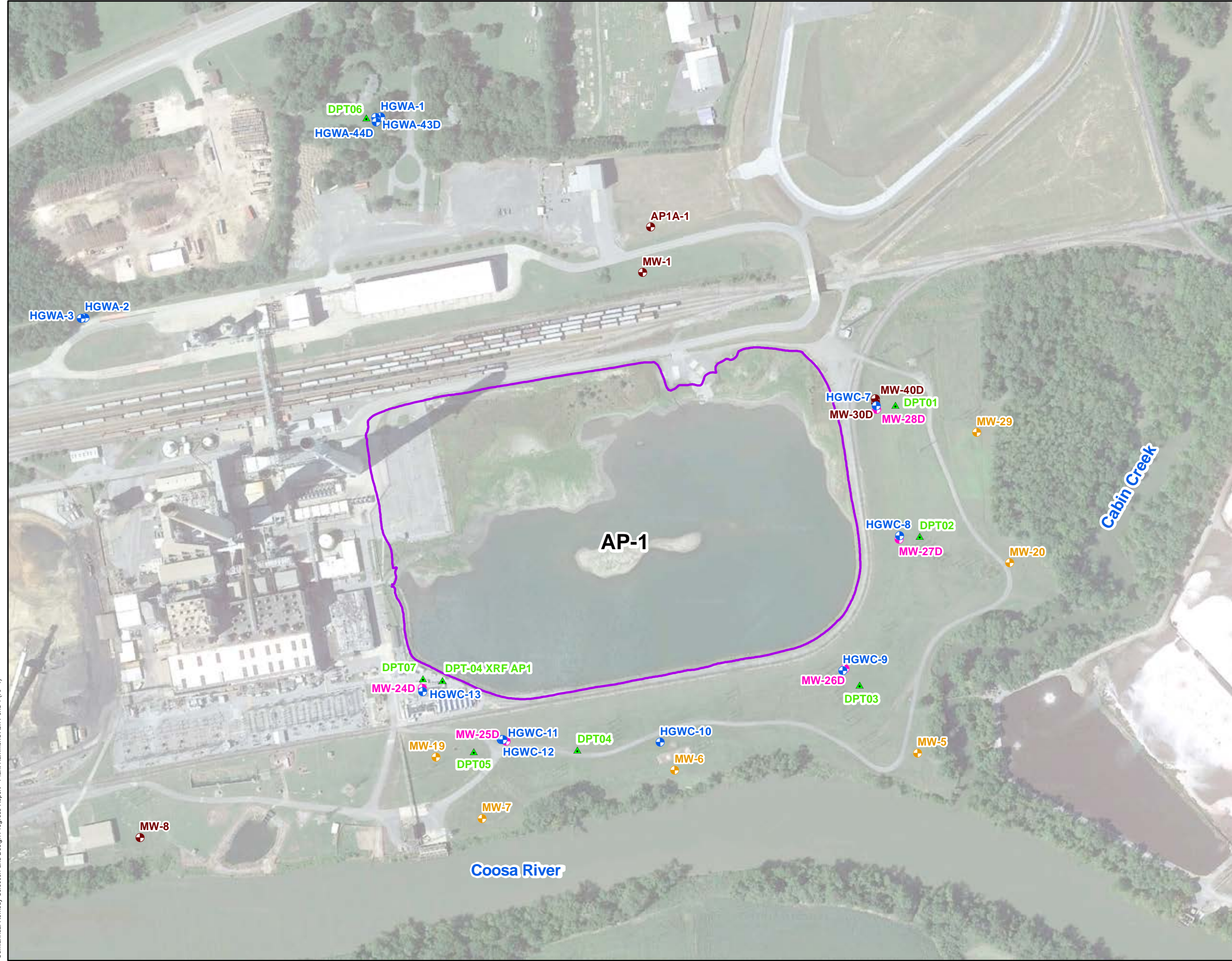
Prepared For:  Georgia Power

Prepared By:  Geosyntec
 consultants

KENNESAW, GA

JANUARY 2022

FIGURE
1



- LEGEND**
- + Compliance Monitoring Well
 - + Horizontal Delineation Monitoring Well
 - + Vertical Delineation Monitoring Well
 - + Piezometer
 - ▲ DPT Borehole (unsurveyed location)
 - Approximate AP-1 Boundary

Note:
1. Aerial photograph source: Google Earth Pro, August 2019.



MONITORING WELL NETWORK AND SAMPLING LOCATION MAP

GEORGIA POWER COMPANY
PLANT HAMMOND AP-1
ROME, FLOYD COUNTY, GEORGIA

Prepared For: Georgia Power

Prepared By: Geosyntec
consultants

KENNESAW, GA JANUARY 2022

**FIGURE
2**



- LEGEND**
- Compliance Monitoring Well
 - Horizontal Delineation Well
 - Vertical Delineation Well (Not Used for Contouring)
 - Piezometer
 - Federal GWPS Molybdenum Iso-Concentration Contour (mg/L)
 - State GWPS Molybdenum Iso-Concentration Contour (mg/L)
 - Groundwater Elevation Iso-Contour
 - ➔ Approximate Groundwater Flow
 - Approximate AP-1
 - - - Plant Hammond Property Boundary

- Notes:**
1. Concentration data from groundwater samples collected during the August 2021 semiannual monitoring event. Data reported for wells screened deeper in the aquifer were not used to generate the iso-concentration contour (HGWA-43D, HGWA-44D, MW-24D, MW-25D, MW-26D, MW-27D, MW-28D). Concentrations are reported in mg/L.
 2. Water level elevation recorded on August 11, 2021. Elevation provided in feet (ft) referenced to the North American Vertical Datum (NAVD) 88.
 3. The state Groundwater Protection Standard (GWPS) for molybdenum is 0.010 mg/L; the federal GWPS is 0.10 mg/L.
 4. Molybdenum concentrations for MW-26D and MW-28D for the most recent event are above the state GWPS. However, statistical analyses of the data have not identified Statistical Significant Levels of molybdenum in these wells.
 5. Aerial photograph source: Google Earth Pro, August 2019.



**ISO-CONCENTRATION MAP
MOLYBDENUM - AUGUST 2021**

GEORGIA POWER COMPANY
PLANT HAMMOND AP-1
ROME, FLOYD COUNTY, GEORGIA

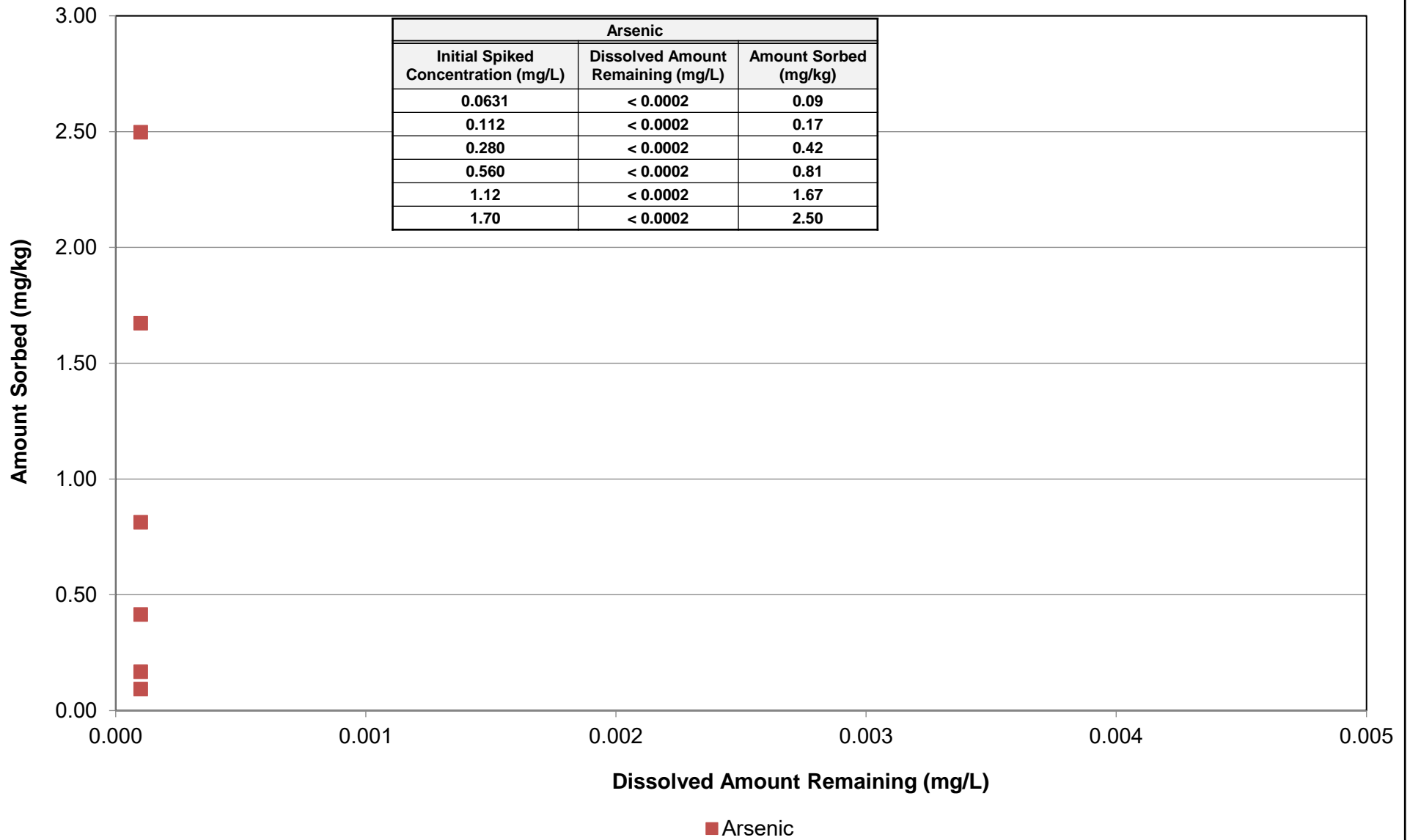
Prepared For: Georgia Power

Prepared By: Geosyntec
consultants

**FIGURE
5**

KENNESAW, GA JANUARY 2022

Semiannual Remedial Selection and Design Progress Report Plant Hammond Ash Pond 1 (AP-1)



- Notes:
1. mg/L = milligrams of constituent per liter; mg/kg = milligrams of constituent per kilogram of aquifer solids.
 2. The distribution coefficient (K_d) is the ratio of sorbed and dissolved concentrations under equilibrium conditions. The bulk K_d is equal to the slope of a line through individual measurements of sorbed and dissolved concentrations. A site-specific arsenic K_d cannot be calculated as all arsenic was completely sorbed at all concentration levels.
 3. Non-detect concentrations are plotted as 1/2 the method detection limit.

SORPTION TEST RESULTS – ARSENIC

GEORGIA POWER COMPANY
 PLANT HAMMOND AP-1
 FLOYD COUNTY, GEORGIA

Prepared For:

Prepared By:

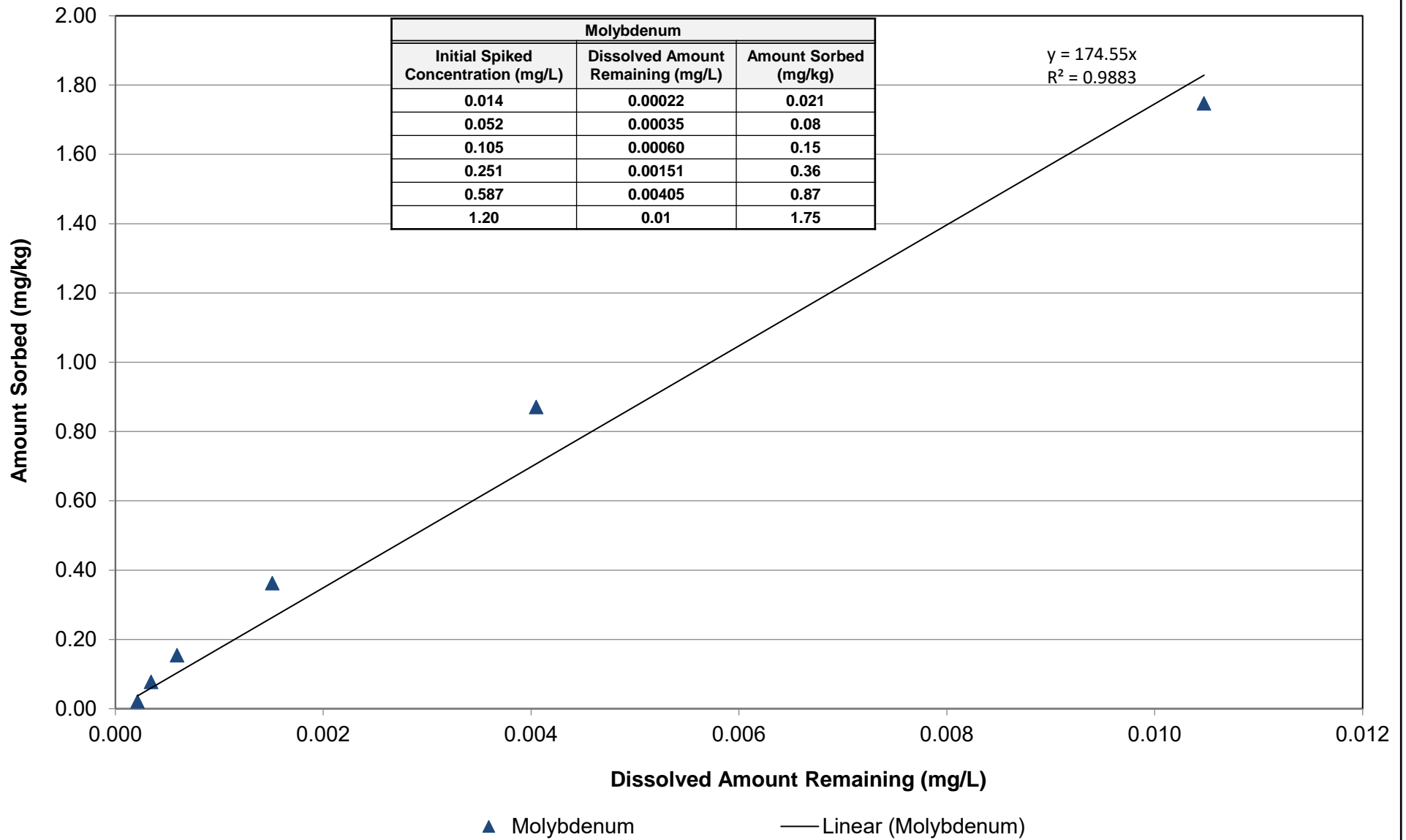


KENNESAW, GA

JANUARY 2022

Figure

6A



- Notes:
1. mg/L = milligrams of constituent per liter; mg/kg = milligrams of constituent per kilogram of aquifer solids.
 2. The distribution coefficient (K_d) is the ratio of sorbed and dissolved concentrations under equilibrium conditions. The bulk K_d is equal to the slope of a line through individual measurements of sorbed and dissolved concentrations.
 3. Non-detect concentrations are plotted as ½ the method detection limit.

SORPTION TEST RESULTS – MOLYBDENUM

GEORGIA POWER COMPANY
PLANT HAMMOND AP-1
FLOYD COUNTY, GEORGIA

Prepared For:

Prepared By:

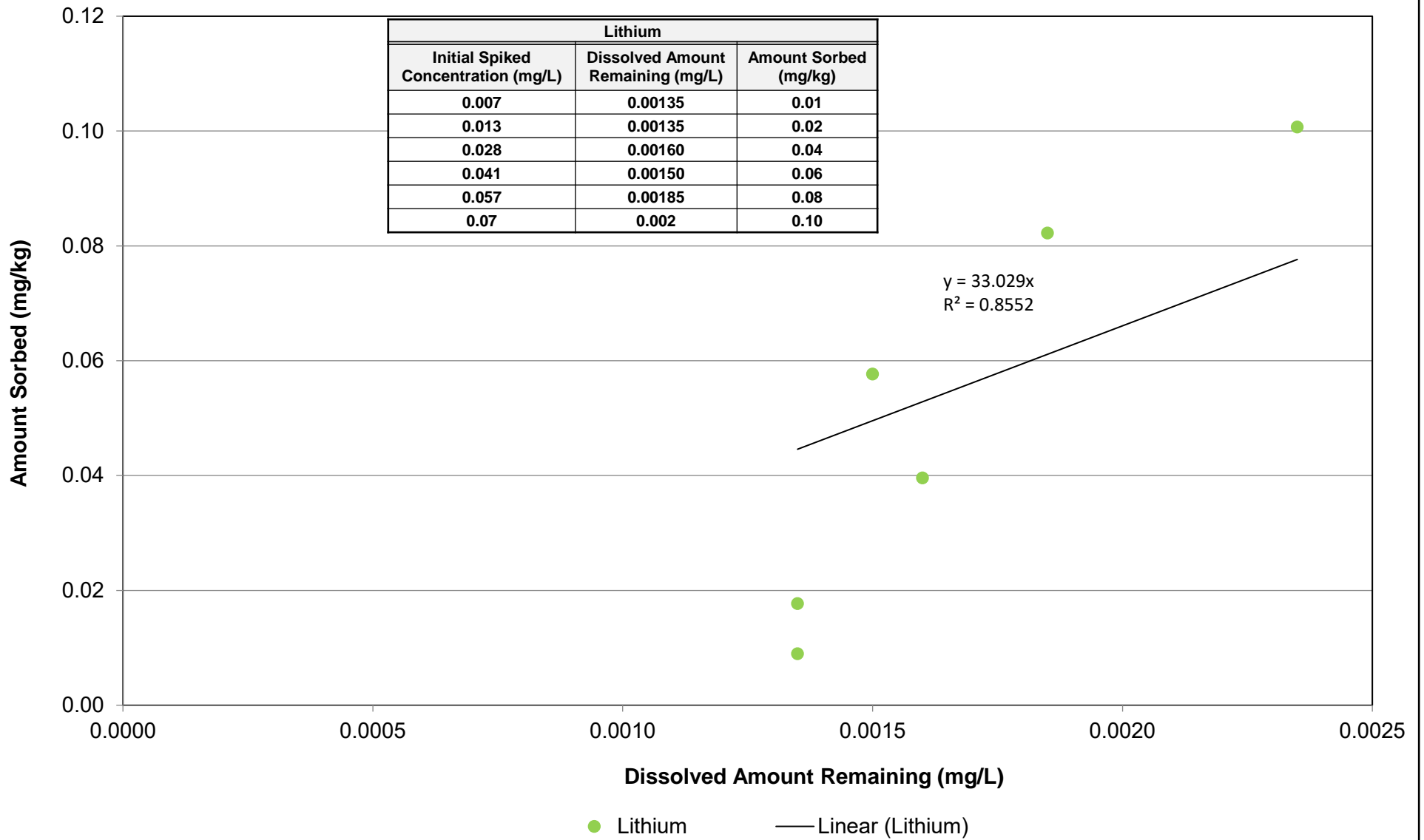


Figure

6B

KENNESAW, GA

JANUARY 2022



- Notes:
1. mg/L = milligrams of constituent per liter; mg/kg = milligrams of constituent per kilogram of aquifer solids.
 2. The distribution coefficient (K_d) is the ratio of sorbed and dissolved concentrations under equilibrium conditions. The bulk K_d is equal to the slope of a line through individual measurements of sorbed and dissolved concentrations.
 3. Non-detect concentrations are plotted as $\frac{1}{2}$ the method detection limit.

SORPTION TEST RESULTS – LITHIUM

GEORGIA POWER COMPANY
 PLANT HAMMOND AP-1
 FLOYD COUNTY, GEORGIA

Prepared For:

Prepared By:



KENNESAW, GA

JANUARY 2022

Figure

6C

APPENDIX A

Appendix IV Constituents Trend Tests

Appendix IV Trend Test Summary - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/25/2021, 7:17 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Lithium (mg/L)	HGWA-1 (bg)	-0.006059	-119	-81	Yes	20	45	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-2 (bg)	-0.0003434	-84	-81	Yes	20	30	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-7	0.00396	155	87	Yes	21	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-9	0.002522	128	81	Yes	20	0	n/a	n/a	0.01	NP

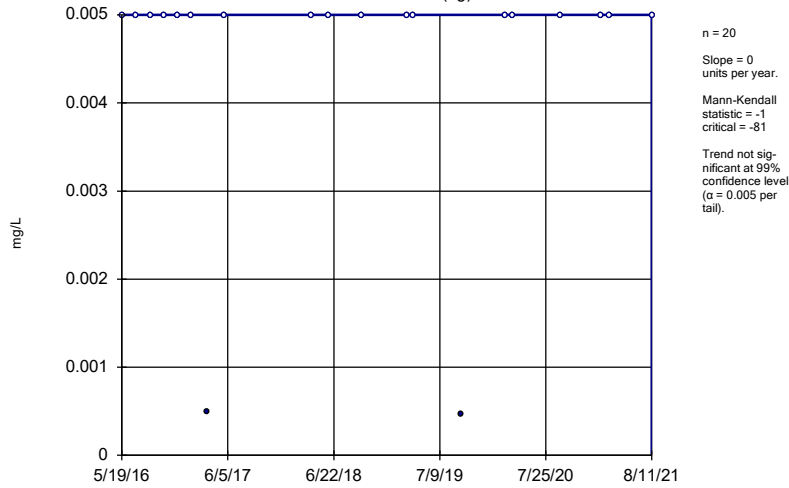
Appendix IV Trend Test Summary - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/25/2021, 7:17 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Arsenic (mg/L)	HGWA-1 (bg)	0	-1	-81	No	20	90	n/a	n/a	0.01	NP
Arsenic (mg/L)	HGWA-2 (bg)	0	20	81	No	20	60	n/a	n/a	0.01	NP
Arsenic (mg/L)	HGWA-3 (bg)	0	8	81	No	20	60	n/a	n/a	0.01	NP
Arsenic (mg/L)	HGWA-43D (bg)	-0.003883	-10	-18	No	7	28.57	n/a	n/a	0.01	NP
Arsenic (mg/L)	HGWA-44D (bg)	0	-2	-18	No	7	85.71	n/a	n/a	0.01	NP
Arsenic (mg/L)	HGWC-13	0.0173	61	81	No	20	0	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-1 (bg)	-0.006059	-119	-81	Yes	20	45	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-2 (bg)	-0.0003434	-84	-81	Yes	20	30	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-3 (bg)	0.00003978	21	81	No	20	5	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-43D (bg)	0.001273	11	18	No	7	0	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-44D (bg)	0.01521	13	18	No	7	0	n/a	n/a	0.01	NP
Lithium (mg/L)	MW-25D	-0.0008246	-11	-25	No	9	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-1 (bg)	0	0	87	No	21	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-2 (bg)	0	0	81	No	20	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-3 (bg)	0	0	87	No	21	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-43D (bg)	-0.001109	-4	-18	No	7	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-44D (bg)	0.003529	12	18	No	7	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-11	-0.001035	-19	-81	No	20	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-12	-0.0002265	-14	-81	No	20	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-13	-0.0002928	-12	-81	No	20	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-7	0.00396	155	87	Yes	21	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-8	-0.005012	-34	-87	No	21	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-9	0.002522	128	81	Yes	20	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	MW-19	-0.006345	-7	-25	No	9	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

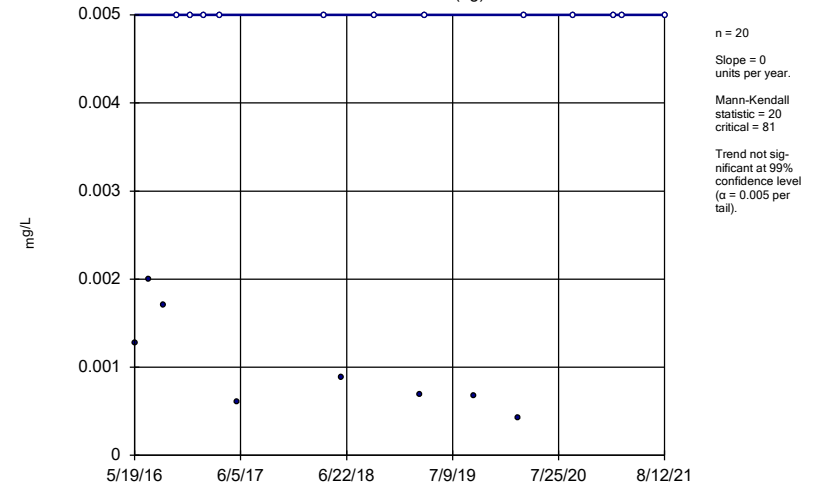
HGWA-1 (bg)



Constituent: Arsenic Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

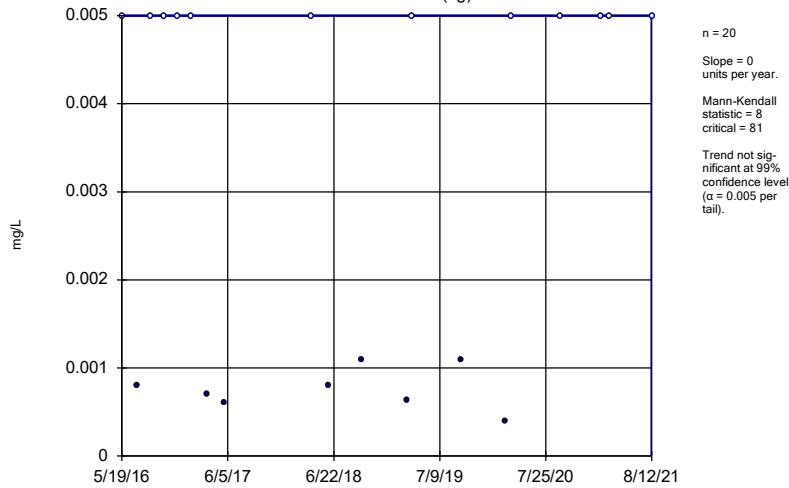
HGWA-2 (bg)



Constituent: Arsenic Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

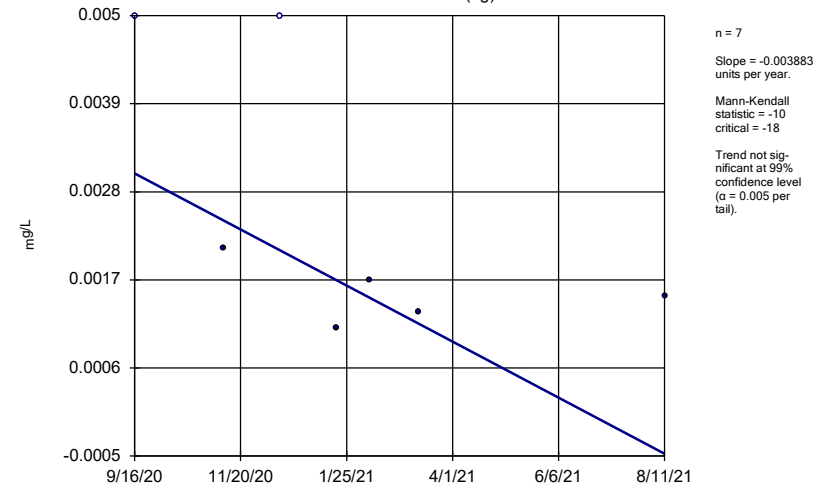
HGWA-3 (bg)



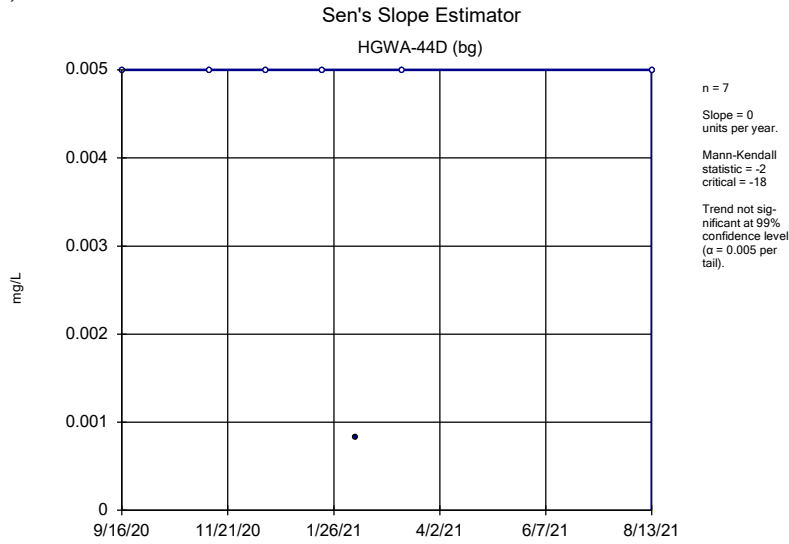
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

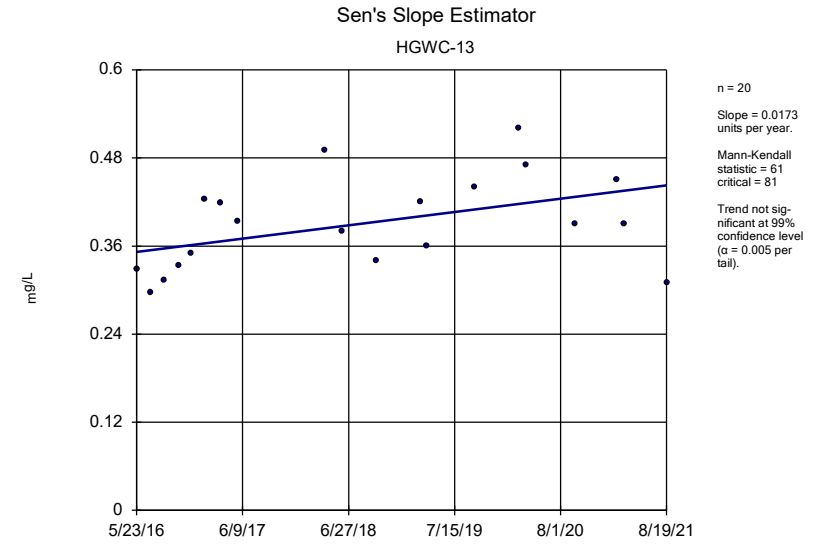
HGWA-43D (bg)



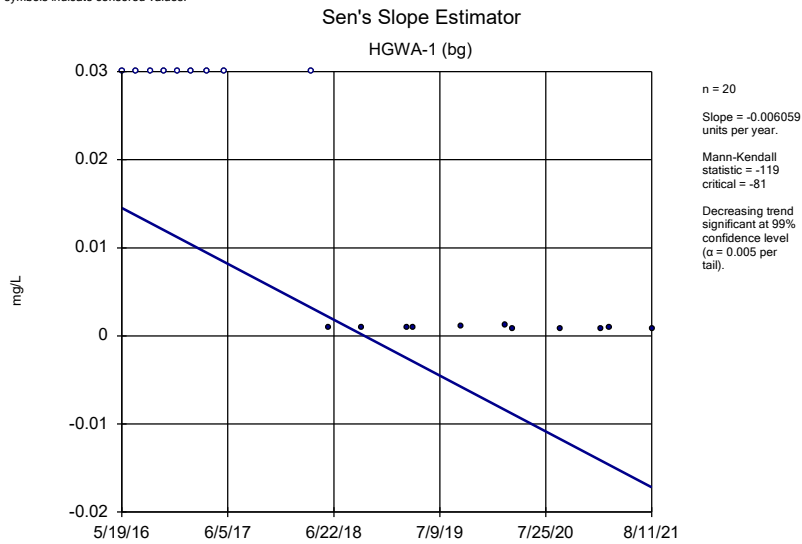
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Plant Hammond Client: Southern Company Data: Hammond AP-1



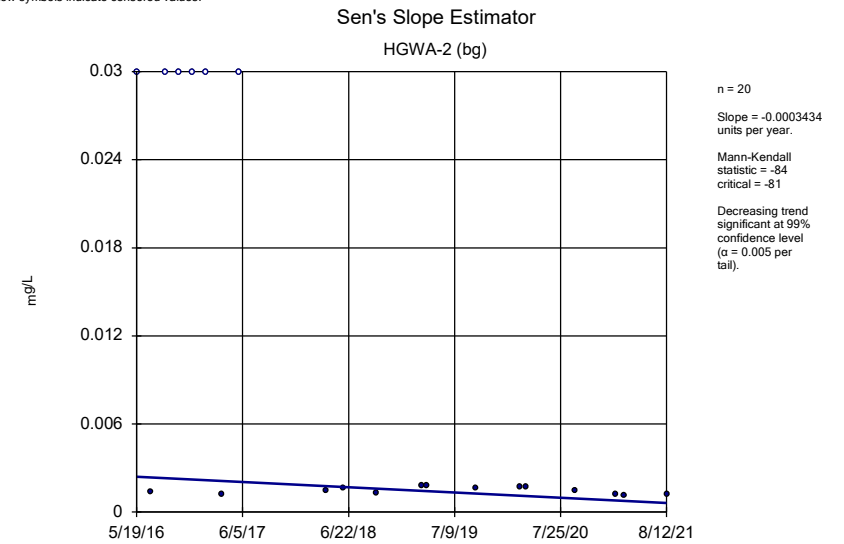
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Plant Hammond Client: Southern Company Data: Hammond AP-1



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Plant Hammond Client: Southern Company Data: Hammond AP-1

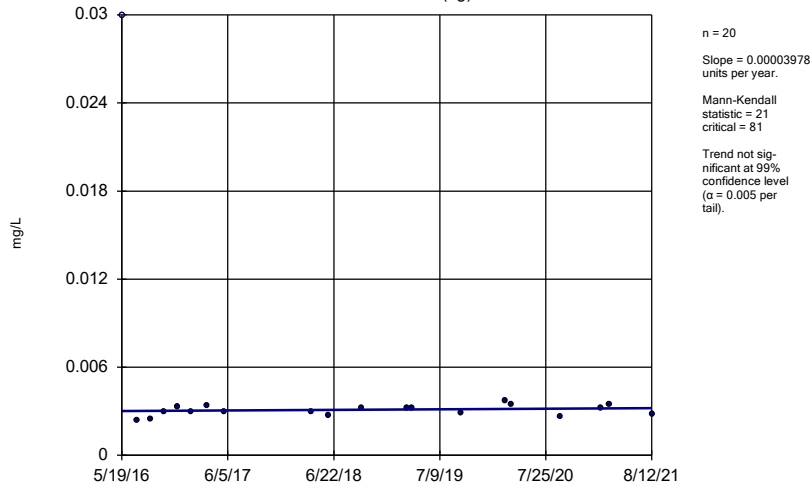


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Plant Hammond Client: Southern Company Data: Hammond AP-1



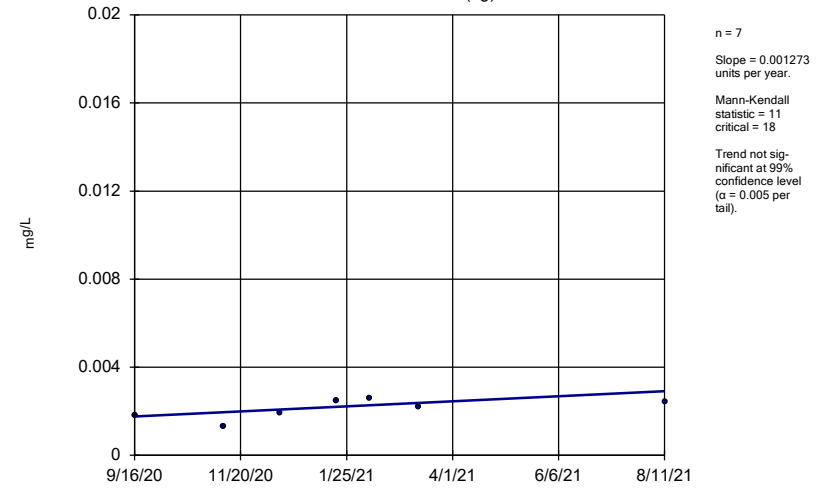
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-3 (bg)



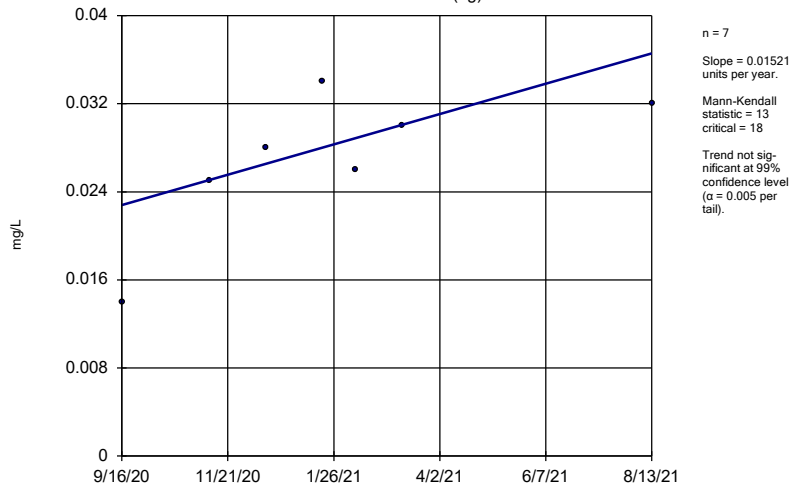
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-43D (bg)



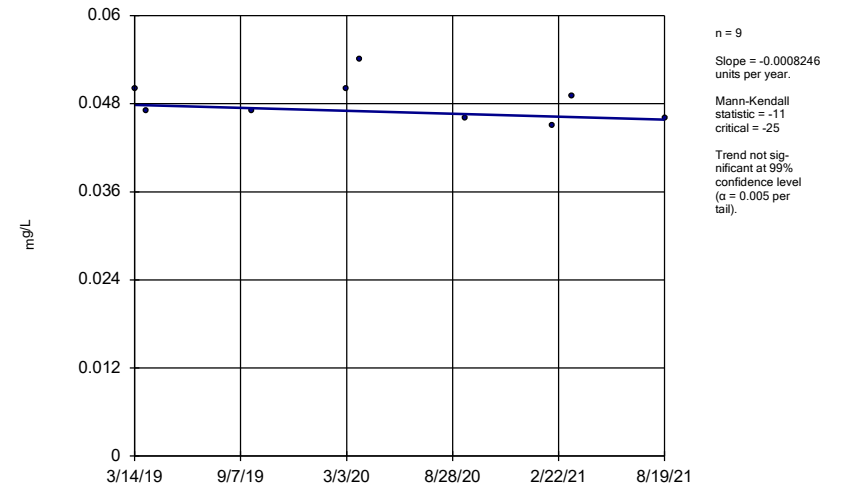
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-44D (bg)

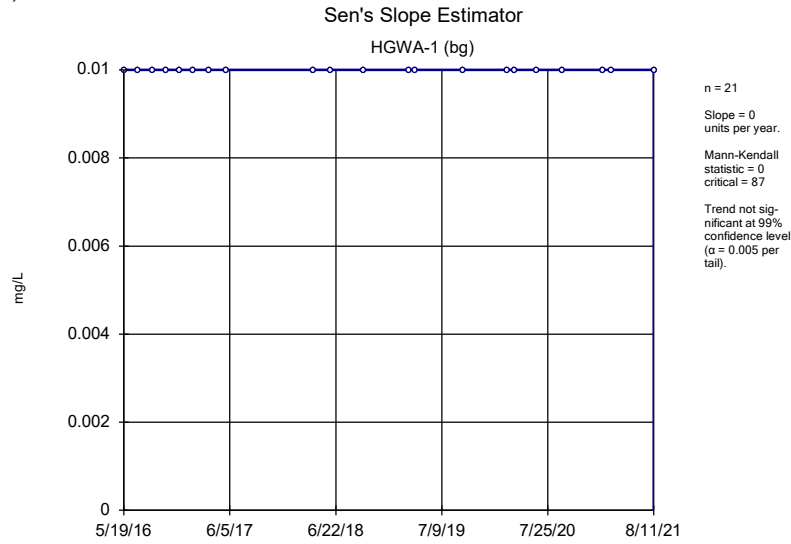


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Plant Hammond Client: Southern Company Data: Hammond AP-1

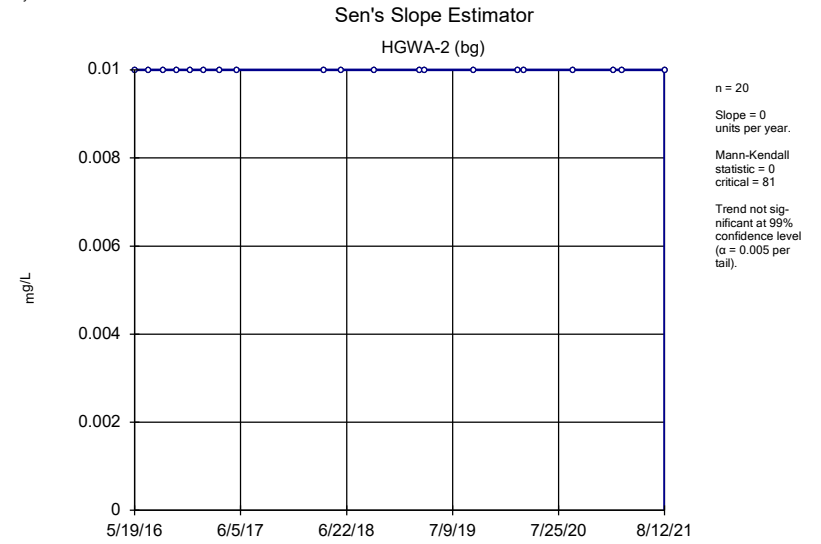
Sen's Slope Estimator
MW-25D



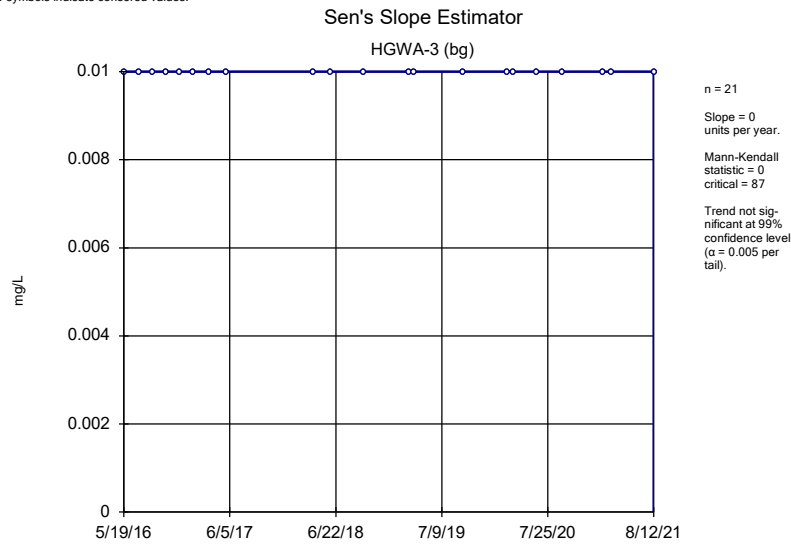
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Plant Hammond Client: Southern Company Data: Hammond AP-1



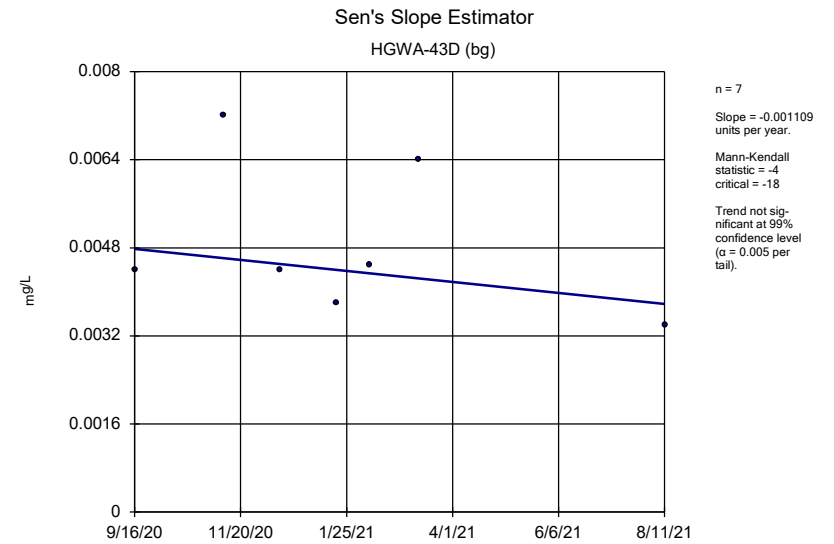
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Plant Hammond Client: Southern Company Data: Hammond AP-1



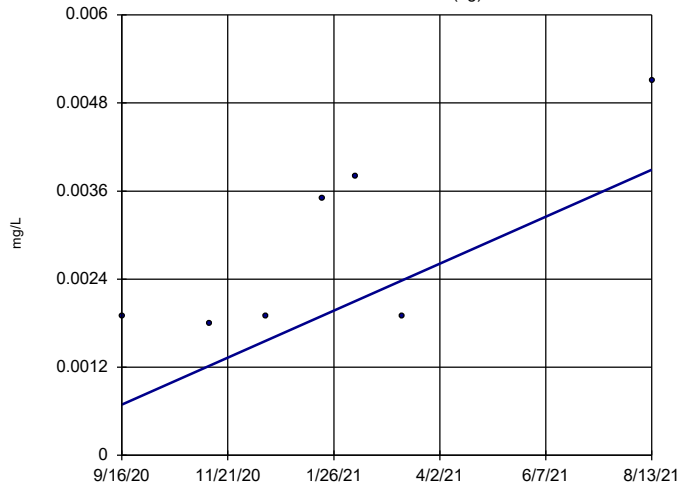
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Plant Hammond Client: Southern Company Data: Hammond AP-1



Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWA-44D (bg)

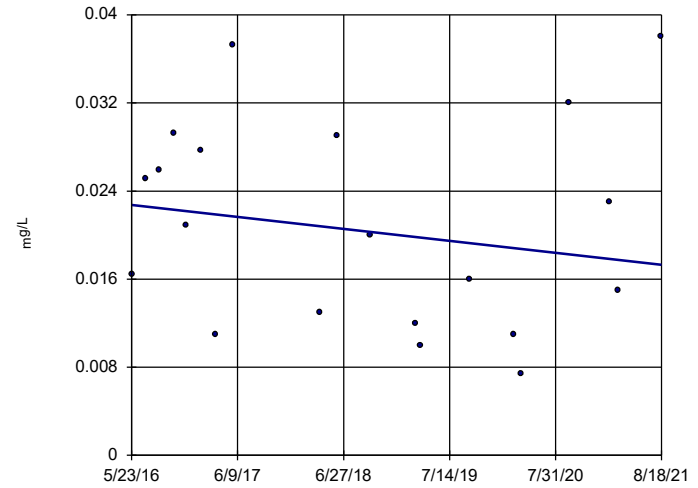


n = 7
 Slope = 0.003529
 units per year.
 Mann-Kendall
 statistic = 12
 critical = 18
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWC-11

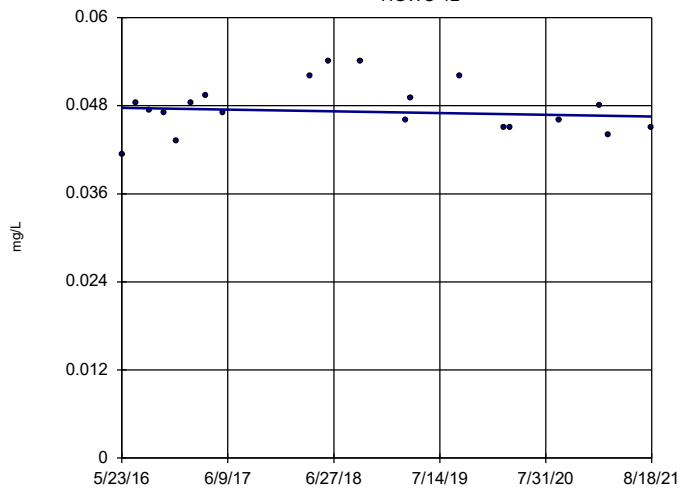


n = 20
 Slope = -0.001035
 units per year.
 Mann-Kendall
 statistic = -19
 critical = -81
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWC-12

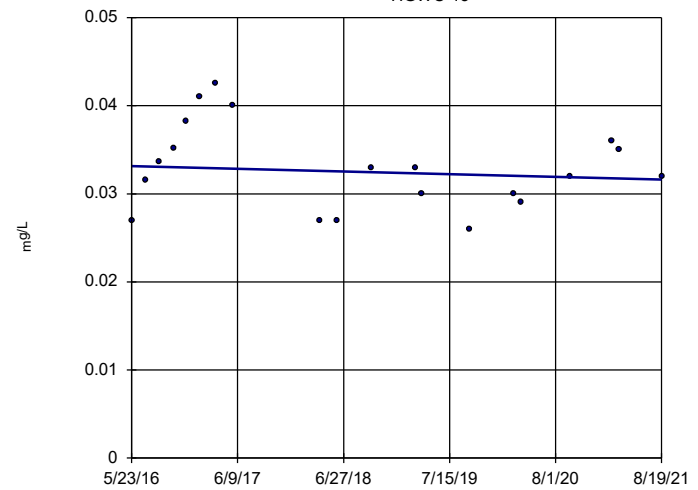


n = 20
 Slope = -0.0002265
 units per year.
 Mann-Kendall
 statistic = -14
 critical = -81
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

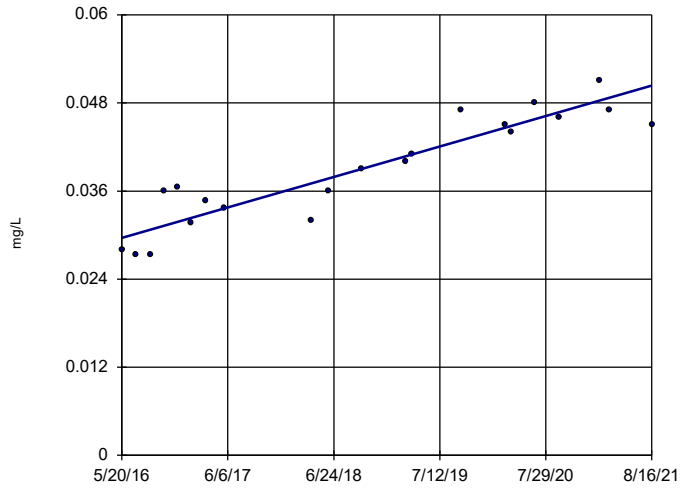
HGWC-13



n = 20
 Slope = -0.0002928
 units per year.
 Mann-Kendall
 statistic = -12
 critical = -81
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

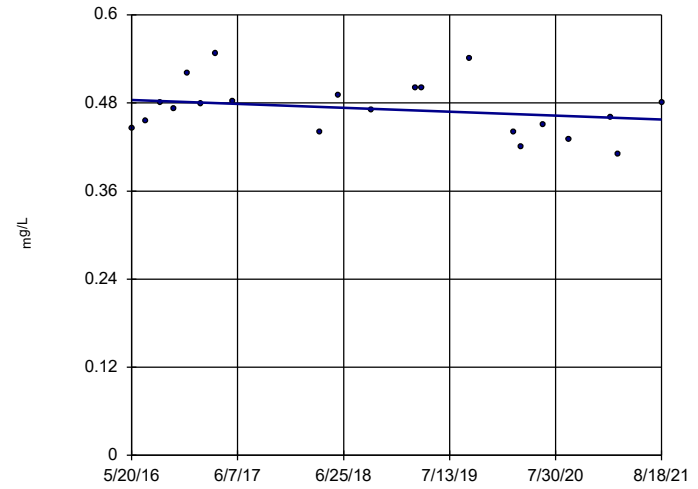
Sen's Slope Estimator HGWC-7



n = 21
 Slope = 0.00396
 units per year.
 Mann-Kendall
 statistic = 155
 critical = 87
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

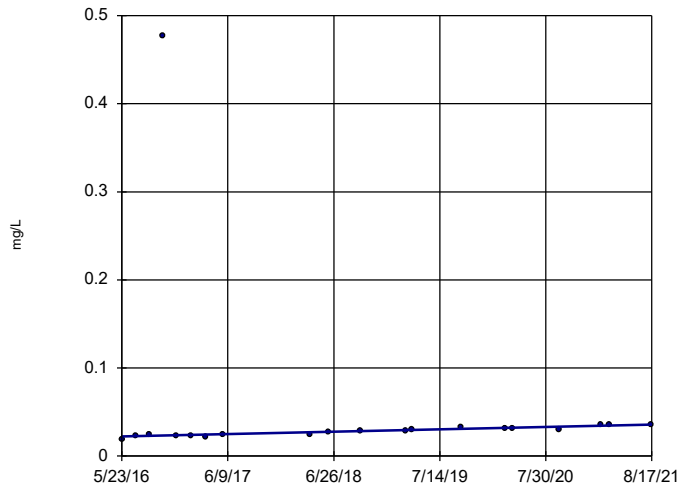
Sen's Slope Estimator HGWC-8



n = 21
 Slope = -0.005012
 units per year.
 Mann-Kendall
 statistic = -34
 critical = -87
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

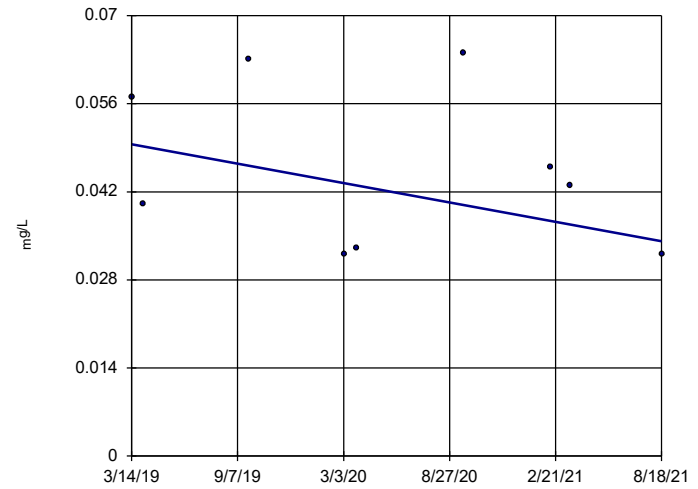
Sen's Slope Estimator HGWC-9



n = 20
 Slope = 0.002522
 units per year.
 Mann-Kendall
 statistic = 128
 critical = 81
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator MW-19



n = 9
 Slope = -0.006345
 units per year.
 Mann-Kendall
 statistic = -7
 critical = -25
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

APPENDIX B

Well Survey Report

Plant Hammond
5963 Alabama Hwy
Rome, GA 30165

Inquiry Number: 06760773.1r
November 22, 2021

The EDR GeoCheck® Report



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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GEOCHECK® - PHYSICAL SETTING SOURCE REPORT

TARGET PROPERTY ADDRESS

PLANT HAMMOND
5963 ALABAMA HWY
ROME, GA 30165

TARGET PROPERTY COORDINATES

Latitude (North): 34.251229 - 34° 15' 4.42"
Longitude (West): 85.351141 - 85° 21' 4.11"
Universal Tranverse Mercator: Zone 16
UTM X (Meters): 651830.0
UTM Y (Meters): 3791046.8
Elevation: 578 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map: 34085-C3 ROCK MOUNTAIN, GA
Version Date: 1985

South Map: 34085-B3 LIVINGSTON, GA
Version Date: 1982

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
13115C0163E	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
13115C0164E	FEMA FIRM Flood data
13115C0252E	FEMA FIRM Flood data
13115C0251E	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
ROCK MOUNTAIN	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Paleozoic
System:	Cambrian
Series:	Cambrian
Code:	C (decoded above as Era, System & Series)

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	ETOWAH
Soil Surface Texture:	loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: LOW

Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	7 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 4.50
2	7 inches	38 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 4.50
3	38 inches	70 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 4.50

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: silt loam
clay loam

Surficial Soil Types: silt loam
clay loam

Shallow Soil Types: sandy clay loam
clay loam
silty clay loam
silty clay

Deeper Soil Types: clay loam
stratified
clay
cherty - clay loam
weathered bedrock
loam

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	2.000
Federal FRDS PWS	2.000
State Database	2.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
B3	USGS40000266955	1/8 - 1/4 Mile NNE
C5	USGS40000266962	1/4 - 1/2 Mile NNE
D7	USGS40000266956	1/4 - 1/2 Mile NE
C10	USGS40000266965	1/2 - 1 Mile NNE
D12	USGS40000266957	1/2 - 1 Mile ENE
E14	USGS40000266972	1/2 - 1 Mile NNE
E17	USGS40000266968	1/2 - 1 Mile NE
F18	USGS40000266981	1/2 - 1 Mile NNE
G21	USGS40000266978	1 - 2 Miles ENE
H22	USGS40000266969	1 - 2 Miles ENE
H25	USGS40000266975	1 - 2 Miles ENE
I27	USGS40000266890	1 - 2 Miles South

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
A1	0000004168	1/8 - 1/4 Mile North
A2	0000004169	1/8 - 1/4 Mile North
B4	0000004171	1/8 - 1/4 Mile NNE
C6	0000004175	1/4 - 1/2 Mile NNE
D8	0000004172	1/4 - 1/2 Mile NE
C9	0000004177	1/2 - 1 Mile NNE
D11	0000004173	1/2 - 1 Mile ENE
I3	0000004170	1/2 - 1 Mile WNW
E15	0000004181	1/2 - 1 Mile NNE
E16	0000004179	1/2 - 1 Mile NE
F19	0000004188	1/2 - 1 Mile NNE
G20	0000004185	1 - 2 Miles ENE
H23	0000004180	1 - 2 Miles ENE
H24	0000004183	1 - 2 Miles ENE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID

126

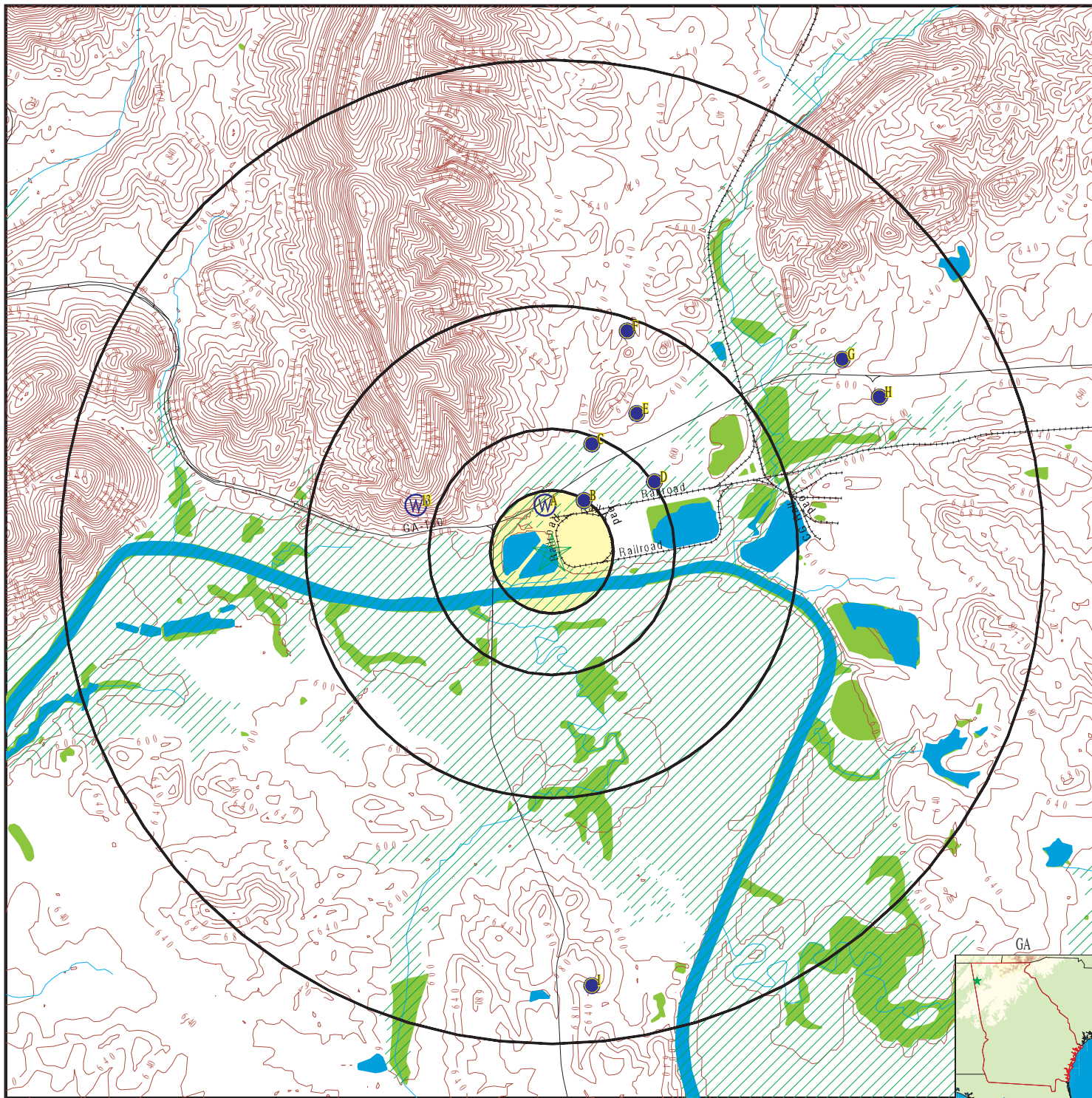
WELL ID

0000004144

LOCATION
FROM TP

1 - 2 Miles South

PHYSICAL SETTING SOURCE MAP - 06760773.1r



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Wildlife Areas

SITE NAME: Plant Hammond
 ADDRESS: 5963 Alabama Hwy
 Rome GA 30165
 LAT/LONG: 34.251229 / 85.351141

CLIENT: Geosyntec Consultants
 CONTACT: Christine Hug
 INQUIRY #: 06760773.1r
 DATE: November 22, 2021 1:00 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

A1
North
1/8 - 1/4 Mile
Higher

GA WELLS 000004168

County code:	115	Well num:	03JJS2
Remarks:	JOE EARLY	Lat:	341514
Lon:	0852106	Latlon datum:	NAD27
Alt:	590	Alt datum:	NGVD29
Depth:	Not Reported	Depth to casing:	Not Reported
Casing dia:	Not Reported	Casing matl:	Not Reported
Depth to top:	Not Reported	Depth to bot:	Not Reported
Opening type:	Not Reported	Constr date:	Not Reported
Discharge:	208.3	Prim use:	Not Reported
Aquifer code:	Not Reported	Edr id:	000004168

A2
North
1/8 - 1/4 Mile
Higher

GA WELLS 000004169

County code:	115	Well num:	03JJS2
Remarks:	JOE EARLY	Lat:	341514
Lon:	0852106	Latlon datum:	NAD27
Alt:	590	Alt datum:	NGVD29
Depth:	Not Reported	Depth to casing:	Not Reported
Casing dia:	Not Reported	Casing matl:	Not Reported
Depth to top:	Not Reported	Depth to bot:	Not Reported
Opening type:	Not Reported	Constr date:	Not Reported
Discharge:	208.3	Prim use:	Not Reported
Aquifer code:	Not Reported	Edr id:	000004169

B3
NNE
1/8 - 1/4 Mile
Higher

FED USGS USGS40000266955

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ41	Type:	Well
Description:	GA POWER, PLANT HAMMOND	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Conasauga Formation
Aquifer Type:	Not Reported	Construction Date:	19511101
Well Depth:	411	Well Depth Units:	ft
Well Hole Depth:	411	Well Hole Depth Units:	ft

B4
NNE
1/8 - 1/4 Mile
Higher

GA WELLS 000004171

County code:	115	Well num:	03JJ41
Remarks:	GA POWER, PLANT HAMMOND	Lat:	341515
Lon:	0852056	Latlon datum:	NAD27
Alt:	586.00	Alt datum:	NGVD29

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Depth:	411	Depth to casing:	44.5
Casing dia:	12.	Casing matl:	Not Reported
Depth to top:	44.5	Depth to bot:	411.
Opening type:	X	Constr date:	19551101
Discharge:	69.60	Prim use:	N
Aquifer code:	371CNSG	Edr id:	0000004171

C5
NNE
1/4 - 1/2 Mile
Higher

FED USGS USGS40000266962

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ31	Type:	Well
Description:	RUTH BRIDGES	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Floyd Shale
Aquifer Type:	Not Reported	Construction Date:	1949
Well Depth:	96	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1961-11-07
Feet below surface:	20	Feet to sea level:	Not Reported
Note:	Not Reported		

C6
NNE
1/4 - 1/2 Mile
Higher

GA WELLS 0000004175

County code:	115	Well num:	03JJ31
Remarks:	RUTH BRIDGES	Lat:	341524
Lon:	0852052	Latlon datum:	NAD27
Alt:	590	Alt datum:	NGVD29
Depth:	96	Depth to casing:	20
Casing dia:	6	Casing matl:	Not Reported
Depth to top:	20	Depth to bot:	96
Opening type:	X	Constr date:	1949
Discharge:	10	Prim use:	H
Aquifer code:	331FLYD	Edr id:	0000004175

D7
NE
1/4 - 1/2 Mile
Higher

FED USGS USGS40000266956

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ35	Type:	Well
Description:	GA. POWER CO. WELL NO.3	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Conasauga Formation
Aquifer Type:	Not Reported	Construction Date:	195111
Well Depth:	405	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

D8
NE
1/4 - 1/2 Mile
Higher

GA WELLS 0000004172

County code:	115	Well num:	03JJ35
Remarks:	GA. POWER CO. WELL NO.3	Lat:	341518
Lon:	0852041	Latlon datum:	NAD27
Alt:	590.0	Alt datum:	NGVD29
Depth:	405.0	Depth to casing:	22.0
Casing dia:	12.0	Casing matl:	Not Reported
Depth to top:	22.0	Depth to bot:	405.0
Opening type:	X	Constr date:	195111
Discharge:	Not Reported	Prim use:	Not Reported
Aquifer code:	371CNSG	Edr id:	0000004172

C9
NNE
1/2 - 1 Mile
Higher

GA WELLS 0000004177

County code:	115	Well num:	03JJ14
Remarks:	MRS. ARTHUR L. LLOYD	Lat:	341530
Lon:	0852056	Latlon datum:	NAD27
Alt:	595	Alt datum:	NGVD29
Depth:	87	Depth to casing:	21
Casing dia:	6	Casing matl:	Not Reported
Depth to top:	21	Depth to bot:	87
Opening type:	X	Constr date:	1948
Discharge:	16.7	Prim use:	H
Aquifer code:	371CNSG	Edr id:	0000004177

C10
NNE
1/2 - 1 Mile
Higher

FED USGS USGS40000266965

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ14	Type:	Well
Description:	MRS. ARTHUR L. LLOYD	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Conasauga Formation
Aquifer Type:	Not Reported	Construction Date:	1948
Well Depth:	87	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1948
Feet below surface:	4	Feet to sea level:	Not Reported
Note:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

D11
ENE
1/2 - 1 Mile
Higher

GA WELLS 0000004173

County code:	115	Well num:	03JJ40
Remarks:	GA POWER CO, HAMMOND PLNT	Lat:	341520
Lon:	0852035	Latlon datum:	NAD27
Alt:	590	Alt datum:	NGVD29
Depth:	405	Depth to casing:	Not Reported
Casing dia:	Not Reported	Casing matl:	Not Reported
Depth to top:	Not Reported	Depth to bot:	Not Reported
Opening type:	Not Reported	Constr date:	195111
Discharge:	40.	Prim use:	N
Aquifer code:	371CNSG	Edr id:	0000004173

D12
ENE
1/2 - 1 Mile
Higher

FED USGS USGS40000266957

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ40	Type:	Well
Description:	GA POWER CO, HAMMOND PLNT	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Conasauga Formation
Aquifer Type:	Not Reported	Construction Date:	195111
Well Depth:	405	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1951-11
Feet below surface:	15	Feet to sea level:	Not Reported
Note:	Not Reported		

13
WNW
1/2 - 1 Mile
Higher

GA WELLS 0000004170

County code:	115	Well num:	03JJ47
Remarks:	A.A. LOONEY	Lat:	341514
Lon:	0852139	Latlon datum:	NAD27
Alt:	800	Alt datum:	NGVD29
Depth:	Not Reported	Depth to casing:	Not Reported
Casing dia:	Not Reported	Casing matl:	Not Reported
Depth to top:	Not Reported	Depth to bot:	Not Reported
Opening type:	Not Reported	Constr date:	Not Reported
Discharge:	Not Reported	Prim use:	Not Reported
Aquifer code:	Not Reported	Edr id:	0000004170

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

E14
NNE
1/2 - 1 Mile
Higher

FED USGS USGS40000266972

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ13	Type:	Well
Description:	ARTHUR W. LLOYD	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Floyd Shale
Aquifer Type:	Not Reported	Construction Date:	1955
Well Depth:	72	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels, Number of Measurements:	1	Level reading date:	1955
Feet below surface:	15.0	Feet to sea level:	Not Reported
Note:	Not Reported		

E15
NNE
1/2 - 1 Mile
Higher

GA WELLS 0000004181

County code:	115	Well num:	03JJ13
Remarks:	ARTHUR W. LLOYD	Lat:	341533
Lon:	0852047	Latlon datum:	NAD27
Alt:	625	Alt datum:	NGVD29
Depth:	72	Depth to casing:	28
Casing dia:	6	Casing matl:	Not Reported
Depth to top:	28	Depth to bot:	72
Opening type:	X	Constr date:	1955
Discharge:	15	Prim use:	H
Aquifer code:	331FLYD	Edr id:	0000004181

E16
NE
1/2 - 1 Mile
Higher

GA WELLS 0000004179

County code:	115	Well num:	03JJ12
Remarks:	DEWEY H. WORTHY JR.	Lat:	341534
Lon:	0852038	Latlon datum:	NAD27
Alt:	600	Alt datum:	NGVD29
Depth:	60	Depth to casing:	55
Casing dia:	6	Casing matl:	Not Reported
Depth to top:	55	Depth to bot:	60
Opening type:	X	Constr date:	196106
Discharge:	10	Prim use:	H
Aquifer code:	331FLYD	Edr id:	0000004179

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

E17
NE
1/2 - 1 Mile
Higher

FED USGS USGS40000266968

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ12	Type:	Well
Description:	DEWEY H. WORTHY JR.	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Floyd Shale
Aquifer Type:	Not Reported	Construction Date:	196106
Well Depth:	60	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1961-11-07
Feet below surface:	15.35	Feet to sea level:	Not Reported
Note:	Not Reported		

F18
NNE
1/2 - 1 Mile
Higher

FED USGS USGS40000266981

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ15	Type:	Well
Description:	ROME CRAFT	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Floyd Shale
Aquifer Type:	Not Reported	Construction Date:	1958
Well Depth:	205	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1958
Feet below surface:	40.0	Feet to sea level:	Not Reported
Note:	Not Reported		

F19
NNE
1/2 - 1 Mile
Higher

GA WELLS 000004188

County code:	115	Well num:	03JJ15
Remarks:	ROME CRAFT	Lat:	341551
Lon:	0852045	Latlon datum:	NAD27
Alt:	640	Alt datum:	NGVD29
Depth:	205	Depth to casing:	179
Casing dia:	6	Casing matl:	Not Reported
Depth to top:	179	Depth to bot:	205
Opening type:	X	Constr date:	1958
Discharge:	6.5	Prim use:	C
Aquifer code:	331FLYD	Edr id:	000004188

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

G20
ENE
1 - 2 Miles
Higher

GA WELLS 000004185

County code:	115	Well num:	03JJ16
Remarks:	C.W. AKRIDGE	Lat:	341545
Lon:	0851950	Latlon datum:	NAD27
Alt:	590	Alt datum:	NGVD29
Depth:	89	Depth to casing:	7
Casing dia:	6	Casing matl:	Not Reported
Depth to top:	7	Depth to bot:	89
Opening type:	X	Constr date:	1941
Discharge:	5	Prim use:	H
Aquifer code:	331FLYD	Edr id:	000004185

G21
ENE
1 - 2 Miles
Higher

FED USGS USGS40000266978

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ16	Type:	Well
Description:	C.W. AKRIDGE	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Floyd Shale
Aquifer Type:	Not Reported	Construction Date:	1941
Well Depth:	89	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

H22
ENE
1 - 2 Miles
Higher

FED USGS USGS40000266969

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ17	Type:	Well
Description:	C.W. AKRIDGE	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Floyd Shale
Aquifer Type:	Not Reported	Construction Date:	1945
Well Depth:	157	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

H23
ENE
1 - 2 Miles
Higher

GA WELLS 000004180

County code:	115	Well num:	03JJ17
Remarks:	C.W. AKRIDGE	Lat:	341535
Lon:	0851942	Latlon datum:	NAD27
Alt:	605	Alt datum:	NGVD29

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Depth:	157	Depth to casing:	Not Reported
Casing dia:	6.0	Casing matl:	Not Reported
Depth to top:	Not Reported	Depth to bot:	Not Reported
Opening type:	Not Reported	Constr date:	1945
Discharge:	5	Prim use:	H
Aquifer code:	331FLYD	Edr id:	0000004180

**H24
ENE
1 - 2 Miles
Higher**

GA WELLS 0000004183

County code:	115	Well num:	03JJ18
Remarks:	C.H. JOHNSON	Lat:	341539
Lon:	0851939	Latlon datum:	NAD27
Alt:	600	Alt datum:	NGVD29
Depth:	96	Depth to casing:	35
Casing dia:	6	Casing matl:	Not Reported
Depth to top:	35	Depth to bot:	96
Opening type:	X	Constr date:	1959
Discharge:	Not Reported	Prim use:	H
Aquifer code:	331FLYD	Edr id:	0000004183

**H25
ENE
1 - 2 Miles
Higher**

FED USGS USGS40000266975

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03JJ18	Type:	Well
Description:	C.H. JOHNSON	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Floyd Shale
Aquifer Type:	Not Reported	Construction Date:	1959
Well Depth:	96	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1961-11-07
Feet below surface:	33.28	Feet to sea level:	Not Reported
Note:	Not Reported		

**I26
South
1 - 2 Miles
Higher**

GA WELLS 0000004144

County code:	115	Well num:	03HH27
Remarks:	SIDNEY EVANS	Lat:	341332
Lon:	0852054	Latlon datum:	NAD27
Alt:	660.0	Alt datum:	NGVD29
Depth:	129.0	Depth to casing:	50.0
Casing dia:	6.0	Casing matl:	Not Reported
Depth to top:	50.0	Depth to bot:	129.0
Opening type:	X	Constr date:	1956
Discharge:	9.0	Prim use:	H
Aquifer code:	371CNSG	Edr id:	0000004144

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

I27
South
1 - 2 Miles
Higher

FED USGS USGS40000266890

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	03HH27	Type:	Well
Description:	SIDNEY EVANS	HUC:	03150105
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Valley and Ridge aquifers	Formation Type:	Conasauga Formation
Aquifer Type:	Not Reported	Construction Date:	1956
Well Depth:	129	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for FLOYD County: 2

- Note: Zone 1 indoor average level > 4 pCi/L.
- : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
- : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for FLOYD COUNTY, GA

Number of sites tested: 14

<u>Area</u>	<u>Average Activity</u>	<u>% <4 pCi/L</u>	<u>% 4-20 pCi/L</u>	<u>% >20 pCi/L</u>
Living Area - 1st Floor	1.586 pCi/L	93%	7%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.767 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory

Source: Georgia GIS Clearinghouse

Telephone: 706-542-1581

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Georgia Public Supply Wells

Source: Georgia Department of Community Affairs

Telephone: 404-894-0127

USGS Georgia Water Wells

Source: USGS, Georgia District Office

Telephone: 770-903-9100

OTHER STATE DATABASE INFORMATION

DNR Managed Lands

Source: Department of Natural Resources

Telephone: 706-557-3032

This dataset provides 1:24,000-scale data depicting boundaries of land parcels making up the public lands managed by the Georgia Department of Natural Resources (GDNR). It includes polygon representations of State Parks, State Historic Parks, State Conservation Parks, State Historic Sites, Wildlife Management Areas, Public Fishing Areas, Fish Hatcheries, Natural Areas and other specially-designated areas. The data were collected and located by the Georgia Department of Natural Resources. Boundaries were digitized from survey plats or other information.

RADON

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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APPENDIX C

SiREM Laboratory Sorption and Desorption Treatability Study and Site Material Characterization Report

Prepared for:

Geosyntec Consultants, Inc.
1255 Roberts Blvd, Suite 200
Kennesaw, Georgia 30144

FINAL

Laboratory Sorption and Desorption Treatability Study and Site Material Characterization

Hammond Ash Pond-1, Floyd County, Georgia

Prepared by:



130 Stone Rd W
Guelph, Ontario N1G 3Z2

SiREM Ref: GW6581B

27 January 2022

siremlab.com

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LIST OF ABBREVIATIONS

%	percent
°C	degrees Celsius
µg/g	micrograms per gram
µm	micrometers
AEC	anion exchange capacity
AP	Ash Pond
As	arsenic
CEC	cation exchange capacity
CO ₂	carbon dioxide
EDXA	energy dispersive X-ray analysis
g	grams
g/L	grams per liter
g/mL	grams per milliliter
Geosyntec	Geosyntec Consultants, Inc.
H ₂	hydrogen
HDPE	high density polyethylene
ICP-MS	inductively coupled plasma-mass spectrometry
Li	lithium
meq/100g	milliequivalents per 100 grams
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
min	minutes
mL	milliliter
Mo	molybdenum
mV	millivolts
N ₂	nitrogen
ORP	oxidation-reduction potential
RPM	revolutions per minute
SEM	scanning electron microscopy
SEP	sequential extraction procedure
SGS	SGS Environmental
SiREM	SiREM Laboratory
TOC	total organic carbon
XRD	X-ray diffraction

1. INTRODUCTION

Geosyntec Consultants, Inc. (Geosyntec) retained SiREM Laboratory (SiREM) to characterize geologic materials and perform sorption and desorption treatability studies for arsenic (As), lithium (Li) and molybdenum (Mo) in groundwater and geologic materials from the Hammond Ash Pond (AP)-1 site in Floyd County, GA (the Site).

The geologic materials were collected by Geosyntec personnel on 4 October 2018, 4 August 2020, 5 August 2020 and 28 January 2021 and were received by SiREM on 21 September 2020, 23 March 2021 and 2 June 2021, respectively. The groundwater labelled HGWA-1, which is groundwater from a background well, was collected by Geosyntec personnel on 26 May 2021 and was received by SiREM on 1 June 2021. Upon arrival at SiREM, geological material and groundwater were stored at 4 degrees Celsius (°C) until required for reactor construction. Geological material samples were submitted for baseline characterization prior to the sorption and desorption tests and locations for testing were selected based on the baseline characterization results. The chain of custodies received with these samples are provided in Appendix A.

The remainder of this report is divided into two sections. Section 2 presents the experimental materials and methods and Section 3 presents the results.

2. MATERIALS AND METHODS

The following sections describe the materials and methods used for geologic material baseline characterization (Section 2.1), sorption test reactor construction and incubation (Section 2.2), desorption test reactor construction and incubation (Section 2.3), and sorption and desorption test sampling and analysis (Section 2.4).

2.1 Site Geologic Material Baseline Characterization

Geologic material baseline characterization was completed through SiREMNA™ testing and included anion exchange capacity (AEC), cation exchange capacity (CEC), total sulfur, total sulfide, total organic carbon (TOC) content, total metals, X-ray diffraction (XRD), scanning electron microscopy (SEM) with energy dispersive X-ray analysis (EDXA) and a follow up sequential extraction procedure (SEP) on select aquifer solid samples.

On 24 September 2020, geologic material samples were individually homogenized and subsampled in a chemical fume hood. The samples were shipped to external laboratories for analysis as outlined in the summary table below. Prior to performing the XRD analysis, SGS Environmental (SGS) in Lakefield, ON performed whole rock analysis on the samples to have as a reference for the mineral identification by XRD.

On 25 March 2021 geologic material samples received on 23 March 2021 was homogenized and subsampled in a chemical fume hood. The samples were shipped to external laboratories for analysis as outlined in the summary table below. Prior to performing the XRD analysis, SGS performed whole rock analysis on the samples to have as a reference for the mineral identification by XRD

On 15 and 16 June 2021, geologic material samples received on 2 June 2021 were homogenized with respective samples received on 21 September 2020. After homogenization, samples from the locations labelled DPT02_AP1_080420_12-22 and DPT06_AP1_080520_15-23 were shipped to Eurofins TestAmerica (Knoxville, TN) for SEP analysis.

On 11 August 2021 geologic material samples from the sample labelled DPT04XRF_AP1_100418_40-45 was homogenized and subsampled in a chemical fume hood. The samples were shipped to external laboratories for analysis as outlined in the summary table below. Prior to performing the XRD analysis, SGS performed whole rock analysis on the samples to have as a reference for the mineral identification by XRD.

Parameter	Method	Laboratory
Total sulfur, total sulfide and TOC content	ASTM E1915-13	SGS, Lakefield, Ontario
Total metals	EPA 200.8	
Whole Rock Analysis	Borate Fusion and Xray Fluorescence Spectrometry	
XRD	Rietveld refinement method	
SEM and EDXA	SGS Internal method	
CEC	EPA method SW9081	SGS, Guelph, Ontario
AEC	Modified EPA method SW9081	Specialty Analytical, Clackamas, Oregon
Sequential extraction procedure	Methods SW846, 6010B and 3010A for SEP Steps 1-7	Eurofins TestAmerica, Knoxville, Tennessee

2.2 Sorption Test Reactor Construction and Incubation

One sample location of geological material was selected from the Hammond AP-1 Site to be tested for the sorption test. On 17 June 2021 the material from the DPT06 (15-23) location received on 21 September 2020 was homogenized by manually mixing with additional material received on 2 June 2021 for reproducibility between replicates. Reactors were constructed by filling 250 milliliter (mL) (nominal volume) high density polyethylene (HDPE) Nalgene® bottles (Systems Plus, New Hamburg, ON) with 100 grams (g) of homogenized geologic material. Reactors were constructed in duplicate with an additional set of duplicate reactors constructed to be used for sampling at Time 0.

After adding geologic material to enough reactors to represent six testing concentration conditions, six separate volumes of HGWA-1 Site groundwater were spiked with As, Li and Mo to target the concentration levels for the sorption test as listed in Table 1A. For each concentration level, 800 mL of Site groundwater was spiked with arsenic as a 3 gram per liter (g/L) sodium arsenate heptahydrate (Sigma-Aldrich, Oakville, ON) stock solution, lithium as a 1 g/L lithium chloride (Sigma-Aldrich, Oakville, ON) stock solution and molybdenum as a 2 g/L sodium molybdate dihydrate (Sigma-Aldrich, Oakville, ON) stock solution. Once the groundwater for each concentration level was spiked, the reactors containing geologic material were each amended with 150 mL of the appropriately spiked groundwater. Note that “target” spiked concentrations and “actual concentrations” (as determined by subsequent laboratory analyses) may not be exactly the same. However, the sorption calculations used the measured spiked concentrations and not the target concentrations.

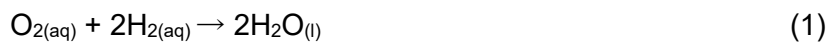
After construction on 29 June 2021 and 30 June 2021, the reactors were placed on an end-over-end tumbler at room temperature and mixed for a period of 7 days. Table 1A summarizes the details of reactor construction, incubation, amendments, sampling schedule and parameters of the sorption test reactors.

2.3 Desorption Test Reactor Construction and Incubation

Two sample locations from Hammond AP-1 were selected to be tested for the desorption test. On 15 June 2021 the materials from the DPT02 (12-22) location received on 21 September 2020 were homogenized by manually mixing with additional materials received on 2 June 2021 for reproducibility between replicates. These materials were used to evaluate desorption of Mo from aquifer materials collected in the vicinity of a Mo-impacted well. The materials labelled DPT04XRF (40-45) received on 2 June 2021 were manually homogenized prior to reactor construction for reproducibility between replicates. These materials were used to evaluate desorption of As from aquifer materials collected in the vicinity of an As-impacted well. Reactors were constructed by filling 250 mL (nominal volume) HDPE Nalgene® bottles (Systems Plus, New Hamburg, ON) with 100 g of geologic material and 150 mL of HGWA-1 Site groundwater.

Reactors were constructed in duplicate with an additional set of duplicate reactors constructed to be used for sampling at Time 0. One set of reactors were constructed using materials from DPT02 to be incubated at ambient conditions to evaluate desorption of Mo. Two sets of desorption test reactors were constructed using material from DPT04XRF to evaluate desorption of As, one to be incubated under ambient conditions and one to be incubated under reducing conditions and amended with hydrogen gas (H₂).

After construction on 30 August 2021 and 7 September 2021, ambient condition reactors were placed on an end-over-end tumbler at room temperature and continually mixed for 7 days. Reactors incubated under reducing conditions were transferred to an anaerobic chamber (Coy Laboratory Products, Grass Lake, MI) filled with an atmosphere of approximately 80 percent (%) nitrogen (N₂), 10% carbon dioxide (CO₂) and 10% H₂ (Linde Gases, Guelph, ON) and incubated for a period of 14 days at room temperature. Throughout the 14 day incubation period, the reducing treatment reactors were amended with 5 mL of H₂ gas five times a week to chemically react with dissolved O₂ with the goal of creating anoxic conditions as per the chemical reaction:



The hydrogen gas was added in excess to have enough hydrogen present to react with the oxygen in the reactors. It was assumed that the water in the reactors was fully saturated with oxygen, which at standard temperature and pressure is equal to a concentration of approximately 8 mg/L (or 0.0375 mmol of oxygen per reactor). Using the equation above, the amount of H₂ gas required to react with 0.0375 mmol of oxygen is 0.075 mmol. The regular H₂ gas additions provided approximately 50 mL (2.1 mmol) of H₂ per reactor over the incubation period equal to a stoichiometric safety factor of 28, ensuring the H₂ was added in excess. However, after 14 days of incubation under anaerobic conditions and with the regular amendment with H₂ gas, the reactors did not appear to achieve reducing conditions based on the measured ORP at the end of the incubation period.

During incubation, the reducing condition reactors were inverted once a day to increase the contact between the geologic material and groundwater. Table 1B summarizes the reactor construction, incubation, amendments, sampling schedule and parameters of the desorption test reactors.

2.4 Sorption and Desorption Test Sampling and Analysis

2.4.1 Reactor Sampling

Aqueous samples were collected from the sorption test reactors at Time 0 and after 7 days of incubation. Aqueous samples from the spiked Site groundwater from each concentration level which had not been combined with Site geological material was also sampled at Time 0. Aqueous samples were collected from the desorption test reactors at time 0, after 7 days of incubation for the ambient condition reactors and after 14 days of incubation for the H₂ amended reducing condition reactors. Both sorption and desorption test reactors and the groundwater sampled at baseline were sampled for analysis of pH, oxidation-reduction potential (ORP), and dissolved metals.

Prior to sampling, contents of the reactors were transferred to 250 mL centrifuge bottles and centrifuged for 5 minutes (min) at 5,000 revolutions per minute (RPM) to separate the solid and aqueous phases. Once separated, the supernatant was sampled using 30 mL HDPE plastic syringes (Fisher Scientific, Whitby, ON).

The sampling and analytical methods employed by SiREM and SGS are described in Sections 2.3.2 to 2.3.4.

2.4.2 Analysis of pH

The pH measurements were performed using an Oakton pH spear with a combination pH electrode (Oakton, Vernon Hills, IL). A 0.5 mL sample was collected and placed into a 1.5 mL micro-centrifuge tube. The pH was measured on the lab bench. The pH spear was calibrated at each sampling event according to the manufacturer's instructions using pH 4.0, 7.0 and 10 standards.

2.4.3 Analysis of ORP

The ORP measurements performed using an Omega PHH-127 Multi-Parameter Water Quality Monitor with ORP Probe (Omega, Laval, QC). A 1.2 mL sample was collected and placed in a 5 mL Thermo-Fisher vial. The ORP was measured on the lab bench immediately after sampling. The ORP probe was tested at each sampling event according to the manufacturer's instructions using Zobell's solution.

2.4.4 Analysis of Dissolved Metals at SGS Environmental

Analysis of dissolved metals was completed at SGS Environmental (SGS) in Lakefield, ON using an inductively coupled plasma-mass spectrometer (ICP-MS) based on Standard Method 3030B, EPA Method 200.8 and NIOSH 7300 Issue 2.

A 30 mL sample was collected and filtered through a 0.45 micrometer (μm) nylon syringe filter (Mandel Scientific, Guelph, ON) into a 30 mL HDPE bottle with a nitric acid preservative. Once collected, the samples were packaged on ice in a cooler and shipped overnight to SGS.

3. RESULTS

Appendix B presents the results of the baseline chemical characterization, Appendix C presents the baseline mineralogical results and Appendix D present the SEP results. Appendices E and F present the results of the sorption and desorption tests respectively. The tables in Appendices E and F present results for dissolved metals, pH and ORP as well as the recorded masses of Site geological materials and Site groundwater amended to each respective reactor. AEC and CEC are presented in units of milliequivalents per 100 grams (meq/100g). Total sulfur, total sulfide, TOC, whole rock analysis, XRD are presented as a percentage of the total weight of the geologic material. Bulk metals results are presented in units of micrograms per gram ($\mu\text{g/g}$). SEP results are presented in milligrams per kilogram (mg/kg). Concentrations of dissolved metals are provided in milligrams per liter (mg/L), ORP results are provided in millivolts (mV) and reactor weights are provided in g. The volume of Site groundwater amended to each reactor was calculated from the measured mass of water added to the reactor using a density of 1 gram per milliliter (g/mL). The external laboratory reports are presented in Appendix G.

TABLES

TABLE 1A: SUMMARY OF SORPTION TEST REACTORS, CONTROLS, TREATMENTS, AND AMENDMENTS
Hammond Ash Plant-1, Floyd County, Georgia

Groundwater Sample ID	Geologic Material Sample ID	Treatment	Number of Reactors	Number of Sacrificial Reactors	Reactor Numbers	Incubation Period and Sampling Frequency	Reactor Contents		Amendments			Analyses	
							Groundwater (L)	Geologic Material (kg)	Arsenic	Lithium	Molybdenum	Dissolved As, Li and Mo	pH/ORP
HGWA-1	DPT06(15-23)	Concentration Level 1	2	2	1 & 2	7 Days (Sampled at Time 0 and on Day 7)	0.150	0.100	Spiked with 0.05 mg/L Arsenic	Spiked with 0.01 mg/L Lithium	Spiked with 0.01 mg/L Molybdenum	4	4
		Concentration Level 2	2	2	3 & 4		0.150	0.100	Spiked with 0.1 mg/L Arsenic	Spiked with 0.02 mg/L Lithium	Spiked with 0.05 mg/L Molybdenum	4	4
		Concentration Level 3	2	2	5 & 6		0.150	0.100	Spiked with 0.25 mg/L Arsenic	Spiked with 0.04 mg/L Lithium	Spiked with 0.1 mg/L Molybdenum	4	4
		Concentration Level 4	2	2	7 & 8		0.150	0.100	Spiked with 0.5 mg/L Arsenic	Spiked with 0.06 mg/L Lithium	Spiked with 0.25 mg/L Molybdenum	4	4
		Concentration Level 5	2	2	9 & 10		0.150	0.100	Spiked with 1 mg/L Arsenic	Spiked with 0.08 mg/L Lithium	Spiked with 0.5 mg/L Molybdenum	4	4
		Concentration Level 6	2	2	11 & 12		0.150	0.100	Spiked with 1.5 mg/L Arsenic	Spiked with 0.1 mg/L Lithium	Spiked with 1 mg/L Molybdenum	4	4

Notes:

- - not applicable
- As - arsenic
- ID - identification
- kg - kilogram
- L - liter
- Li - lithium
- mg/L - milligrams per liter
- Mo - molybdenum
- ORP - oxidation-reduction potential

TABLE 1B: SUMMARY OF DESORPTION TEST REACTORS, CONTROLS, TREATMENTS, AND AMENDMENTS
Hammond Ash Pond-1, Floyd County, Georgia

Location	Groundwater Sample ID	Geologic Material Sample ID	Treatment	Number of Reactors	Number of Sacrificial Reactors	Reactor Numbers	Incubation Period and Sampling Frequency	Reactor Contents		Analyses		
								Groundwater (L)	Geologic Material (kg)	Dissolved As, Li and Mo	Target Constituents	pH/ORP
Hammond AP-1	HGWA-1	DPT02(12-22)	Ambient Conditions	2	2	1 & 2	7 Days (Sampled at Time 0 and on Day 7)	0.150	0.100	4	As, Li, Mo	4
		DPT04XRF(40-45)	Ambient Conditions	2	2	3 & 4		0.150	0.100	4	As, Li, Mo	4
			Hydrogen Amended	2	0	5 & 6	14 Days (Sampled at Time 0 and on Day 14)	0.150	0.100	4	As, Li, Mo	2

Notes:

- - not applicable
- As - arsenic
- ID - identification
- kg - kilogram
- L - liter
- Li - lithium
- mL - milliliters
- Mo - molybdenum
- mV - millivolt
- ORP - oxidation-reduction potential

**APPENDIX A:
Chain of Custody Documentation**



Chain-of-Custody Form

siremlab.com

130 Stone Road West
Guelph ON, Canada N1G 3Z2
(519) 822-2265

Lab #
5-7677

*Project Name Hammond AP1 AP2 AP3 ACM evaluation		*Project # GW6581B/14; GW6581/22		Analysis																
*Project Manager Whitney Law		*Company Geosyntec Consultants		2	2	2	2	2	2	2	2						Preservative Key			
*Email Address wlaw@geosyntec.com				Anion exchange capacity (AEC)	Cation exchange capacity (CEC)	Total sulfur	Total sulfide	Organic carbon content	X-ray diff. SEM, EDXA	Total metal conc (see notes)	<i>W/L</i> <i>3/18/21</i>					0. None 1. HCL 2. Other <u>ICE</u> 3. Other _____ 4. Other _____ 5. Other _____ 6. Other _____				
Address (Street) 1255 Roberts Blvd, NW, Suite 200																Other Information				
City Kennesaw		State/Province GA		Country USA		*Phone # 678-202-9573		*Sampler's Signature		*Sampler's Printed Name										
Client Sample ID			Sampling		Matrix	# of Containers														
			Date	Time																
DPT07_AP1_012821_32-42			1/28/21		S	2	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Li, F, As, Fe, Al, Mg			
DPT11_AP2_012721_30-40			01/27/21		S	2	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Co, Li, Fe, Al, Mg			
DPT08_AP2_012621_10-20			1/26/21		S	2	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Co, Li, Fe, Al, Mg			
DPT07_AP2_020221_10-20			2/2/21		S	2	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Co, Li, Fe, Al, Mg			
DPT01_AP3_012921_10-18			1/29/21		S	2	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Li, Fe, Al, Mn			
DPT03_AP3_020121_13-18			2/1/21		S	1	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Li, Fe, Al, Mn			
DPT02_AP3_020121_13-18			2/1/21		S	1	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Li, Fe, Al, Mn			
DPT04_AP3_020121_13-21			2/1/21		S	2	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Li, Fe, Al, Mn			
DPT09_AP2_012621_20-30			1/26/21		S	2	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Co, Li, Fe, Al, Mg			
DPT10_AP2_012721_25-35			1/27/21		S	2	X	X	X	X	X	X	X	X	X	X	Rept total conc for: Mo, Co, Li, Fe, Al, Mg			
Billing Information				Turnaround Time Requested				For Lab Use Only					For Lab Use Only							
P.O. #				Normal <input checked="" type="checkbox"/>				Cooler Condition: <i>Good</i>					Proposal #: _____							
*Bill To: Speak with PM on how to partition invoice				Rush <input type="checkbox"/>				Cooler Temperature: <i>14°C</i>												
								Custody Seals: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>												
Relinquished By:		Received By:		Relinquished By:		Received By:		Relinquished By:		Received By:		Relinquished By:		Received By:						
Signature <i>W Law</i>		Signature <i>N Brent</i>		Signature		Signature		Signature		Signature		Signature		Signature						
Printed Name Whitney Law		Printed Name <i>Natasha Brent</i>		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name						
Firm Geosyntec Consultants		Firm <i>SIREM</i>		Firm		Firm		Firm		Firm		Firm		Firm						
Date/Time 3/18/21, 16:00		Date/Time <i>23 Mar 21 13:55</i>		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time						

*Project Name Hammond AP1 ACM Evaluation		*Project # GW65818/14		Analysis																																																																																									
*Project Manager Whitney Law		*Company Geosyntec Consultants																																																																																											
*Email Address wlaw@geosyntec.com				<table border="1"> <tr> <td colspan="10" style="text-align: center;">Preservative Key</td> </tr> <tr> <td colspan="10">0. None</td> </tr> <tr> <td colspan="10">1. HCl</td> </tr> <tr> <td colspan="10">2. Other _____</td> </tr> <tr> <td colspan="10">3. Other _____</td> </tr> <tr> <td colspan="10">4. Other _____</td> </tr> <tr> <td colspan="10">5. Other _____</td> </tr> <tr> <td colspan="10">6. Other _____</td> </tr> </table>										Preservative Key										0. None										1. HCl										2. Other _____										3. Other _____										4. Other _____										5. Other _____										6. Other _____									
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Address (Street) 1255 Roberts Blvd, NW, Suite 200																																																																																													
City Kennesaw		State/Province GA (30144)		County USA																																																																																									
*Phone # 678-202-9573																																																																																													
*Sampler's Signature		*Sampler's Printed Name																																																																																											
Client Sample ID		Sampling		Matrix		# of Containers		<table border="1"> <tr> <td>Gene-Trac DHC</td> <td>Gene-Trac VC</td> <td>Gene-Trac DHB</td> <td>Gene-Trac DHG</td> <td>Treatability Study</td> </tr> </table>										Gene-Trac DHC	Gene-Trac VC	Gene-Trac DHB	Gene-Trac DHG	Treatability Study																																																																							
Gene-Trac DHC	Gene-Trac VC	Gene-Trac DHB	Gene-Trac DHG	Treatability Study																																																																																									
		Date		Time																																																																																									
DPT01_AP1_080520_12-17		8/5/20				1		to be homogenized with existing sample at lab																																																																																					
DPT02_AP1_080420_12-22		8/4/20				1		to be homogenized with existing sample at lab and conduct SEP for As, Li, Mo																																																																																					
DPT03_AP1_080420_32-39		8/4/20				2		to be homogenized with existing sample at lab																																																																																					
DPT04_AP1_080420_12-18		8/4/20				1		to be homogenized with existing sample at lab																																																																																					
DPT05_AP1_080420_15-25		8/4/20				2		to be homogenized with existing sample at lab																																																																																					
DPT06_AP1_080520_16-23		8/5/20				2		to be homogenized with existing sample at lab; conduct SEP for As, Li, Mo; conduct batch sorption study for As, Li, Mo.																																																																																					
DPT04XRF_AP1_100418_40-45		10/4/18				1		conduct baseline MMA characterization only; conduct SEP for As, Li, Mo																																																																																					

W/L 5/27/21

*Bill To: GW65818/14/01		Turnaround Time Requested Normal <input checked="" type="checkbox"/> Rush <input type="checkbox"/>		Cooler Condition: For Lab Use Only <i>Sealed</i>		Cooler Temperature: <i>20°C</i>		Custody Seals: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		For Lab Use Only Proposal #:	
----------------------------	--	--	--	---	--	---------------------------------	--	--	--	---------------------------------	--

Relinquished By: Signature <i>Whitney Law</i>		Received By: Signature <i>Jordan Linkletter</i>		Relinquished By: Signature		Received By: Signature		Relinquished By: Signature		Received By: Signature	
Printed Name <i>Whitney Law</i>		Printed Name <i>Jordan Linkletter</i>		Printed Name		Printed Name		Printed Name		Printed Name	
Firm <i>Geosyntec</i>		Firm <i>SiREM</i>		Firm		Firm		Firm		Firm	
Date/Time <i>5/27/21 12:00</i>		Date/Time <i>6/2/21 3:45 pm</i>		Date/Time		Date/Time		Date/Time		Date/Time	

**APPENDIX B:
Baseline Chemical Characterization Results**

Analytical Results

SiREM File Reference: S-6195, S-7677 & S-8083

Client: Geosyntec Consultants Inc.

Client Project Number: GW6581B/14

Date Samples Received: September 21, 2020, March 23, 2021 and June 21, 2021

Date Samples Analyzed: October 5, 2020 to October 21, 2020, April 4 to 29, 2021, September 16, 2021, October 18, 2021 and November 11, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	Anion Exchange Capacity	Cation Exchange Capacity	Total Sulfur	Total Sulfide	Total Organic Carbon
			meq/100g	meq/100g	%	%	%
DPT01(12-17)	S-6195-1	5-Aug-20	8.48	15.80	0.018	< 0.04	0.07
DPT02(12-22)	S-6195-2	4-Aug-20	6.58	19.00	0.008	< 0.04	0.04
DPT03(32-39)	S-6195-3	4-Aug-20	8.09	19.40	0.005	< 0.04	0.16
DPT04(12-18)	S-6195-4	4-Aug-20	7.85	20.20	0.006	< 0.04	0.09
DPT05(15-25)	S-6195-5	4-Aug-20	6.74	15.70	< 0.005	< 0.04	< 0.025
DPT06(15-23)	S-6195-6	5-Aug-20	4.57	5.70	< 0.005	< 0.04	0.12
DPT07_AP1_012821_32-42	S-7677-1	28-Jan-21	5.13	7.83	0.022	< 0.04	0.07
DPT04XRF_AP1_100418_40-45	S-8083-7	4-Oct-18	5.52	3.10	0.007	<0.04	0.05

Comments:

% - percent

< - compound not detected, the associated value is the detection limit

meq/100g - milliequivalents per 100 grams

Analyst:



Kela Ashworth, B.Sc.
Senior Laboratory Technician

Results approved:



Michael Healey, B.Sc.
Laboratory Supervisor I

Date:

19-Nov-21

Analytical Results - Total Metals

SiREM File Reference: S-6195, S-7677 & S-8083

Client: Geosyntec Consultants Inc.
Client Project Number: GW6581B/14
Date Samples Received: September 21, 2020, March 23, 2021 and June 21, 2021
Date Samples Analyzed: October 13, 2020, April 15, 2021 and August 19, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	Molybdenum	Lithium	Cobalt	Arsenic	Iron	Aluminum	Manganese
			µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
DPT01(12-17)	S-6195-1	5-Aug-20	1.2	38	12	4.9	26,000	50,000	710
DPT02(12-22)	S-6195-2	4-Aug-20	6.2	33	11	4.7	26,000	33,000	530
DPT03(32-39)	S-6195-3	4-Aug-20	0.54	43	26	12	52,000	55,000	1,100
DPT04(12-18)	S-6195-4	4-Aug-20	1.4	38	19	3.8	42,000	69,000	2,400
DPT05(15-25)	S-6195-5	4-Aug-20	13	36	38	4.6	50,000	75,000	830
DPT06(15-23)	S-6195-6	5-Aug-20	0.40	59	23	4.8	41,000	68,000	1,200
DPT07_AP1_012821_32-42	S-7677-1	28-Jan-21	1	24	7	7.8	20,000	42,000	100
DPT04XRF_AP1_100418_40-45	S-8083-7	4-Oct-18	1.40	12	4	13.0	14,000	13,000	120

Comments:


µg/g - microgram per gram

Analyst:



Kela Ashworth, B.Sc.
Senior Laboratory Technician

Results approved:



Michael Healey, B.Sc.
Laboratory Supervisor I

Date:

19-Nov-21

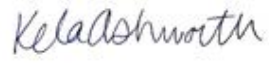
Analytical Results - Whole Rock Analysis

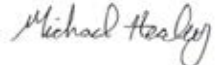
SiREM File Reference: S-6195, S-7677 & S-8083

Client: Geosyntec Consultants Inc.
Client Project Number: GW6581B/14
Date Samples Received: September 21, 2020, March 23, 2021 and June 21, 2021
Date Samples Analyzed: November 3, 2020, April 6, 2021 and October 20, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	Quartz (SiO ₂)	Aluminum Oxide (Al ₂ O ₃)	Ferric Oxide (Fe ₂ O ₃)	Magnesium Oxide (MgO)	Calcium Oxide (CaO)	Sodium Oxide (Na ₂ O)	Potassium Oxide (K ₂ O)	Titanium Dioxide (TiO ₂)	Phosphorous Pentoxide (P ₂ O ₅)	Manganese Oxide (MnO)	Chromium (III) Oxide (Cr ₂ O ₃)	Vanadium Oxide (V ₂ O ₅)	Loss on Ignition
			%	%	%	%	%	%	%	%	%	%	%	%	%
DPT01(12-17)	S-6195-1	5-Aug-20	76.7	9.84	3.73	0.82	0.59	0.36	0.94	0.90	0.11	0.08	< 0.01	0.02	5.66
DPT02(12-22)	S-6195-2	4-Aug-20	84.1	6.43	3.72	0.58	0.34	0.24	0.79	0.39	0.11	0.06	< 0.01	< 0.01	3.69
DPT03(32-39)	S-6195-3	4-Aug-20	64.8	11.8	7.30	2.09	2.36	0.64	1.85	0.50	0.29	0.14	0.01	< 0.01	8.23
DPT04(12-18)	S-6195-4	4-Aug-20	66.7	13.4	5.99	1.63	1.03	0.64	1.95	0.64	0.22	0.29	< 0.01	0.01	7.36
DPT05(15-25)	S-6195-5	4-Aug-20	64.7	14.6	7.24	1.75	0.47	0.15	2.63	0.63	0.13	0.10	0.01	< 0.01	7.98
DPT06(15-23)	S-6195-6	5-Aug-20	52.5	16.3	6.12	1.78	6.37	0.10	2.40	0.70	0.17	0.14	0.01	0.01	13.5
DPT07_AP1_012821_32-42	S-7677-1	28-Jan-21	80.8	9.02	3.21	0.29	0.12	0.10	1.07	0.90	0.04	0.01	< 0.01	0.02	4.02
DPT04XRF_AP1_100418_40-45	S-8083-7	4-Oct-18	91.9	2.69	2.41	0.08	0.08	0.08	0.46	0.38	0.04	0.02	< 0.01	< 0.01	1.5

Comments:
% - percent
< - compound not detected, the associated value is the detection limit

Analyst:

Kela Ashworth, B.Sc.
Senior Laboratory Technician

Results approved:

Michael Healey, B.Sc.
Laboratory Supervisor I

Date:
19-Nov-21

**APPENDIX C:
Baseline Mineralogical Results**


Analytical Results - Rietveld Quantitative X-Ray Diffraction


SIREM File Reference: S-6195, S-7677 & S-8083

Client: Geosyntec Consultants Inc.
Client Project Number: GW6581B/14
Date Samples Received: September 21, 2020, March 23, 2021 and June 21, 2021
Date Samples Analyzed: October 6, 2020, April 16, 2021 and October 30, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	Quartz	Albite	Microcline	Muscovite	Mullite	Chlorite	Kaolinite	Anatase	Rutile	Nontronite	Calcite	Goethite
			wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %
DPT01(12-17)	S-6195-1	5-Aug-20	70.3	4.87	2.07	10.25	-	4.06	5.63	0.68	-	2.15	-	-
DPT02(12-22)	S-6195-2	4-Aug-20	82.0	3.21	1.18	6.96	-	2.46	3.81	0.13	-	0.23	-	-
DPT03(32-39)	S-6195-3	4-Aug-20	64.7	6.0	1.46	13.08	-	6.26	3.37	0.21	-	1.82	3.07	-
DPT04(12-18)	S-6195-4	4-Aug-20	55.8	8.5	3.26	20.46	-	-	7.33	0.58	-	4.09	-	-
DPT05(15-25)	S-6195-5	4-Aug-20	44.9	3.4	7.87	26.07	-	-	-	1.18	-	0.41	-	16.19
DPT06(15-23)	S-6195-6	5-Aug-20	34.4	4.5	4.60	23.98	-	-	-	1.68	-	4.86	15.01	10.9
DPT07_AP1_012821_32-42	S-7677-1	28-Jan-21	68.9	1.8	1.90	10.90	-	-	15.8	0.20	0.40	-	-	-
DPT04XRF AP1 100418 40-45	S-8083-7	4-Oct-18	91.7	-	2.40	3.80	0.30	-	1.80	-	-	-	-	-

Comments:
% - percent
-- not identified by analyst
wt % - weight percent

Analyst:

Kela Ashworth, B.Sc.
Senior Laboratory Technician

Results approved:

Michael Healey, B.Sc.
Laboratory Supervisor I

Date:

19-Nov-21

**APPENDIX D:
Sequential Extraction Procedure Results**

Analytical Results - Sequential Extraction Procedure

SIREM File Reference: S-6195, S-7677 & S-8083

Client: Geosyntec Consultants Inc.
Client Project Number: GW6581B/14
Date Samples Received: September 21, 2020, March 23, 2021 and June 21, 2021
Date Samples Analyzed: November 2, 2021

Client Sample ID	Laboratory Sample ID	Client Sample Date	SEP Step 1			SEP Step 2			SEP Step 3			SEP Step 4			SEP Step 5			SEP Step 6			SEP Step 7			SEP Sum of Steps 1-7			Total		
			Arsenic	Lithium	Molybdenum	Arsenic	Lithium	Molybdenum	Arsenic	Lithium	Molybdenum	Arsenic	Lithium	Molybdenum	Arsenic	Lithium	Molybdenum	Arsenic	Lithium	Molybdenum	Arsenic	Lithium	Molybdenum	Arsenic	Lithium	Molybdenum	Arsenic	Lithium	Molybdenum
DPT02 (15-23)	S-6195-2 & S-8083-2	4-Aug-20	<0.65	<0.75	<0.41	<0.48	<0.56	<0.31	0.42 J	0.52 J	1.6 J	1.5	6.4	1.2 J	<2.4	8.5 J	<1.6	2.1	12	0.21 J	1.2	23.0	<0.10	5.2	50	3.0	5.6	44	3.2
DPT06 (12-22)	S-6195-2 & S-8083-6	5-Aug-20	<0.43	<0.79	<0.43	<0.51	<0.59	<0.32	0.36 J	<0.20	<0.11	0.56 J	4.2	<0.11	<2.5	7.5 J	<1.6	2.2	8.6	<0.13	0.77 J	21.0	<0.11	3.9	41	<0.082	6.6	56	<0.54
DPT04XRF AP1 100418 40-45	S-8083-7	4-Oct-18	<0.54	<0.62	<0.34	<0.40	<0.46	<0.25	2.20	<0.15	0.46 J	5.7	<1.9 J	0.85 J	2.4 J	5.6 J	<1.3	1.5	3	0.13 J	0.46 J	4.9	<0.085	12.0	15	1.4 J	59.0	12	1.5 J

Comments:
 < - compound not detected, the associated value is the method detection limit.
 J - result is less than the reporting limit, but greater than or equal to the method detection limit and the concentration is an approximate value.
 mg/kg - milligram per kilogram

Analyst:

Results approved:

Date:

Kela Ashworth

Michael Healey

Kela Ashworth, B.Sc.
Senior Laboratory Technician

Michael Healey, B.Sc.
Laboratory Supervisor I

19-Nov-21

**APPENDIX E:
Summary of Sorption Test Dissolved Metals, ORP and pH Results**

APPENDIX E: SUMMARY OF SORPTION TEST DISSOLVED METALS, ORP AND pH RESULTS
Hammond Ash Pond-1, Floyd County, Georgia

SIREM

Groundwater Sample ID	Site Material	Treatment	Date	Day	Replicate	Dissolved Arsenic	Dissolved Molybdenum	Dissolved Lithium	Reactor Weight	Reactor + Soil Weight	Mass Soil	Reactor, Soil + Water Weight	Mass Water	pH	ORP		
						mg/L	mg/L	mg/L	g	g	g	g	g				
HGWA-1	DPT06(15-23)	Concentration Level 1	29-Jun-21	0	Spiked Aqueous Concentration	0.0631	0.014	0.0074	--	--	--	--	--	--	--		
					HAP1DPT06 1a	0.0068	0.00763	0.0048	37.22	137.71	100.49	286.29	148.58	7.44	175		
					HAP1DPT06 2a	0.0071	0.00713	0.0049	37.12	137.67	100.55	286.20	148.53	7.41	174		
		Concentration Level 1	6-Jul-21	7	Average	0.0070	0.00738	0.0049	37.17	137.69	100.52	286.25	148.56	7.43	175		
					HAP1DPT06 1b	< 0.0002	0.00024	0.0012	37.15	139.11	101.96	290.05	150.94	7.38	169		
					HAP1DPT06 2b	< 0.0002	0.00019	0.0015	37.24	136.89	99.65	284.87	147.98	7.36	172		
		Concentration Level 2	29-Jun-21	0	Spiked Aqueous Concentration	0.112	0.052	0.0131	--	--	--	--	--	--	--	--	
					HAP1DPT06 3a	0.0260	0.0380	0.0098	37.03	136.66	99.83	283.31	146.45	7.46	199		
					HAP1DPT06 4a	0.0097	0.0292	0.0066	37.25	135.98	98.73	280.23	144.25	7.42	198		
		Concentration Level 2	6-Jul-21	7	Average	0.0179	0.0336	0.0082	37.14	136.42	99.28	281.77	145.35	7.44	199		
					HAP1DPT06 3b	< 0.0002	0.00035	0.0013	37.24	138.09	100.65	284.20	146.11	7.39	161		
					HAP1DPT06 4b	< 0.0002	0.00034	0.0014	37.00	133.14	96.14	283.67	150.53	7.38	156		
		Concentration Level 3	30-Jun-21	0	Spiked Aqueous Concentration	0.280	0.105	0.0283	--	--	--	--	--	--	--	--	
					HAP1DPT06 5a	0.0673	0.0709	0.0135	37.02	138.05	101.03	285.09	147.04	7.49	190		
					HAP1DPT06 6a	0.0805	0.0759	0.0163	37.16	137.08	99.92	287.09	150.01	7.50	205		
		Concentration Level 3	7-Jul-21	7	Average	0.0739	0.0734	0.0149	37.09	137.57	100.48	286.09	148.53	7.50	198		
					HAP1DPT06 5b	< 0.0002	0.00064	0.0016	37.20	135.89	98.69	278.29	142.40	7.38	182		
					HAP1DPT06 6b	< 0.0002	0.00055	0.0016	37.16	135.83	98.67	286.18	150.35	7.44	174		
		Concentration Level 4	30-Jun-21	0	Spiked Aqueous Concentration	ND	0.00660	0.0016	37.18	135.86	98.68	282.24	146.38	7.41	178		
					HAP1DPT06 7a	0.245	0.208	0.0288	37.06	134.75	97.69	284.53	149.78	7.52	203		
					HAP1DPT06 8a	0.199	0.196	0.0254	36.89	137.14	100.25	284.48	147.34	7.56	203		
		Concentration Level 4	7-Jul-21	7	Average	0.222	0.202	0.0271	36.98	135.95	98.97	284.51	148.56	7.54	203		
					HAP1DPT06 7b	< 0.0002	0.00157	0.0015	36.90	138.00	101.10	284.34	146.34	7.48	167		
					HAP1DPT06 8b	< 0.0002	0.00145	0.0015	37.38	137.72	100.34	284.02	146.30	7.47	162		
		Concentration Level 5	30-Jun-21	0	Spiked Aqueous Concentration	1.12	0.587	0.0569	--	--	--	--	--	--	--	--	
					HAP1DPT06 9a	0.442	0.421	0.0327	37.02	136.19	99.17	285.94	149.75	7.51	208		
					HAP1DPT06 10a	0.456	0.435	0.0332	37.42	137.42	100.00	285.81	148.39	7.55	208		
		Concentration Level 5	7-Jul-21	7	Average	0.449	0.428	0.0330	37.22	136.81	99.59	285.88	149.07	7.53	208		
					HAP1DPT06 9b	< 0.0002	0.00379	0.0019	37.40	137.59	100.19	287.11	149.52	7.49	157		
					HAP1DPT06 10b	< 0.0002	0.00431	0.0018	37.30	135.89	98.59	283.36	147.47	7.52	153		
		Concentration Level 6	30-Jun-21	0	Spiked Aqueous Concentration	1.70	0.00405	0.0019	37.35	136.74	99.39	285.24	148.50	7.51	155		
					HAP1DPT06 11a	0.805	0.879	0.0506	36.87	138.12	101.25	287.49	149.37	7.37	207		
					HAP1DPT06 12a	0.791	0.880	0.0480	37.06	136.20	99.14	281.76	145.56	7.42	202		
		Concentration Level 6	7-Jul-21	7	Average	0.798	0.880	0.0493	36.97	137.16	100.20	284.63	147.47	7.40	205		
					HAP1DPT06 11b	< 0.0002	0.00845	0.0022	36.96	137.18	100.32	283.64	146.46	7.48	149		
					HAP1DPT06 12b	< 0.0002	0.0125	0.0025	36.83	136.68	99.85	284.30	147.62	7.45	150		
		Average						ND	0.0105	0.0024	36.85	136.93	100.09	283.97	147.04	7.47	150

Notes:
 -- - not applicable
 < - compound not detected, the associated value is the detection limit
 g - gram
 mg/L - milligrams per liter
 mL - milliliter
 ND - not detected
 ORP - oxidation-reduction potential

**APPENDIX F:
Summary of Desorption Test Dissolved Metals, ORP and pH Results**

APPENDIX F: SUMMARY OF DESORPTION TEST DISSOLVED METALS, ORP AND pH RESULTS
Hammond Ash Pond-1, Floyd County, Georgia

SIREM

Groundwater Sample ID	Site Material	Chemical Characteristics (Baseline Characterization)	Treatment	Date	Day	Replicate	Dissolved Arsenic	Dissolved Molybdenum	Dissolved Lithium	Reactor Weight	Reactor + Soil Weight	Mass Soil	Reactor, Soil + Water Weight	Mass Water	pH	ORP
							mg/L	mg/L	mg/L	g	g	g	g	g		
HGWA-1	DPT02(12-22)	Arsenic: 4.7 µg/g Molybdenum: 6.2 µg/g Lithium: 33 µg/g	Ambient Conditions	31-Aug-21	0	HAP1DPT02_1a	< 0.0002	0.00725	0.0012	37.58	138.18	100.60	290.11	151.93	7.26	160
						HAP1DPT02_2a	< 0.0002	0.00752	0.0013	37.14	138.93	101.79	289.25	150.32	7.21	159
						Average	ND	0.00739	0.0013	37.36	138.56	101.20	289.68	151.13	7.21	159
				15-Sep-21	7*	HAP1DPT02_1b	< 0.0002	0.00956	0.0005	36.36	137.68	101.32	287.48	149.80	6.87	122
						HAP1DPT02_2b	< 0.0002	0.00967	0.0007	36.48	136.90	100.42	288.34	151.44	6.90	121
						Average	ND	0.00962	0.0006	36.42	137.29	100.87	287.91	150.62	6.89	122
	DPT04XRF(40-45)	Arsenic: 13 µg/g Molybdenum: 1.4 µg/g Lithium: 12 µg/g	Ambient Conditions	31-Aug-21	0	HAP1DPT04XRF_3a	0.0007	0.00658	0.0043	36.57	136.59	100.02	288.33	151.74	7.23	160
						HAP1DPT04XRF_4a	0.0007	0.00656	0.0046	36.65	136.65	100.00	288.41	151.76	7.24	159
						Average	0.0007	0.00657	0.0045	36.61	136.62	100.01	288.37	151.75	7.24	160
				15-Sep-21	7*	HAP1DPT04XRF_3b	0.0031	0.0124	0.0048	36.27	138.02	101.75	289.00	150.98	6.98	121
						HAP1DPT04XRF_4b	0.0030	0.0113	0.0040	36.32	136.85	100.53	286.77	149.92	6.97	120
						Average	0.0031	0.0119	0.0044	36.30	137.44	101.14	287.89	150.45	6.98	121
	DPT04XRF(40-45)	Arsenic: 13 µg/g Molybdenum: 1.4 µg/g Lithium: 12 µg/g	Hydrogen Amended	31-Aug-21	0	HAP1DPT04XRF_5a	0.0007	0.00658	0.0043	36.57	136.59	100.02	288.33	151.74	7.23	160
						HAP1DPT04XRF_6a	0.0007	0.00655	0.0046	36.65	136.65	100.00	288.41	151.76	7.24	159
						Average	0.0007	0.00657	0.0045	36.61	136.62	100.01	288.37	151.75	7.24	160
				15-Sep-21	15	HAP1DPT04XRF_5b	0.0012	0.00896	0.0015	36.64	136.62	99.98	286.98	150.36	6.82	122
						HAP1DPT04XRF_6b	0.0012	0.00414	0.0008	36.67	136.66	99.99	287.32	150.66	6.67	124
						Average	0.0012	0.00655	0.0012	36.66	136.64	99.99	287.15	150.51	6.75	123

Notes:
 * Samples for Day 7 sampling were prepared on 8 September 2021
 < - compound not detected, the associated value is the detection limit
 g - grams
 µg/g - microgram per gram
 mg/kg - milligrams per kilogram
 mg/L - milligrams per liter
 ND - not detected
 ORP - oxidation-reduction potential

**APPENDIX G:
External Laboratory Reports**



SGS Canada Inc.
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SiREM Laboratory
Attn : Kela Ashworth

130 Stone Rd. W, Guelph
Canada, N1G 3Z2
Phone: 519-822-2265, Fax:519-822-3151

Project : S-6195

14-October-2020


Date Rec. : 25 September 2020
LR Report: CA15479-SEP20


Copy: #1

CERTIFICATE OF ANALYSIS Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: S-6195-1	6: S-6195-2	7: S-6195-3	8: S-6195-4	9: S-6195-5	10: S-6195-6
Sample Date & Time					24-Sep-20	24-Sep-20	24-Sep-20	24-Sep-20	24-Sep-20	24-Sep-20
Ag [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	< 1	< 1	< 1	< 1	< 1	< 1
Al [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	50000	33000	55000	69000	75000	68000
As [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	4.9	4.7	12	3.8	4.6	4.8
Ba [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	220	190	170	260	260	280
Be [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	1.8	1.6	2.5	3.0	5.6	4.5
Bi [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	0.31	0.23	0.48	0.41	0.37	0.35
Ca [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	4200	2500	16000	7500	3500	46000
Cd [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	0.14	0.11	0.58	0.38	0.19	0.080
Co [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	12	11	26	19	38	23
Cr [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	28	20	64	53	57	16
Cu [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	10	12	29	26	28	25
Fe [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	26000	26000	52000	42000	50000	41000
K [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	7800	6700	13000	16000	22000	14000
Li [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	38	33	43	38	36	59
Mg [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	4900	3600	12000	9900	11000	8800
Mn [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	710	530	1100	2400	830	1200

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: S-6195-1	6: S-6195-2	7: S-6195-3	8: S-6195-4	9: S-6195-5	10: S-6195-6
Mo [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	1.2	6.2	0.54	1.4	13	0.40
Ni [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	25	25	52	47	48	55
Pb [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	18	11	20	20	16	20
Sb [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Se [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Sn [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	< 6	< 6	< 6	< 6	< 6	< 6
Sr [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	67	50	78	46	60	130
Ti [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	1600	970	2700	3500	3400	260
Tl [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	0.40	0.33	0.32	0.44	0.48	0.45
U [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	1.8	1.3	2.5	3.0	3.1	0.88
V [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	63	42	60	71	70	40
Y [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	19	18	22	31	30	64
Zn [µg/g]	07-Oct-20	15:21	13-Oct-20	14:29	52	49	76	79	100	86
S [%]	08-Oct-20	15:16	09-Oct-20	11:21	0.018	0.008	0.005	0.006	< 0.005	< 0.005
C [%]	08-Oct-20	15:16	09-Oct-20	11:21	0.086	0.044	0.412	0.157	0.036	1.15
Sulphide [%]	09-Oct-20	15:49	09-Oct-20	16:46	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
TOC [%]	09-Oct-20	10:44	09-Oct-20	11:21	0.070	0.040	0.160	0.090	< 0.025	0.120

Catharine Arnold

Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

	Minerals Geochemistry Lakefield Laboratory	Revision 2.7 Doc Type Method Summary Method No: GO/GC/GT_XR Code F76V Service Testing Issued Date 23/Sep/2014
Minerals	Preparation and Determination of Major Element Oxides, LOI and Rare Earth Oxides in Oxide Ores, and Process Control and Trade Products by Borate Fusion and Xray Fluorescence Spectrometry [SiO ₂ , Al ₂ O ₃ , Fe ₂ O ₃ , MgO, CaO, Na ₂ O, K ₂ O, P ₂ O ₅ , MnO, TiO ₂ , Cr ₂ O ₃ ; V ₂ O ₅ ; LOI; additions BaO; Ce ₂ O ₃ ; Nd ₂ O ₃ , La ₂ O ₃ ; Pr ₂ O ₃ , Sm ₂ O ₃ ; Nb ₂ O ₅ , ThO ₂ , Ta ₂ O ₅ ; SnO ₂ ; SrO; ZrO ₂ ; HfO ₂ ; Y ₂ O ₃ ; WO ₃ ; U ₃ O ₈ ; Co; Ni ; XRF]	Approved by K. Patel

1. Parameter(s) measured, unit(s):

Silicon Dioxide (SiO₂), Aluminum Oxide (Al₂O₃), Iron(III) Oxide (Fe₂O₃), Magnesium Oxide (MgO), Calcium Oxide (CaO), Sodium Oxide (Na₂O), Potassium Oxide (K₂O), Phosphorus Pentoxide (P₂O₅), Manganese Oxide (MnO), Titanium Dioxide (TiO₂), Chromium (III) Oxide (Cr₂O₃), Vanadium Oxide (V₂O₅), LOI, in %

Barium Oxide (BaO), Cerium (III) Oxide (Ce₂O₃), Neodymium Oxide (Nd₂O₃), Lanthanum Oxide (La₂O₃), Praseodymium Oxide (Pr₂O₃), Samarium Oxide (Sm₂O₃), Niobium Pentoxide (Nb₂O₅), Thorium Dioxide (ThO₂), Tantalum Pentoxide (Ta₂O₅), Tin Dioxide (SnO₂) Uranium Oxide (U₃O₈), Cobalt (Co), Nickel (Ni), Strontium Oxide (SrO), Zirconium Dioxide (ZrO₂), Hafnium Oxide (HfO₂), Yttrium Oxide (Y₂O₃), Tungsten Trioxide (WO₃) in % can be added as additions

2. Typical sample size:

0.2 to 0.5g, 1g additional for LOI analysis

3. Type of sample applicable (media):

Rocks, oxide ores, concentrates and catalysts

4. Sample preparation technique used:

Samples are crushed and pulverized according to client specified instructions or default preparation procedures. This method is used to report, in percentage, the whole rock suite (SiO₂, Al₂O₃, Fe₂O₃, MgO, CaO, Na₂O, K₂O, P₂O₅, MnO, TiO₂, Cr₂O₃, V₂O₅). Sample preparation entails the formation of a homogenous glass disk by the fusion of the sample and a lithium tetraborate/lithium metaborate mixture. The LOI is determined separately and gravimetrically at 1000°C.

5. Method of analysis used:

The prepared disks are analyzed by wavelength dispersion X-ray fluorescence (WD-XRF). The

LOI is included in the matrix correction calculations, which are performed by the XRF software.

6. Data reduction by:

Computer, on line, data fed to Laboratory Information Management System with secure audit trail.

7. Figures of Merit:

This method has been fully validated for the range of samples typically analyzed. Method validation includes the use of reference materials, replicates, duplicates and blanks to calculate accuracy, precision, linearity, range, limit of detection, reporting limit, specificity and measurement uncertainty.

The reporting limits has been determined according to the following

Element	Report Limit %
SiO ₂	0.01
Al ₂ O ₃	0.01
MgO	0.01
Na ₂ O	0.01
K ₂ O	0.01
CaO	0.01
P ₂ O ₅	0.01
TiO ₂	0.01
Cr ₂ O ₃	0.01
V ₂ O ₅	0.01
Fe ₂ O ₃	0.01
MnO	0.01
LOI	-10

*upper limit for all elements is 100%. A negative LOI indicates a gain on ignition

8. Quality control:

Quality control materials include method blanks, replicates and reference materials and are randomly inserted with the frequency set according to method protocols at ~12% for ore grade analysis and 18% for process control analysis. Quality control materials will also include BRM (Barren reference materials, or preparations blanks) and preparation duplicates if samples have been taken through the sample reduction process. Party quality samples are assayed in replicate, umpire quality samples are in triplicate. Calibration materials that cover the range upon method set-up; calibration check performed daily.

9. Accreditation:

The Standards Council of Canada has accredited this test in conformance with the requirements of ISO/IEC 17025. See www.scc.ca/en/search/palcan for scope of accreditation.

Note: Scopes of accreditation are site specific, please check with the local representative.

SGS Canada Inc.

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03-November-2020

SiREM Laboratory

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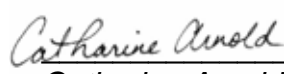

Date Rec. : 25 September 2020
LR Report: CA15480-SEP20
Reference: S-6195

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	5: S-6195-1	6: S-6195-2	7: S-6195-3	8: S-6195-4	9: S-6195-5	10: S-6195-6
Sample Date & Time	24-Sep-20	24-Sep-20	24-Sep-20	24-Sep-20	24-Sep-20	24-Sep-20
SiO ₂ [%]	76.7	84.1	64.8	66.7	64.7	52.5
Al ₂ O ₃ [%]	9.84	6.43	11.8	13.4	14.6	16.3
Fe ₂ O ₃ [%]	3.73	3.72	7.30	5.99	7.24	6.12
MgO [%]	0.82	0.58	2.09	1.63	1.75	1.78
CaO [%]	0.59	0.34	2.36	1.03	0.47	6.37
Na ₂ O [%]	0.36	0.24	0.64	0.64	0.15	0.10
K ₂ O [%]	0.94	0.79	1.85	1.95	2.63	2.40
TiO ₂ [%]	0.90	0.39	0.50	0.64	0.63	0.70
P ₂ O ₅ [%]	0.11	0.11	0.29	0.22	0.13	0.17
MnO [%]	0.08	0.06	0.14	0.29	0.10	0.14
Cr ₂ O ₃ [%]	< 0.01	< 0.01	0.01	< 0.01	0.01	0.01
V ₂ O ₅ [%]	0.02	< 0.01	< 0.01	0.01	< 0.01	0.01
LOI [%]	5.66	3.69	8.23	7.36	7.98	13.5
Sum [%]	99.8	100.5	100.0	99.9	100.5	100.1



Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



Quantitative X-Ray Diffraction by Rietveld Refinement

Report Prepared for: Environmental Services

Project Number/ LIMS No. Custom XRD/MI4503-OCT20

Sample Receipt: October 6, 2020

Sample Analysis: October 6, 2020

Reporting Date: October 23, 2020

Instrument: BRUKER AXS D8 Advance Diffractometer

Test Conditions: Co radiation, 35 kV, 40 mA
Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°

Interpretations : PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.

Detection Limit : 0.5-2%. Strongly dependent on crystallinity.

Contents:

- 1) Method Summary
- 2) Quantitative XRD Results
- 3) XRD Pattern(s)

Kim Gibbs, H.B.Sc., P.Ge.
Senior Mineralogist

Huyun Zhou, Ph.D., P.Ge.
Senior Mineralogist

ACCREDITATION: SGS Minerals Services Lakefield is accredited to the requirements of ISO/IEC 17025 for specific tests as listed on our scope of accreditation, including geochemical, mineralogical and trade mineral tests. To view a list of the accredited methods, please visit the following website and search SGS Canada - Minerals Services - Lakefield: <http://palcan.scc.ca/SpecsSearch/GLSearchForm.do>.



Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Minerals Services is accredited to the requirements of ISO/IEC 17025.

Mineral Identification and Interpretation:

Mineral identification and interpretation involves matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

Quantitative Rietveld Analysis:

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

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WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.



Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

Mineral/Compound	S-6195-1	S-6195-2	S-6195-3	S-6195-4	S-6195-5	S-6195-6
	OCT4503-01 (wt %)	OCT4503-02 (wt %)	OCT4503-03 (wt %)	OCT4503-04 (wt %)	OCT4503-05 (wt %)	OCT4503-06 (wt %)
Quartz	70.3	82.0	64.7	55.8	44.9	34.4
Albite	4.9	3.2	6.0	8.5	3.4	4.5
Microcline	2.1	1.2	1.5	3.3	7.9	4.6
Muscovite	10.2	7.0	13.1	20.5	26.1	24.0
Chlorite	4.1	2.5	6.3	-	-	-
Kaolinite	5.6	3.8	3.4	7.3	-	-
Anatase	0.7	0.1	0.2	0.6	1.2	1.7
Nontronite	2.2	0.2	1.8	4.1	0.4	4.9
Calcite	-	-	3.1	-	-	15.0
Goethite	-	-	-	-	16.2	10.9
TOTAL	100	100	100	100	100	100

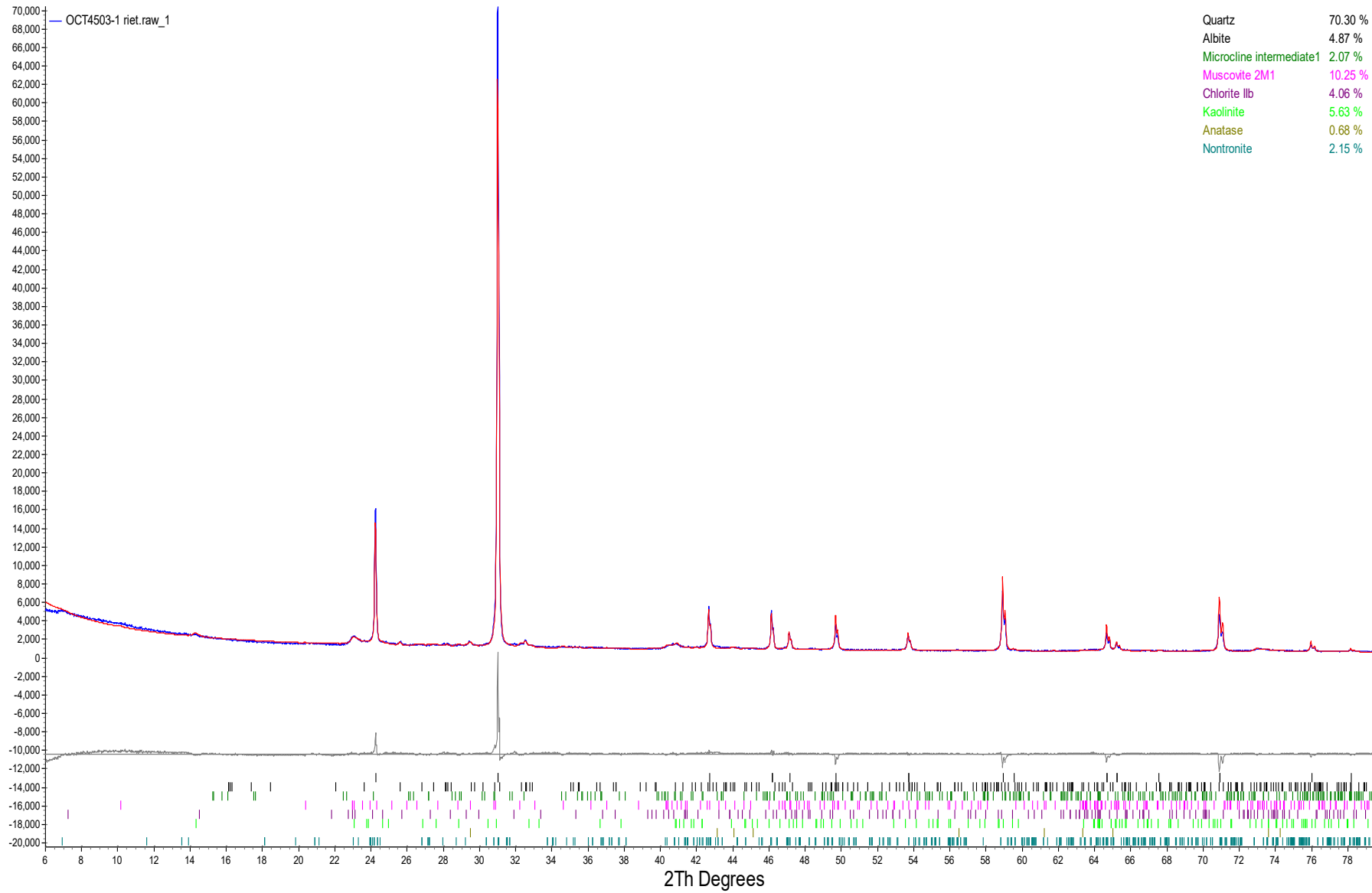
Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

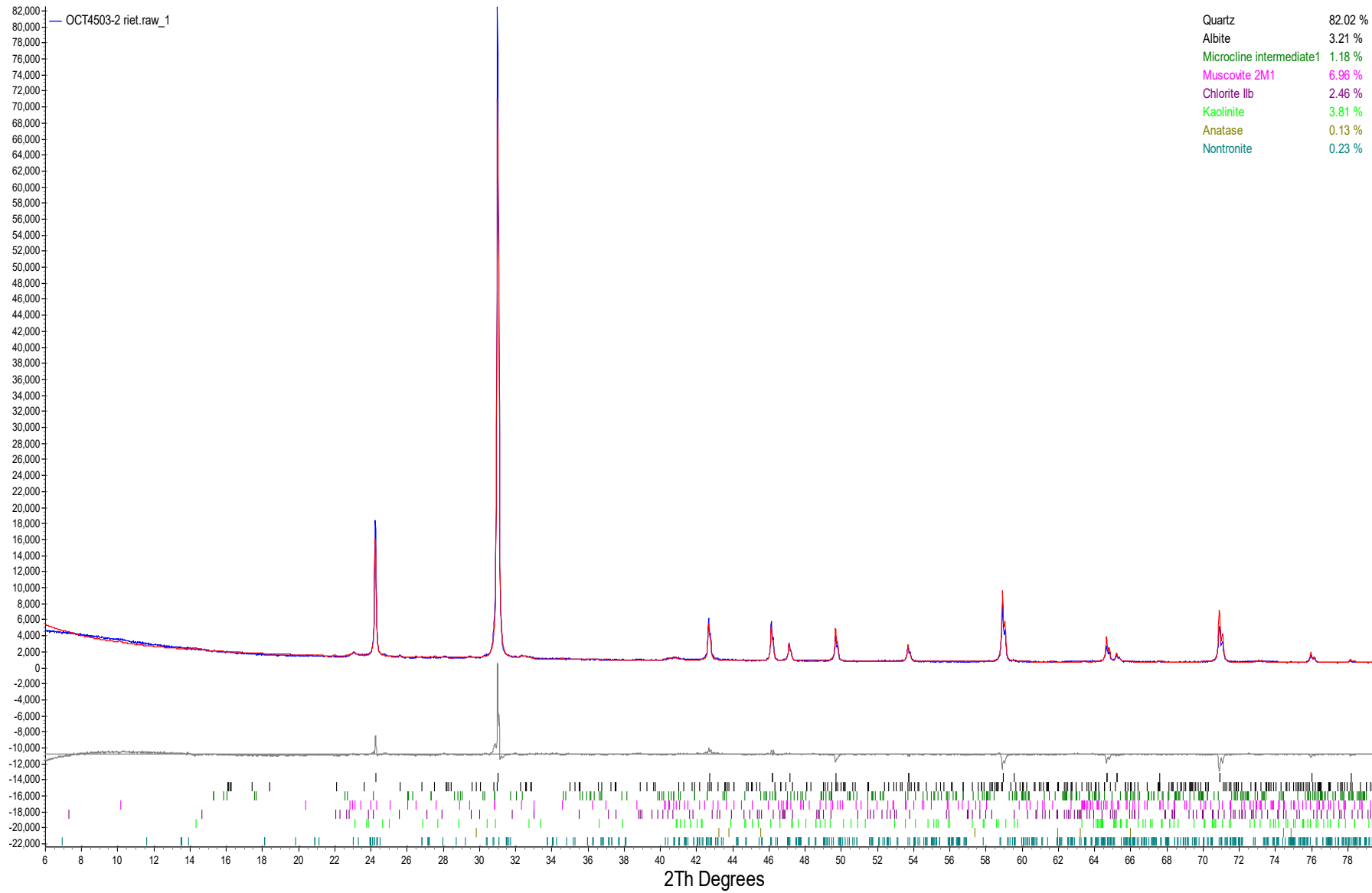
The weight percent quantities indicated have been normalized to a sum of 100%. The quantity of amorphous material has not been determined.

Mineral/Compound	Formula
Quartz	SiO ₂
Albite	NaAlSi ₃ O ₈
Microcline	KAlSi ₃ O ₈
Muscovite	KAl ₂ (AlSi ₃ O ₁₀)(OH) ₂
Chlorite	(Fe, ₁ Mg, ₁ Mn) ₅ Al(Si ₃ Al)O ₁₀ (OH) ₈
Kaolinite	Al ₂ Si ₂ O ₅ (OH) ₄
Anatase	TiO ₂
Nontronite	Fe ₂ (Al,Si) ₄ O ₁₀ (OH) ₂ Na _{0.3} ·4(H ₂ O)
Calcite	CaCO ₃
Goethite	αFeO·OH

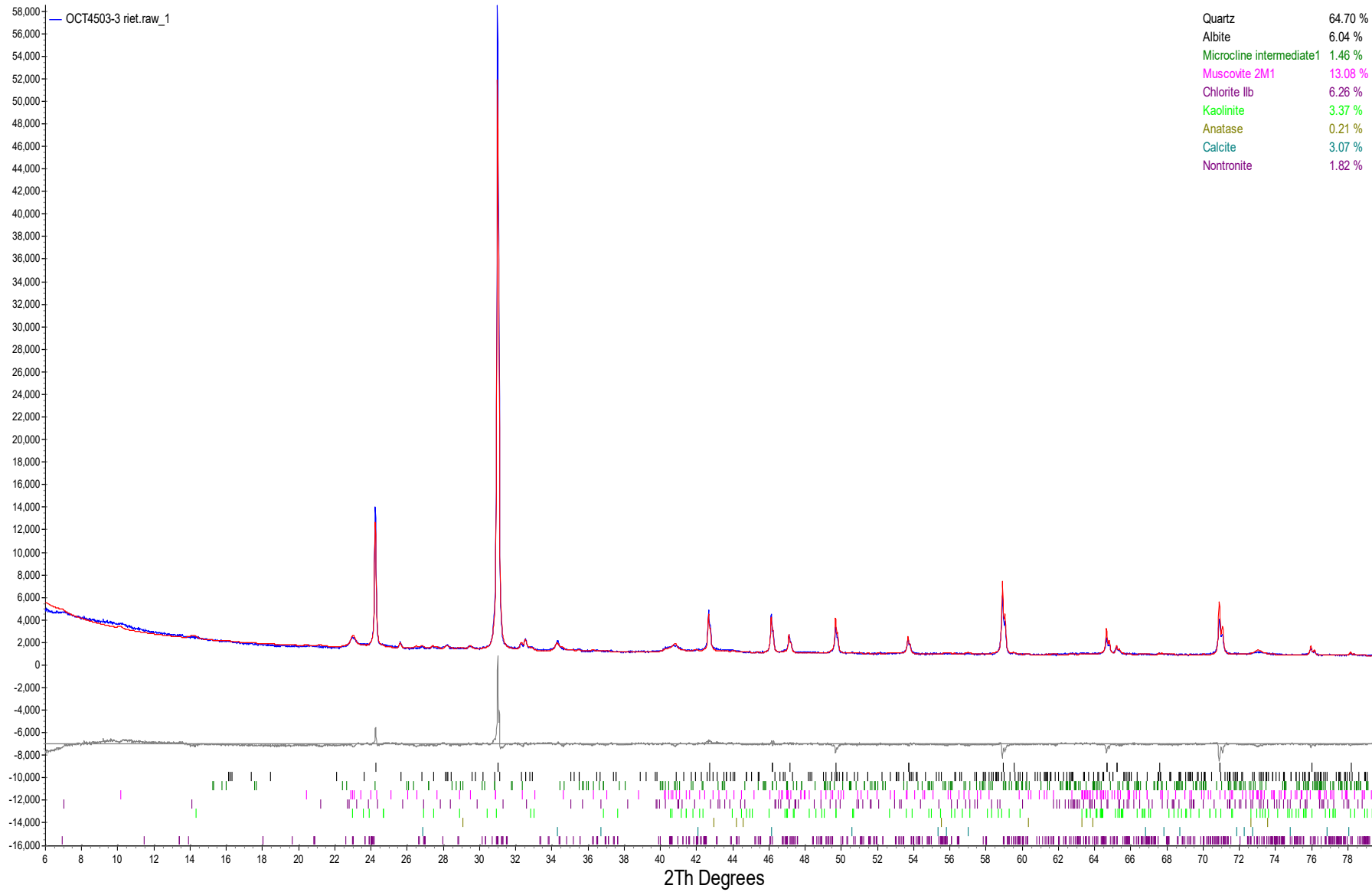
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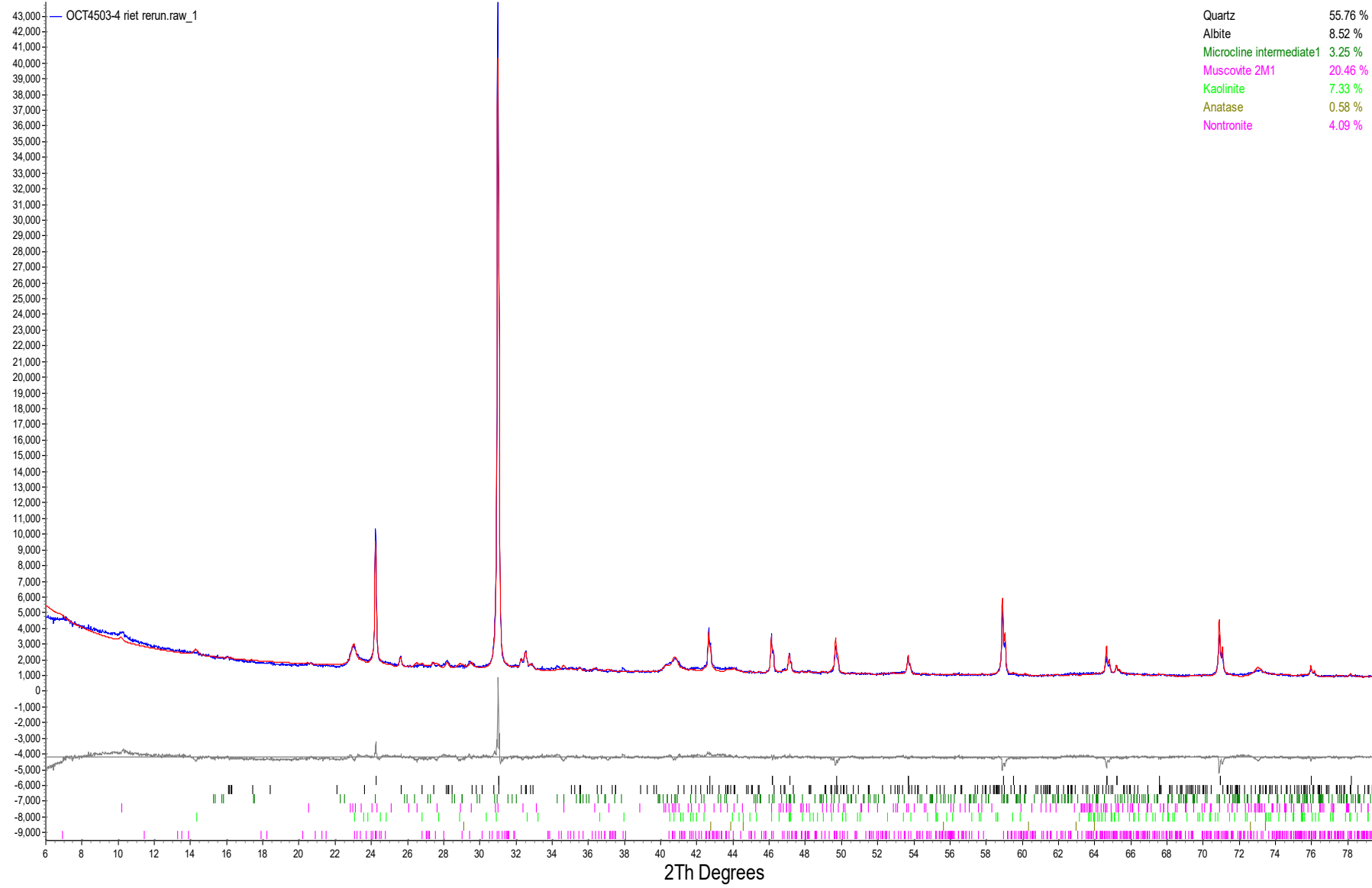
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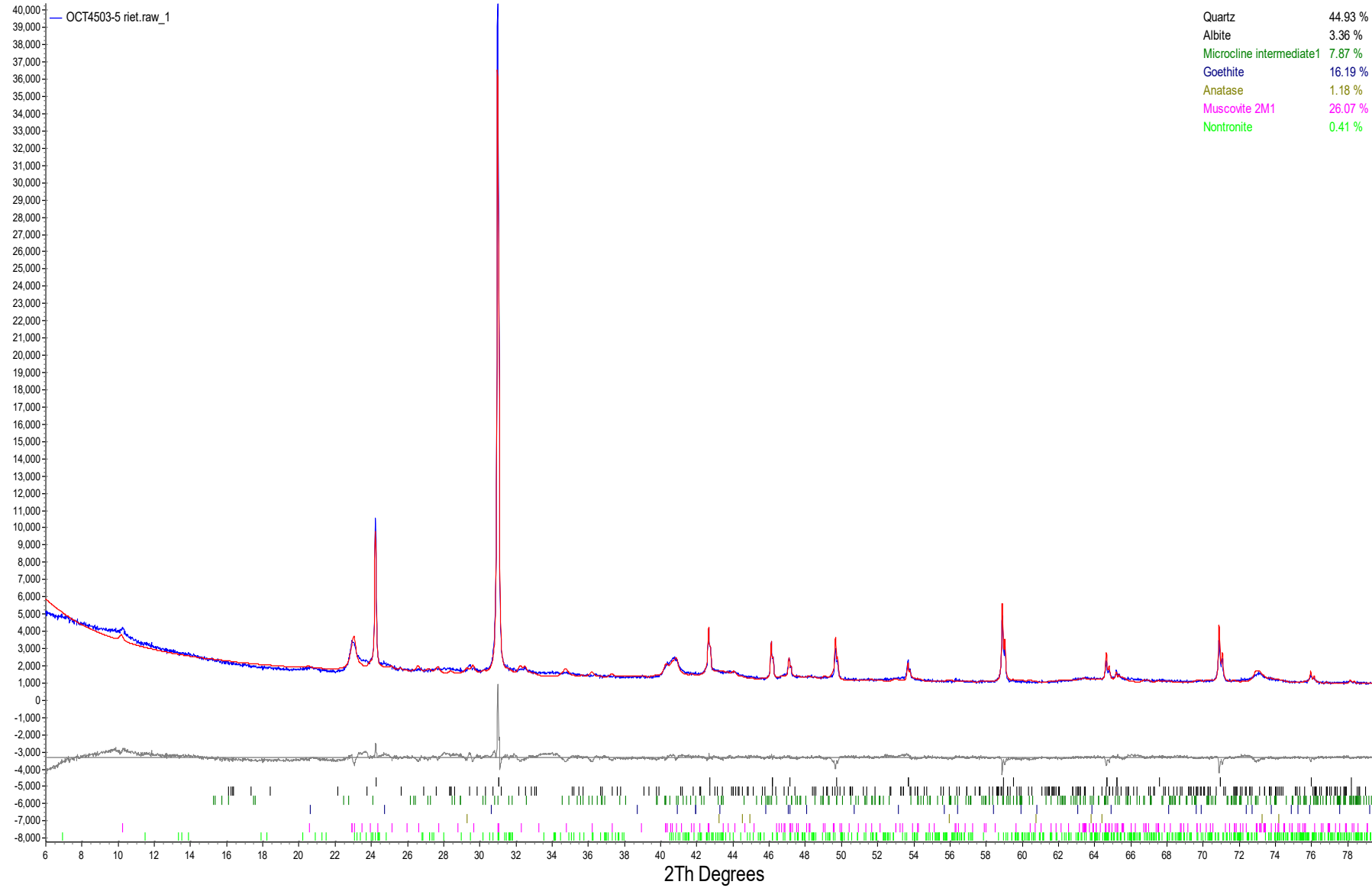
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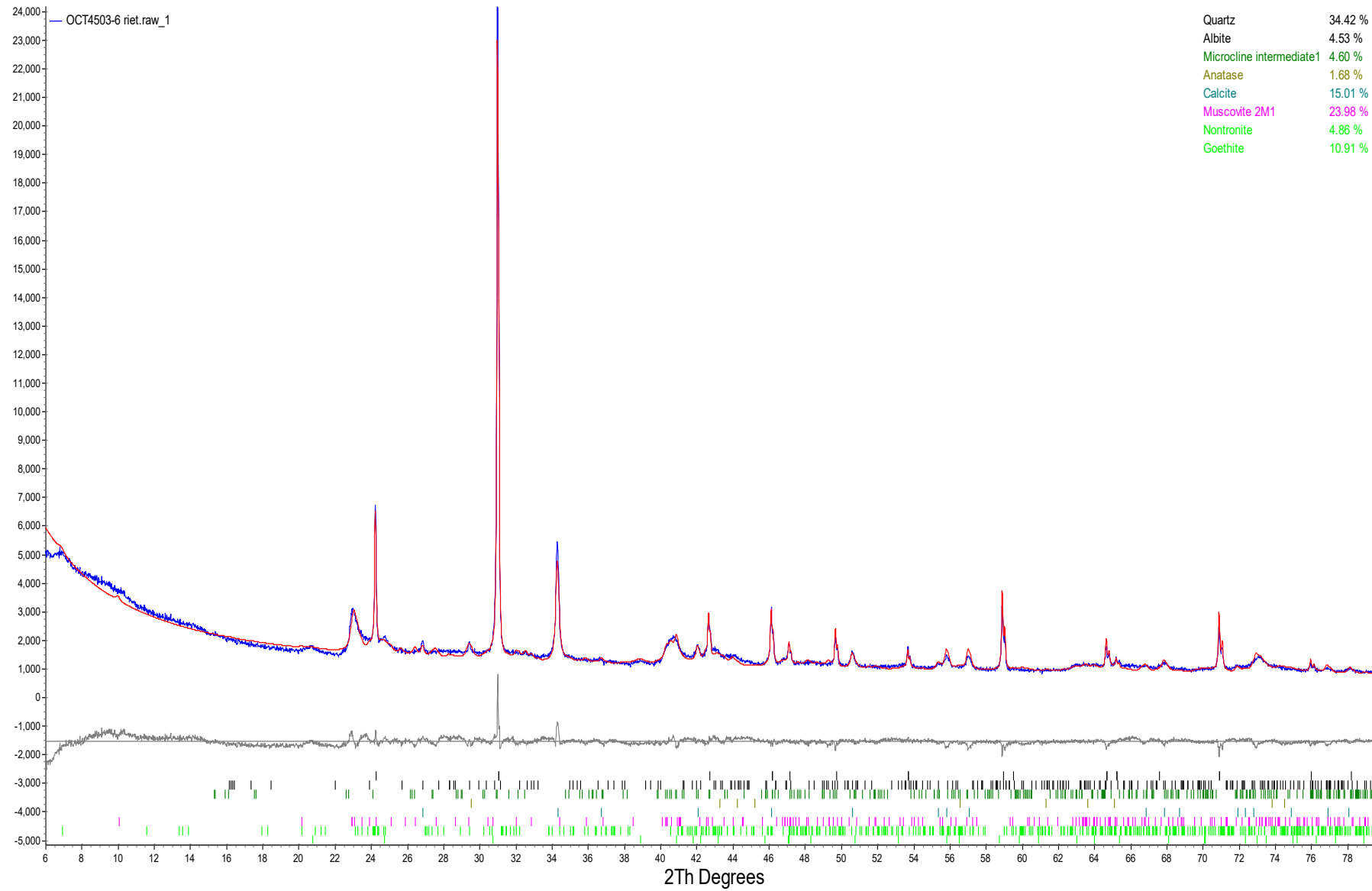
S-6195-4



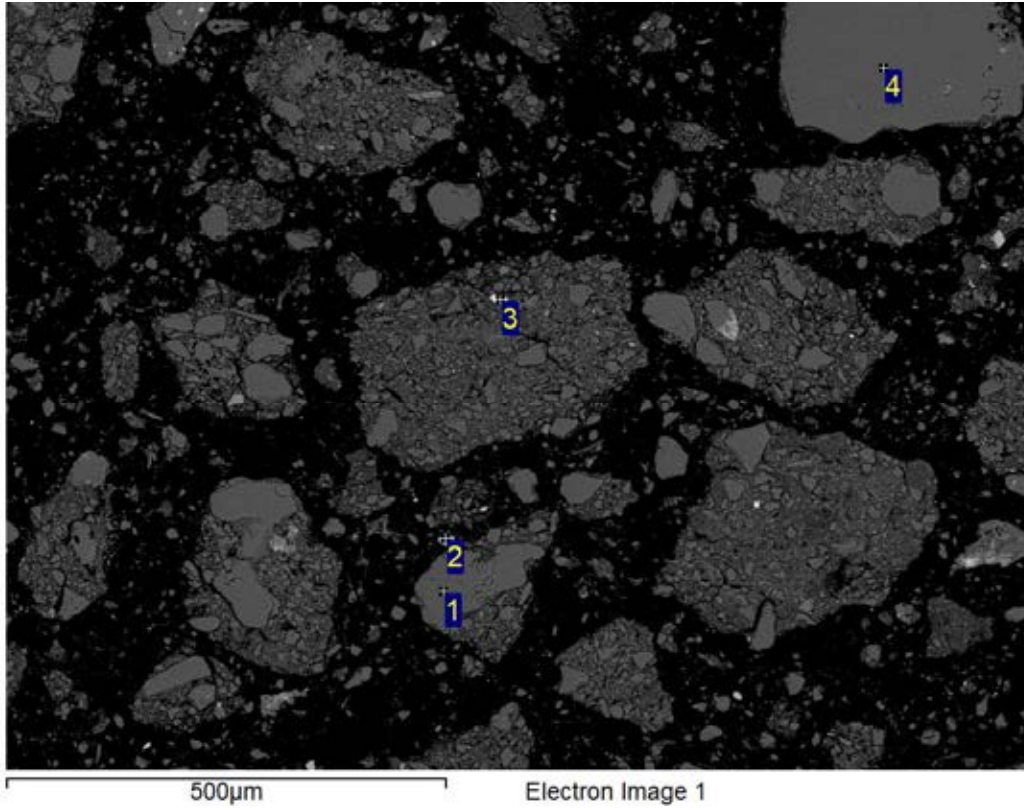
S-6195-5



S-6195-6



Sample Notes:
S-6195-1

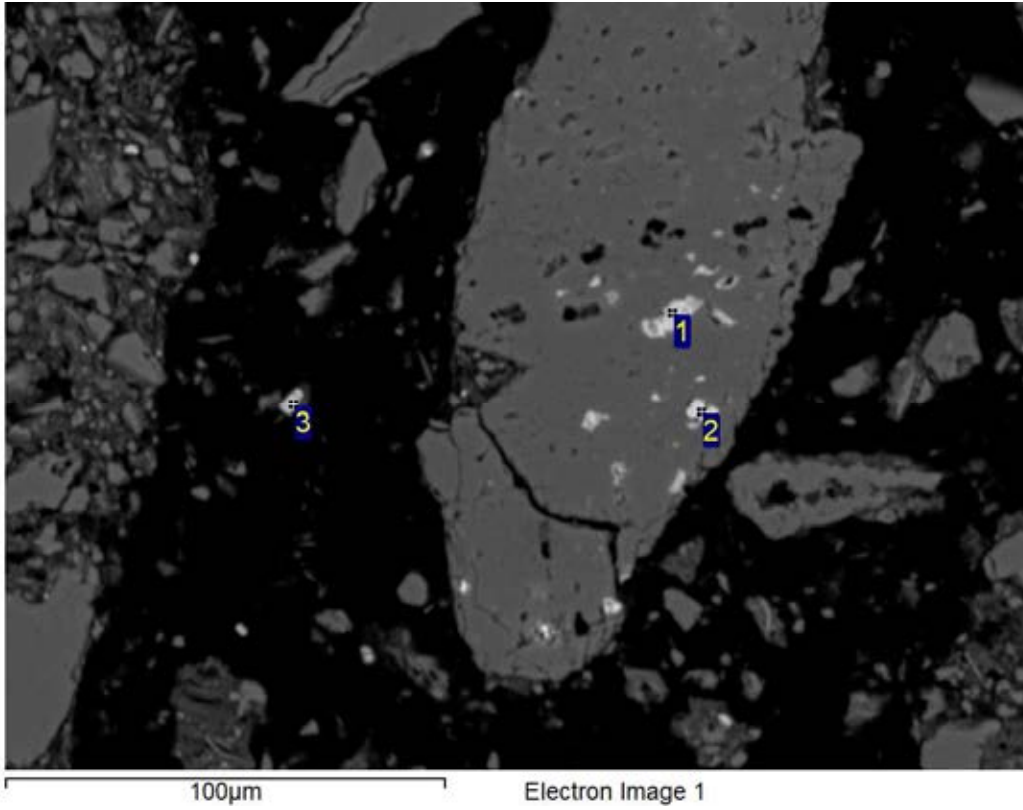


Processing option : All elements analysed (Normalised)

Spectrum	O	F	Si	P	Ca	Ti	Mn	Fe	W	Total	Mineral ID
1	51.8		48.2							100.0	Quartz
A2	36.8	8.2		16.8	36.9				1.3	100.0	Apatite
3	33.5					31.2	3.4	32.0		100.0	Ilmenite
4	52.2		47.8							100.0	Quartz

All results in weight%

Sample Notes:
S-6195-1

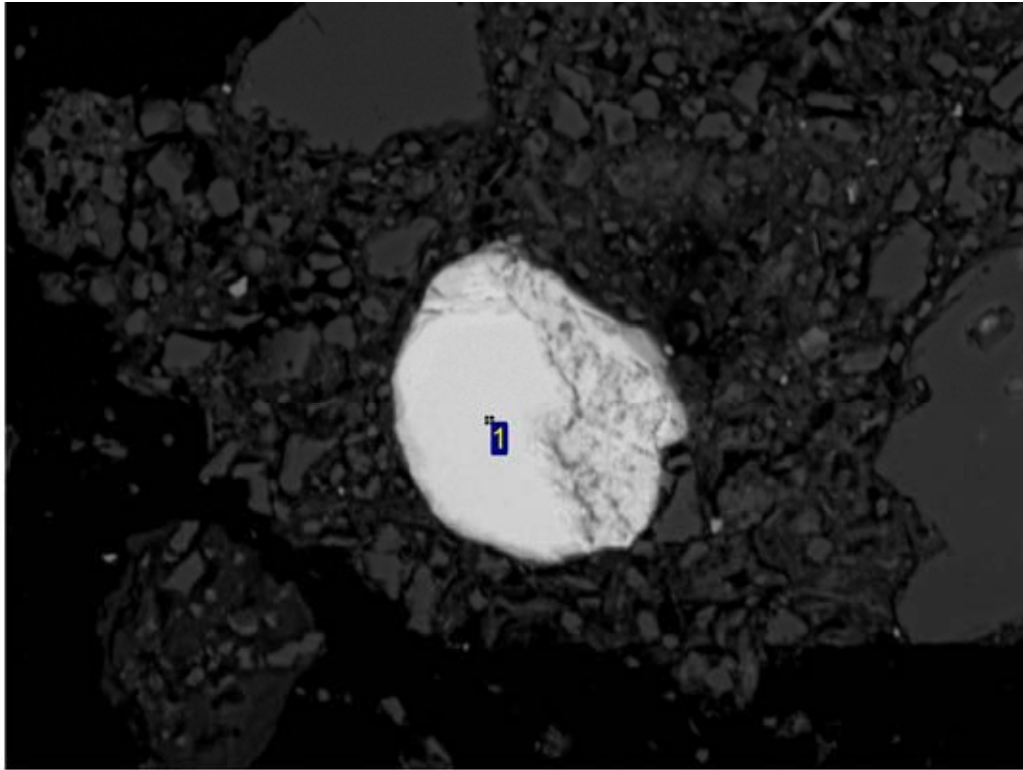


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Ti	Fe	Total	Mineral ID
1	35.2	1.6	14.1	0.7		48.5	100.0	FeOx
2	40.4	0.8	7.9	0.6		50.3	100.0	FeOx
3	46.1	0.5	0.9		51.9	0.6	100.0	Rutile

All results in weight%

Sample Notes:
S-6195-1



100µm

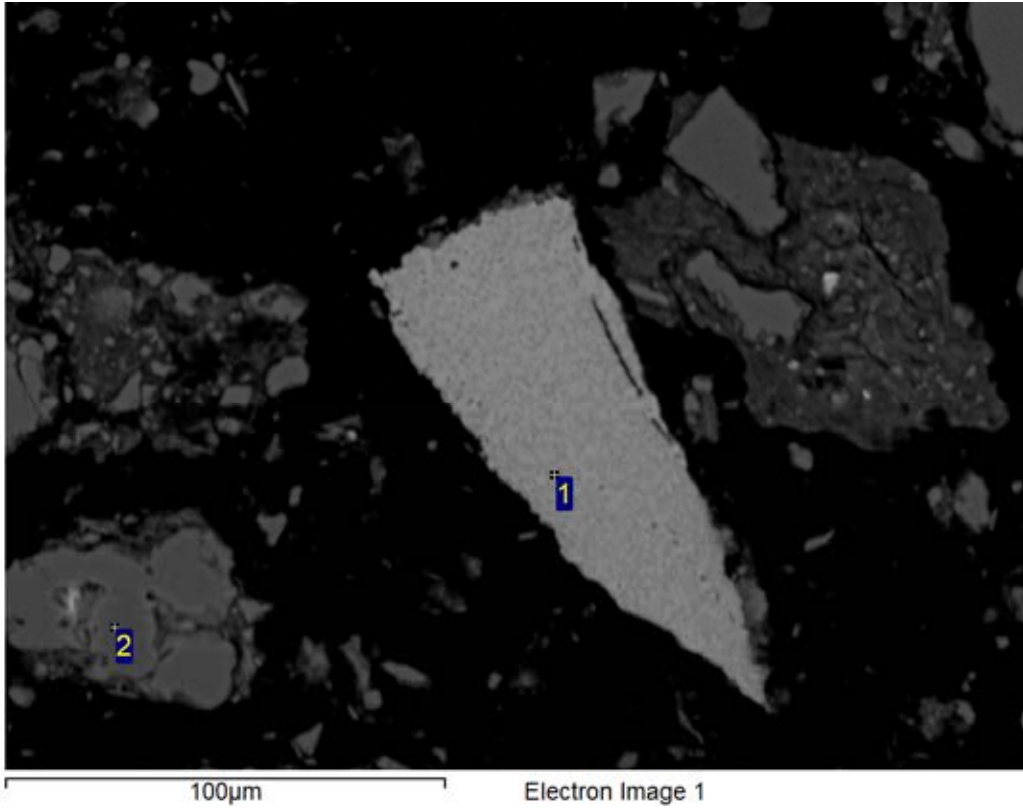
Electron Image 1

Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Zr	Total	Mineral ID
1	34.2	16.0	49.8	100.0	Zircon

All results in weight%

Sample Notes:
S-6195-1

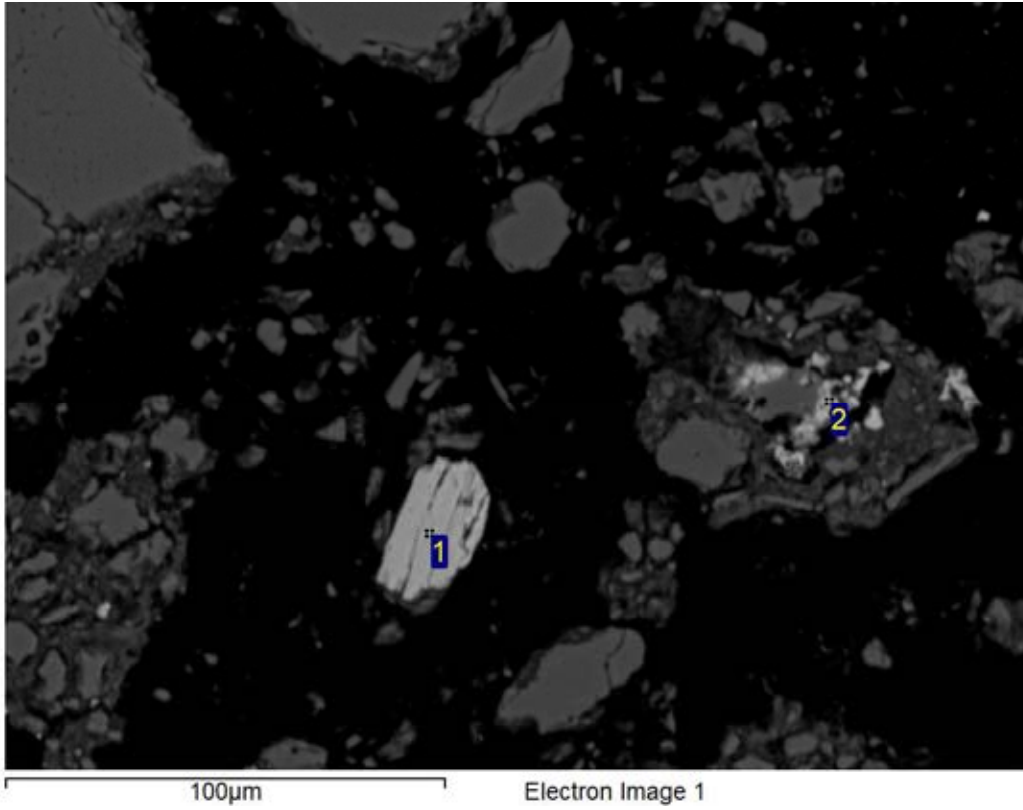


Processing option : All elements analysed (Normalised)

Spectrum	O	F	Na	Si	P	Ca	W	Total	Mineral ID
1	36.6	7.3	0.3		16.9	37.6	1.3	100.0	Apatite
2	52.2			47.8				100.0	Quartz

All results in weight%

Sample Notes:
S-6195-1

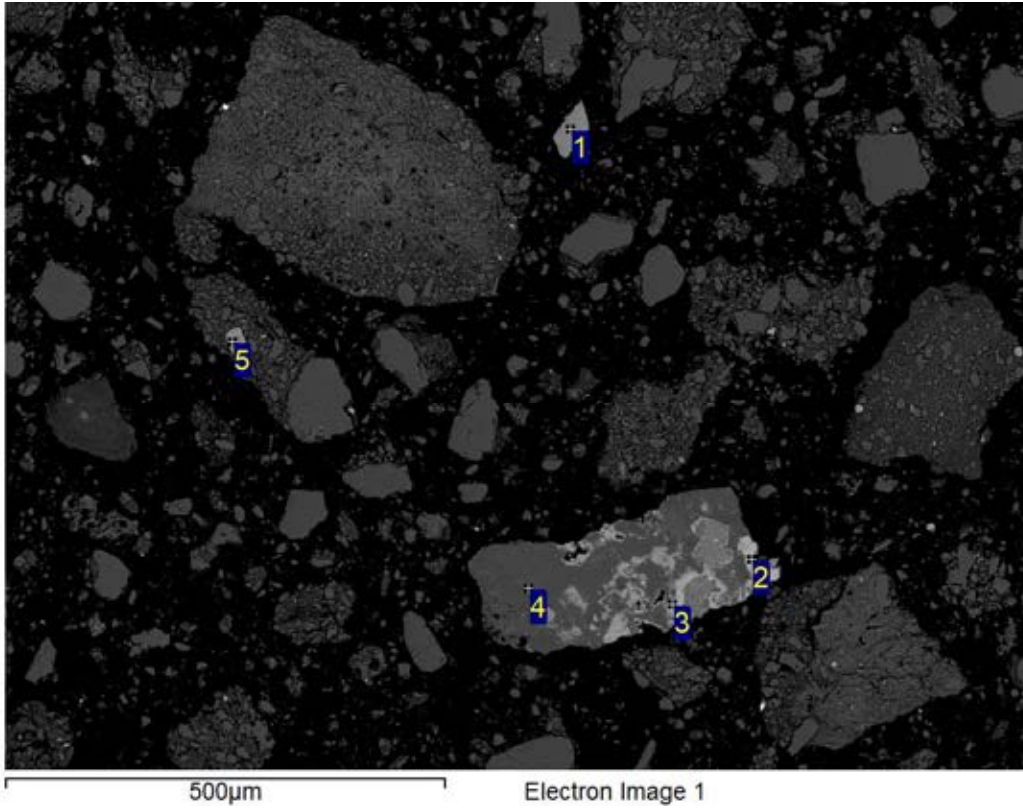


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	41.7			0.2				57.4		0.6	100.0	Rutile
2	38.5	0.4	3.9	9.6	0.5	1.5	0.4		0.4	44.6	100.0	FeOx

All results in weight%

Sample Notes:
S-6195-1

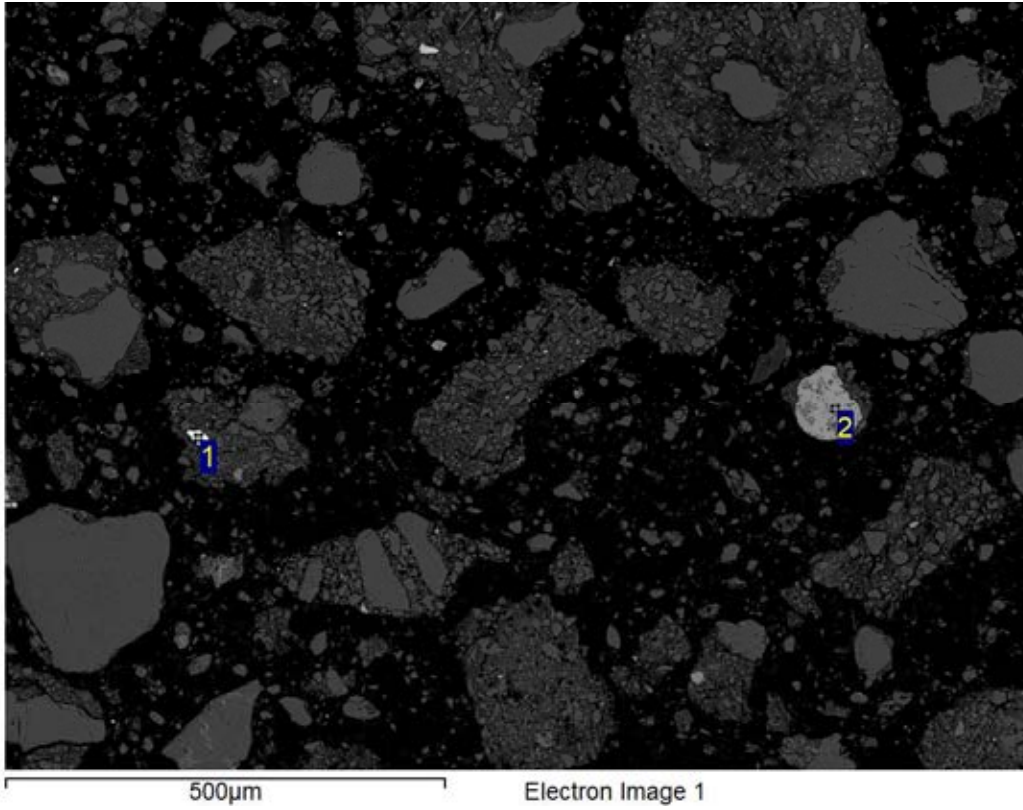


Processing option : All elements analysed (Normalised)

Spectrum	O	F	Mg	Al	Si	P	K	Ca	Ti	Fe	Ce	W	Total	Mineral ID
1	36.2	8.4				17.0		36.5			0.6	1.4	100.0	Apatite
2	37.2			2.5	2.1	0.4				57.9			100.0	FeOx
3	38.3			5.4	5.5	0.4	0.4	0.2		49.8			100.0	FeOx
4	51.7				47.5					0.8			100.0	Quartz
5	45.4		0.3	4.5	6.7		1.7		39.4	2.0			100.0	Rutile

All results in weight%

Sample Notes:
S-6195-1

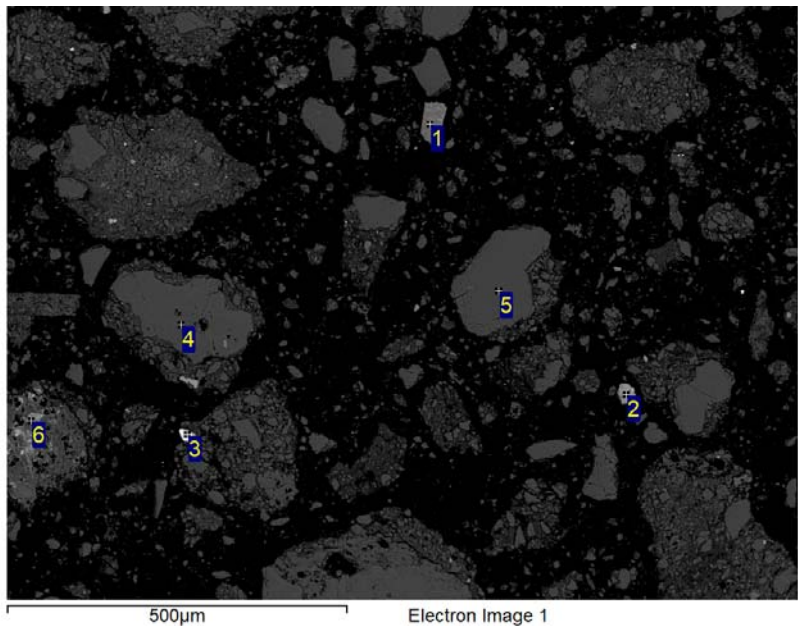


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Ti	Fe	Zr	Total	Mineral ID
1	34.1		15.8			50.1	100.0	Zircon
2	49.9	0.8	1.9	46.6	0.7		100.0	Rutile

All results in weight%

Sample Notes:
S-6195-1 Rep

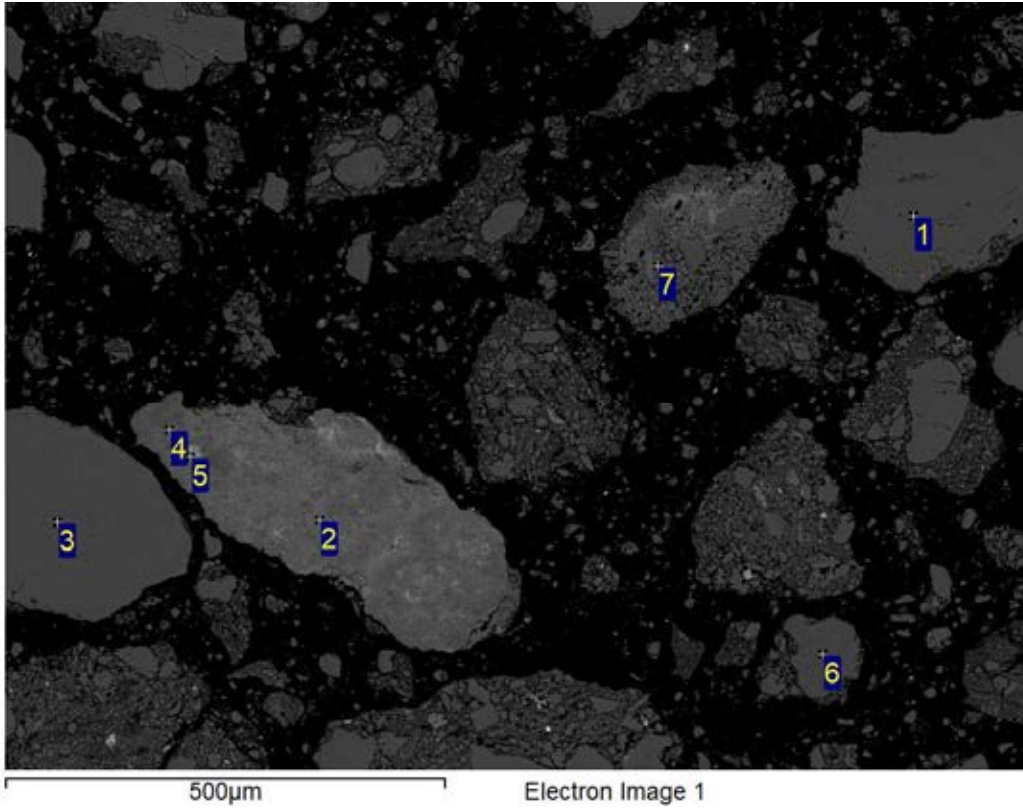


Processing option : All elements analysed (Normalised)

Spectrum	O	F	Na	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Zr	Ba	W	Total	Mineral ID
1	37.6	7.2					17.2		36.6						1.3	100.0	Apatite
2	44.5				1.5	4.7		1.6		47.3		0.3				100.0	Rutile
3	35.3					15.6							49.1			100.0	Zircon
4	49.1		8.3		9.7	32.9										100.0	Albite
5	52.1					47.9										100.0	Quartz
6	43.8	4.5		1.4	2.6	2.4		0.3	3.6		33.8	5.6		2.1		100.0	MnOx

All results in weight%

Sample Notes:
S-6195-1 Rep

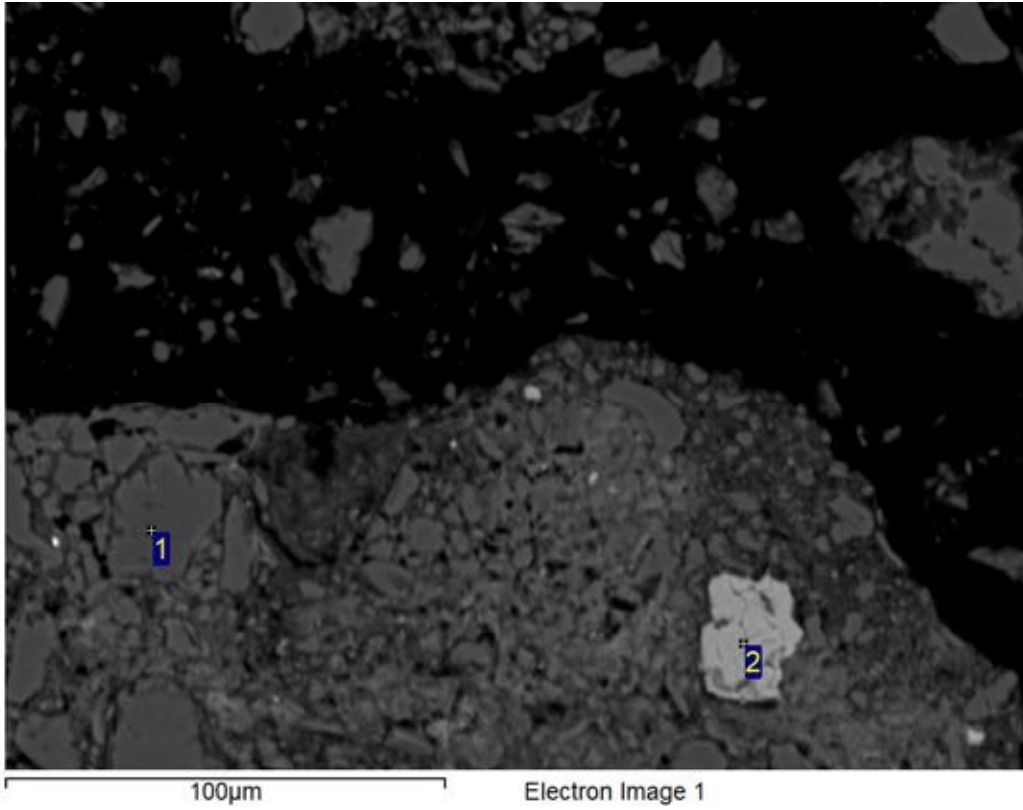


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	S	K	Ca	Ti	Cr	Fe	Total	Mineral ID
1	52.4				47.6							100.0	Quartz
2	48.6			1.1	38.4						11.9	100.0	FeOx/Quartz
3	52.6				47.4							100.0	Quartz
4	46.6			1.4	39.1						12.9	100.0	FeOx/Quartz
5	36.6			7.0	2.4	0.8		0.5		0.4	52.2	100.0	FeOX
6	51.8				48.2							100.0	Quartz
7	44.0	0.9	0.4	19.2	23.8		9.1		0.4		2.2	100.0	Mica

All results in weight%

Sample Notes:
S-6195-1 Rep

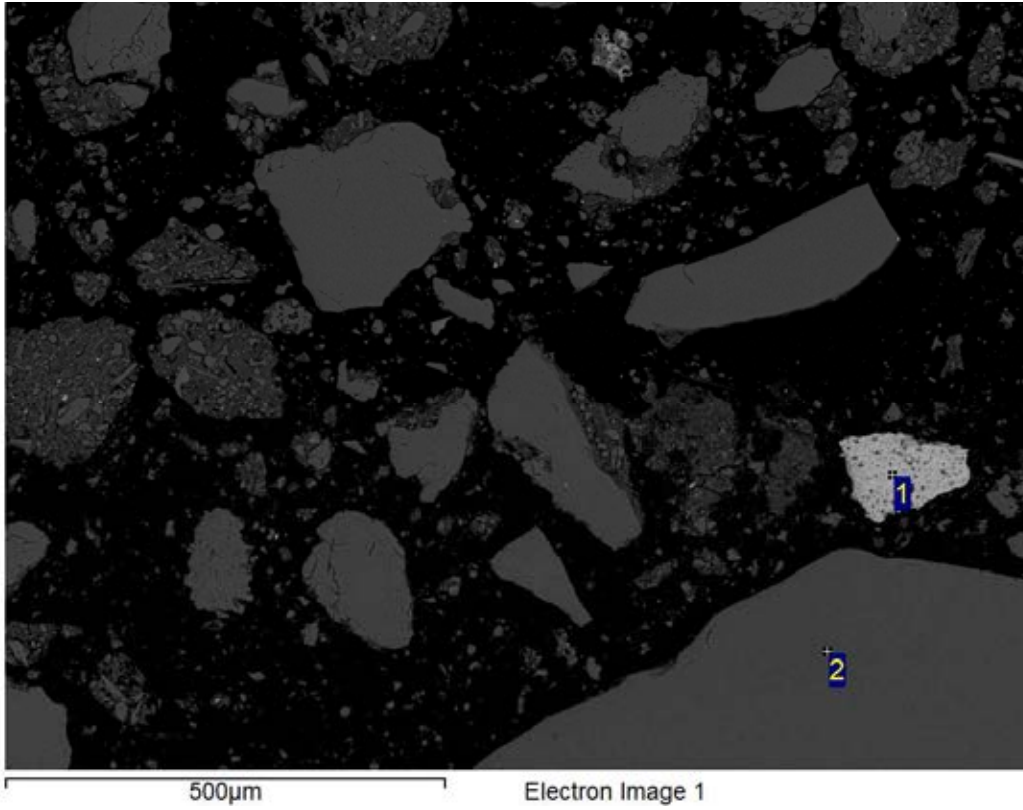


Processing option : All elements analysed (Normalised)

Spectrum	O	Si	Ti	Fe	Total	Mineral ID
1	52.1	47.7		0.2	100.0	Quartz
2	42.2		57.8		100.0	Rutile

All results in weight%

Sample Notes:
S-6195-2

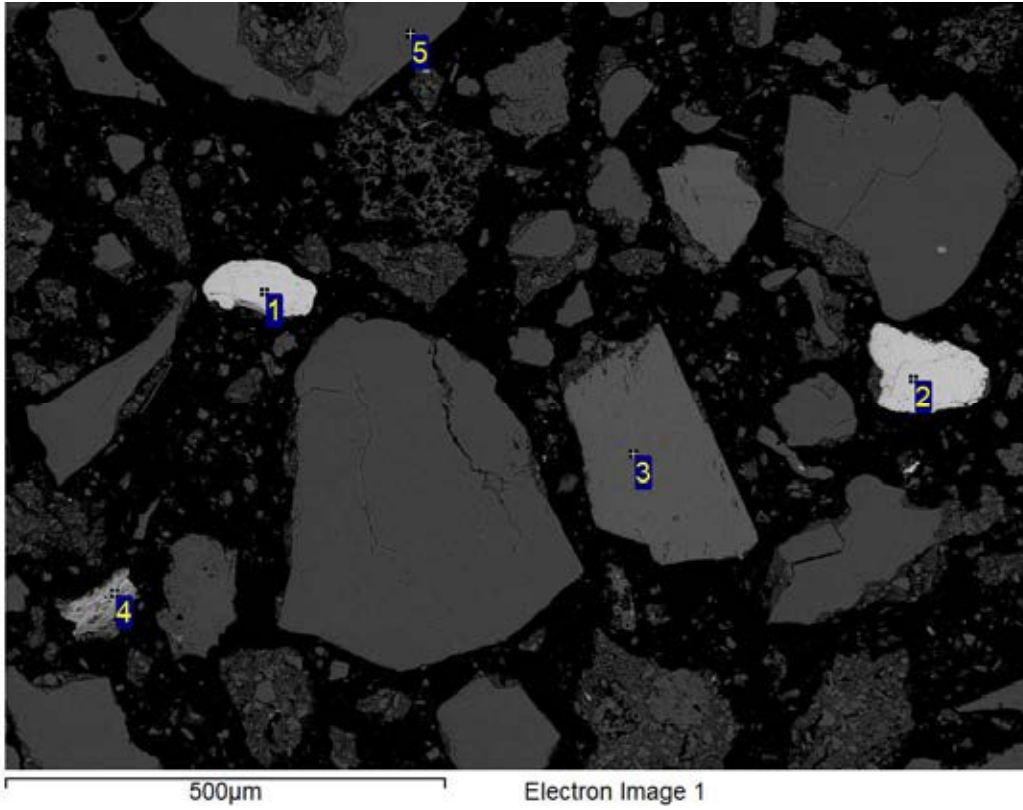


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	K	Ca	Fe	Total	Mineral ID
1	41.9	2.0	4.2	0.7	0.2	0.4	50.7	100.0	FeOx
2	50.9		49.1					100.0	Quartz

All results in weight%

Sample Notes:
S-6195-2

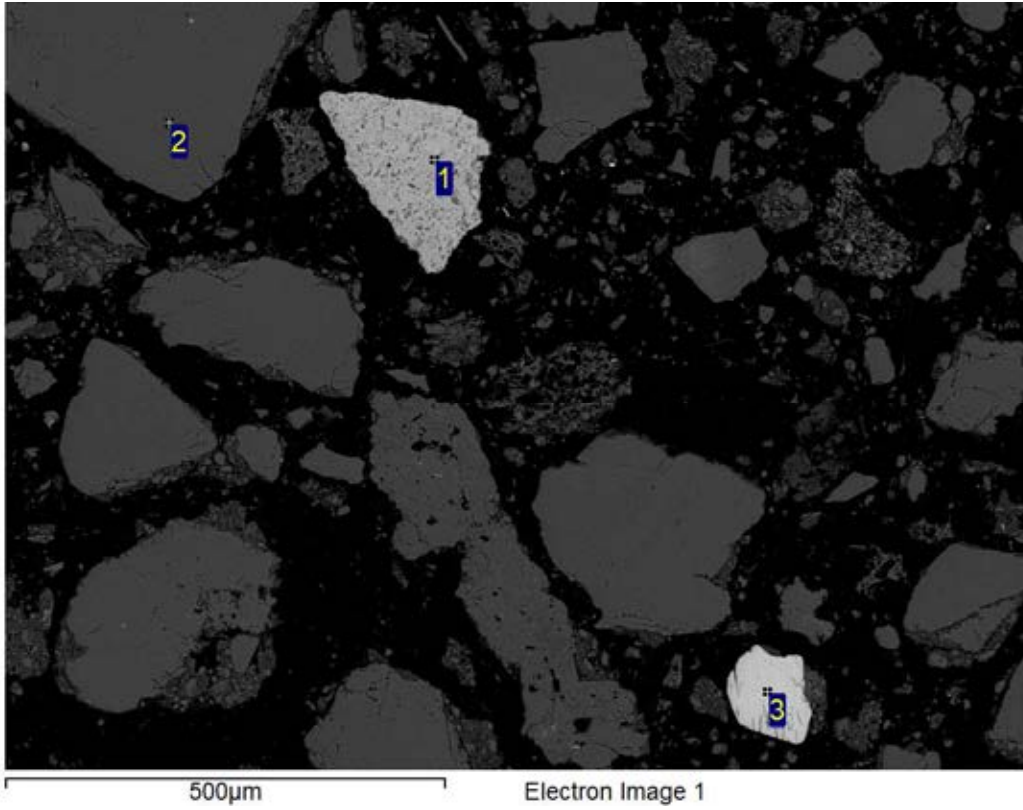


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Al	Si	P	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	34.3							30.8		34.8	100.0	Ilmenite
2	33.7							30.6	0.6	35.0	100.0	Ilmenite
3	45.3	0.7	9.4	32.0		12.6					100.0	Mica
4	41.2		1.3	2.7	0.5		0.3			54.0	100.0	FeOx
5	51.5			48.5							100.0	Quartz

All results in weight%

Sample Notes:
S-6195-2

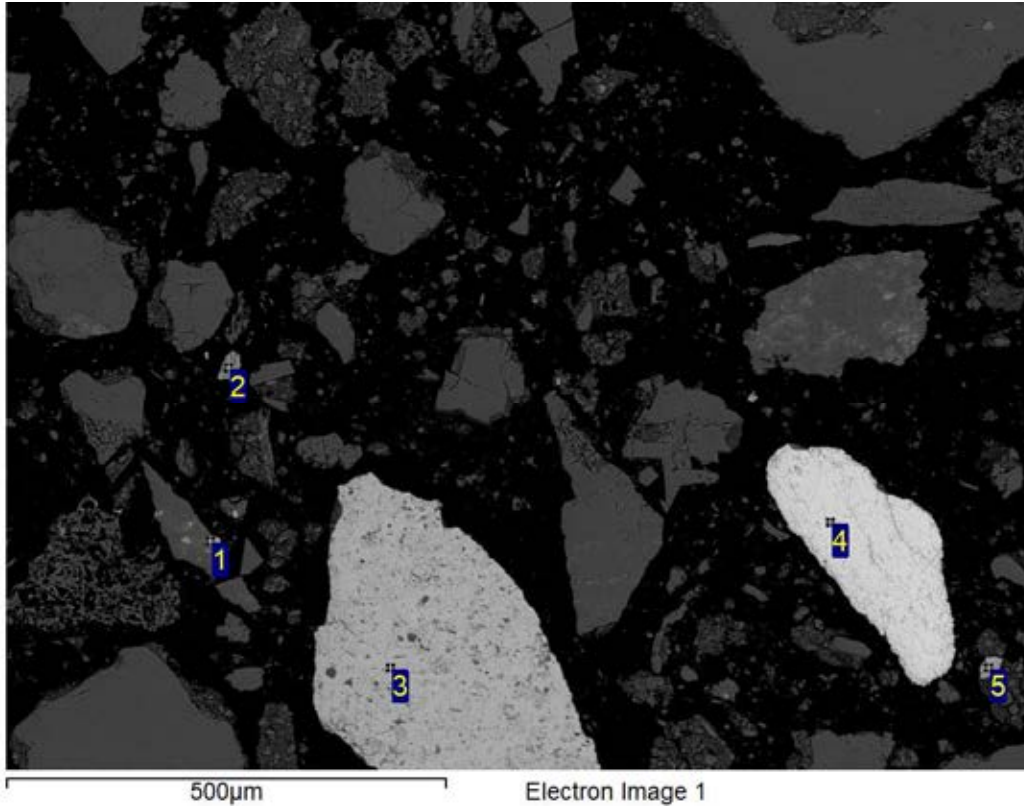


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Ca	Ti	Mn	Fe	Total	Mineral ID
1	42.5	1.2	3.2	0.6	0.3			52.2	100.0	FeOx
2	52.1		47.9						100.0	Quartz
3	34.0					28.9	0.4	36.7	100.0	Ilmenite

All results in weight%

Sample Notes:
S-6195-2

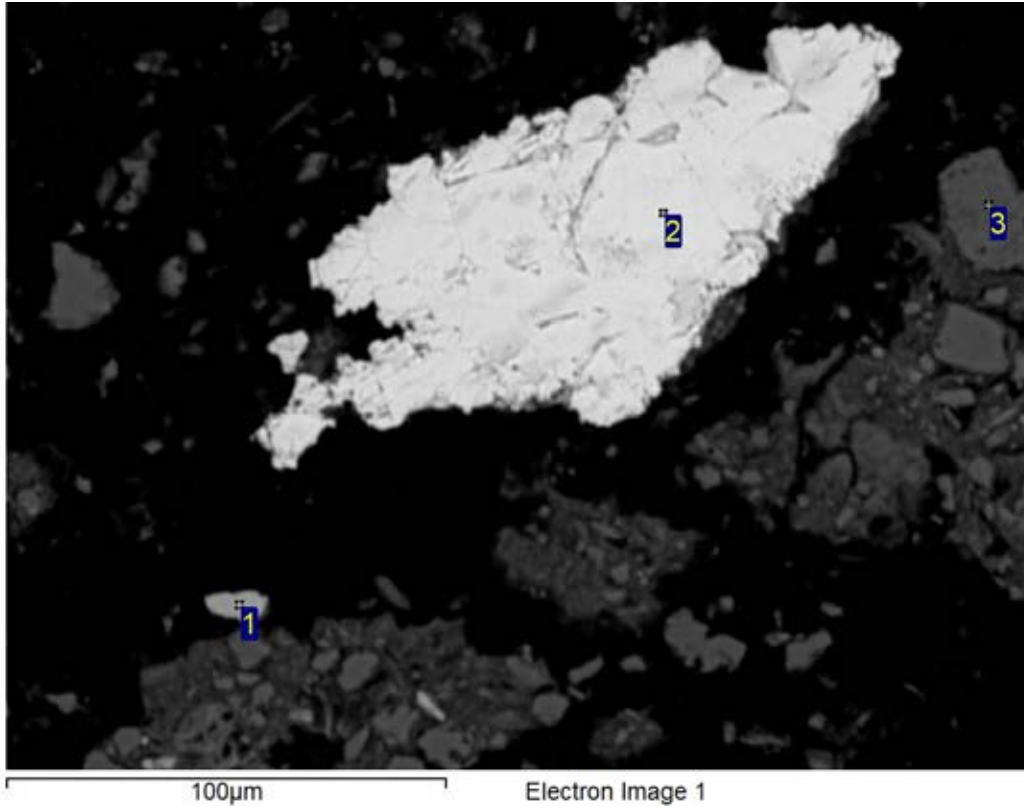


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	46.4		1.7	22.4	0.3					29.2	100.0	FeOx/Quartz
2	40.5	0.6	4.5	7.6		1.1	0.4	2.3		43.0	100.0	FeOx/Quartz
3	41.1		1.0	4.7	0.7	0.2	0.4		1.4	50.4	100.0	FeOx
4	34.3							11.9	0.6	53.3	100.0	Ilmenite/FeOx
5	42.8		0.3	0.2				41.7		14.9	100.0	Ilmenite/FeOx

All results in weight%

Sample Notes:
S-6195-2

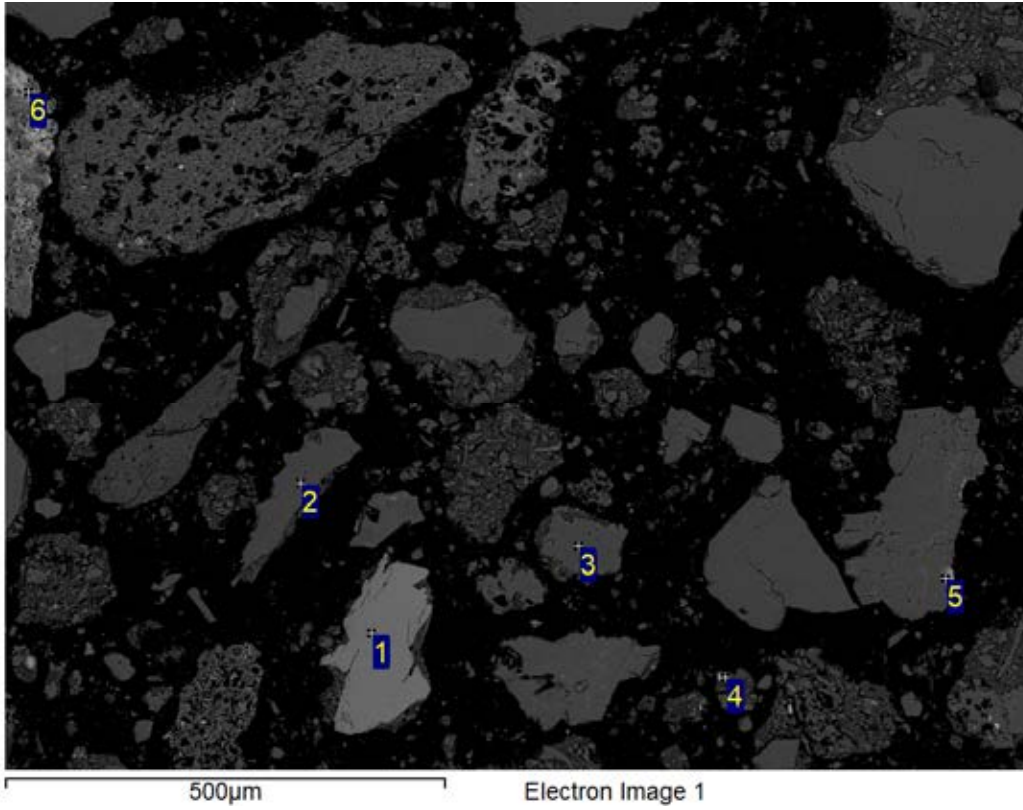


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	Ti	Fe	Total	Mineral ID
1	44.4	0.5	0.9	53.5	0.7	100.0	Rutile
2	33.6			7.0	59.4	100.0	FeOx
3	52.0		47.5		0.5	100.0	Quartz

All results in weight%

Sample Notes:
S-6195-2



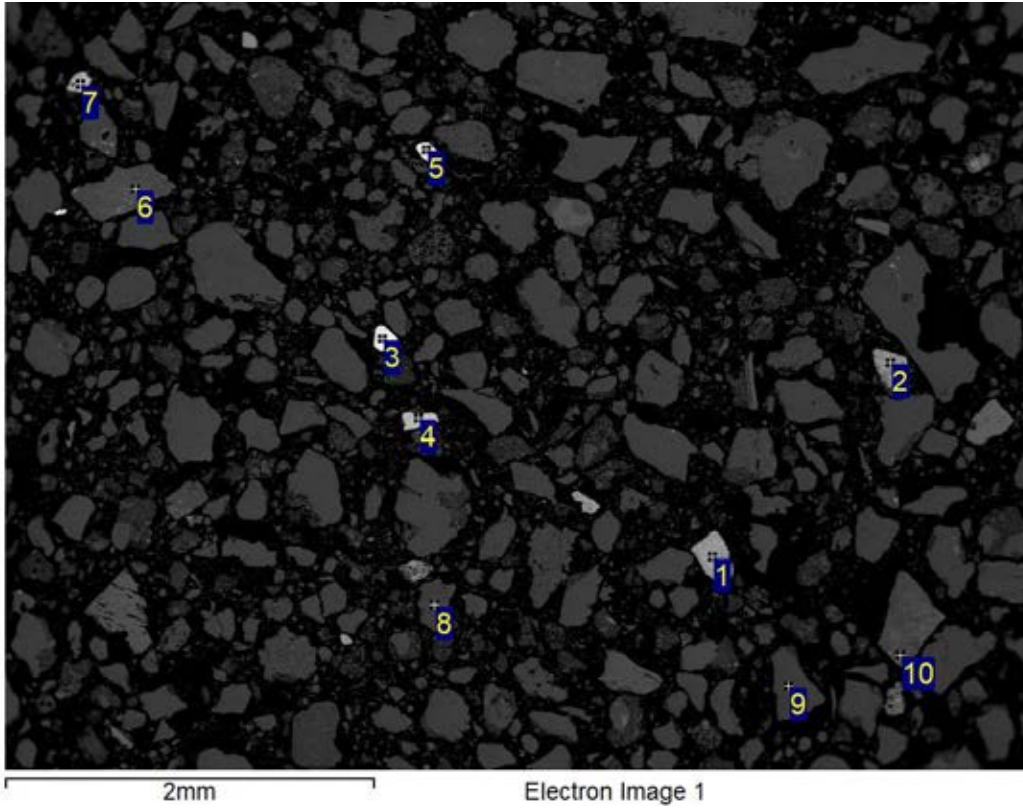
Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	K	Ca	Ti	Fe	Total	Mineral ID
1	44.8	12.5	18.5			16.1		8.1	100.0	Epidote
2	51.8		48.2						100.0	Quartz
3	52.0		48.0						100.0	Quartz
4	46.6	0.4	0.7				52.0	0.4	100.0	Rutile
5	42.0	2.1	37.3		0.1			18.5	100.0	FeOx/Quartz
6	43.6	1.9	19.9	0.4	0.4	0.3		33.6	100.0	FeOx/Quartz

All results in weight%

g

Sample Notes:
S-6195-2

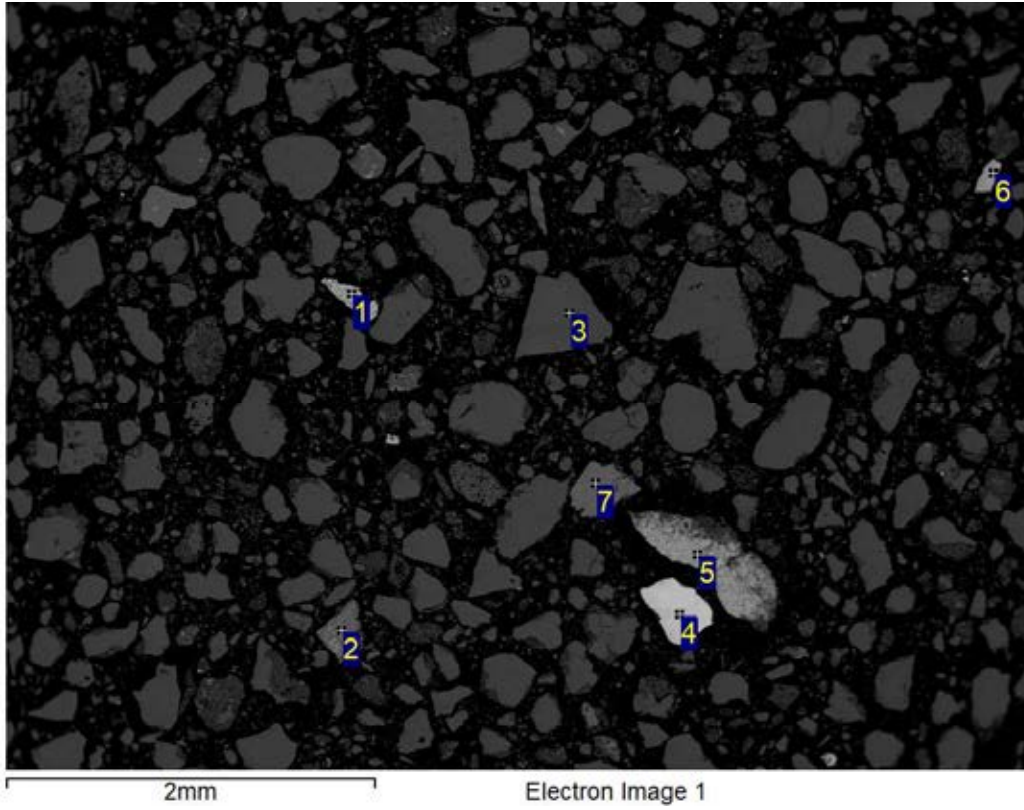


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Zr	Total	Mineral ID
1	42.2	0.3	4.5	7.3	0.5	1.3	0.3			43.6		100.0	FeOx/Silc
2	46.7	0.6	3.4	22.8		1.1	0.2			25.2		100.0	FeOx/Silc
3	34.3			15.8							49.9	100.0	Zircon
4	34.3							31.0	1.6	33.0		100.0	Ilmenite
5	34.9			15.6							49.6	100.0	Zircon
6	53.4		0.7	40.9						5.0		100.0	Quartz
7	36.6			0.5				30.5	2.3	30.1		100.0	Ilmenite
8	52.8			47.2								100.0	Quartz
9	50.6			49.4								100.0	Quartz
10	50.2			45.2						4.6		100.0	Quartz

All results in weight%

Sample Notes:
S-6195-2 Rep

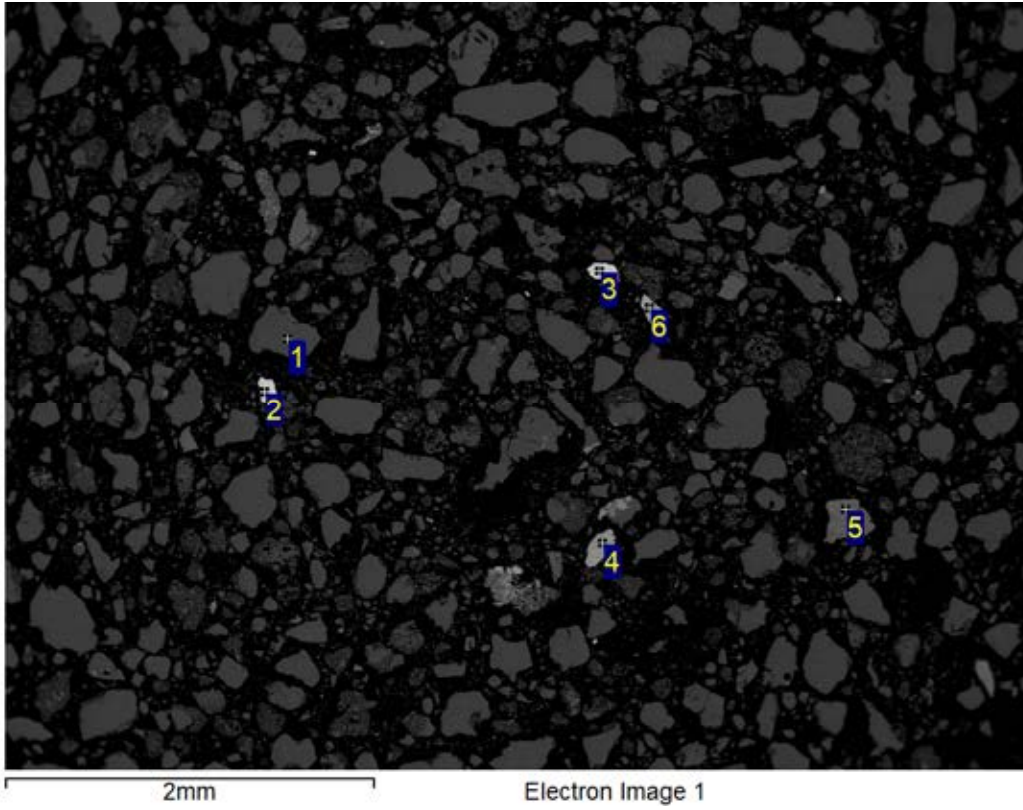


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	42.4			2.1	4.2	0.7	0.2	0.4			50.0	100.0	FeOx
2	51.3			1.3	33.6						13.8	100.0	FeOx/Quartz
3	52.6				46.3						1.1	100.0	Quartz
4	34.6								34.3	1.6	29.6	100.0	Ilmenite
5	42.8		0.8	5.7	10.4		1.9	0.2	0.8		37.5	100.0	FeOx/Silc
6	44.4			2.4	5.7	0.4	0.7	0.3	0.3		45.7	100.0	FeOx/Silc
7	43.9	1.0	10.1	4.8	25.0			8.1			7.1	100.0	Pyroxene

All results in weight%

Sample Notes:
S-6195-2 Rep

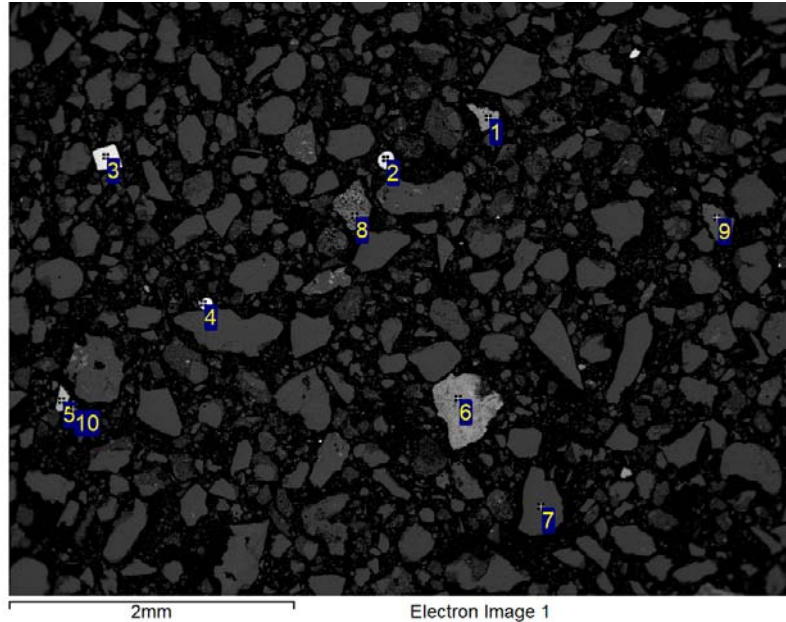


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	52.5		47.5							100.0	Quartz
2	34.2						26.9	2.3	36.6	100.0	Ilmenite
3	34.7						9.1		56.2	100.0	FeOx
4	40.5						59.2		0.4	100.0	Rutile
5	39.4	3.6	20.3						36.7	100.0	FeOx/Quartz
6	42.1	1.3	4.2	0.6	0.3	0.5			51.1	100.0	FeOx

All results in weight%

Sample Notes:
S-6195-2 Rep



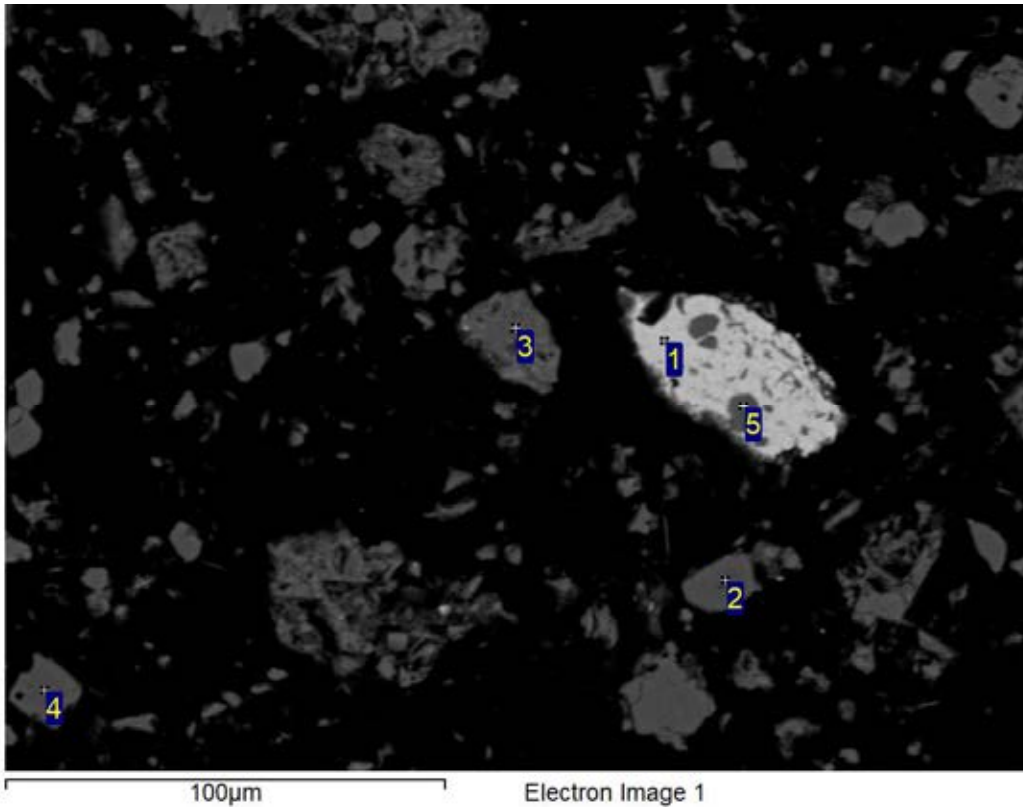
2mm Electron Image 1

Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	K	Ca	Ti	Fe	Zr	Ag	La	Ce	Nd	Hf	Total	Mineral ID
1	47.2		0.3	2.6	5.5	0.6	0.4	0.3	1.1	42.0							100.0	FeOx/Silc
2	34.3				15.4						48.8					1.4	100.0	Zircon
3	36.3				15.2						48.6						100.0	Zircon
4	32.9					14.8		0.8				2.6	12.8	25.7	10.5		100.0	Monazite
5	34.8								30.2	35.0							100.0	Ilmenite
6	44.4		0.4	3.5	5.5	0.5	0.7	0.3	0.4	44.3							100.0	FeOx
7	50.4				49.6												100.0	Quartz
8	41.2			1.7	4.4	0.4	0.4			51.9							100.0	FeOx
9	49.8	0.8		9.2	29.2		11.1										100.0	Mica
10	36.0			0.7	15.4						47.8						100.0	Zircon

All results in weight%

Sample Notes:
S-6195-3

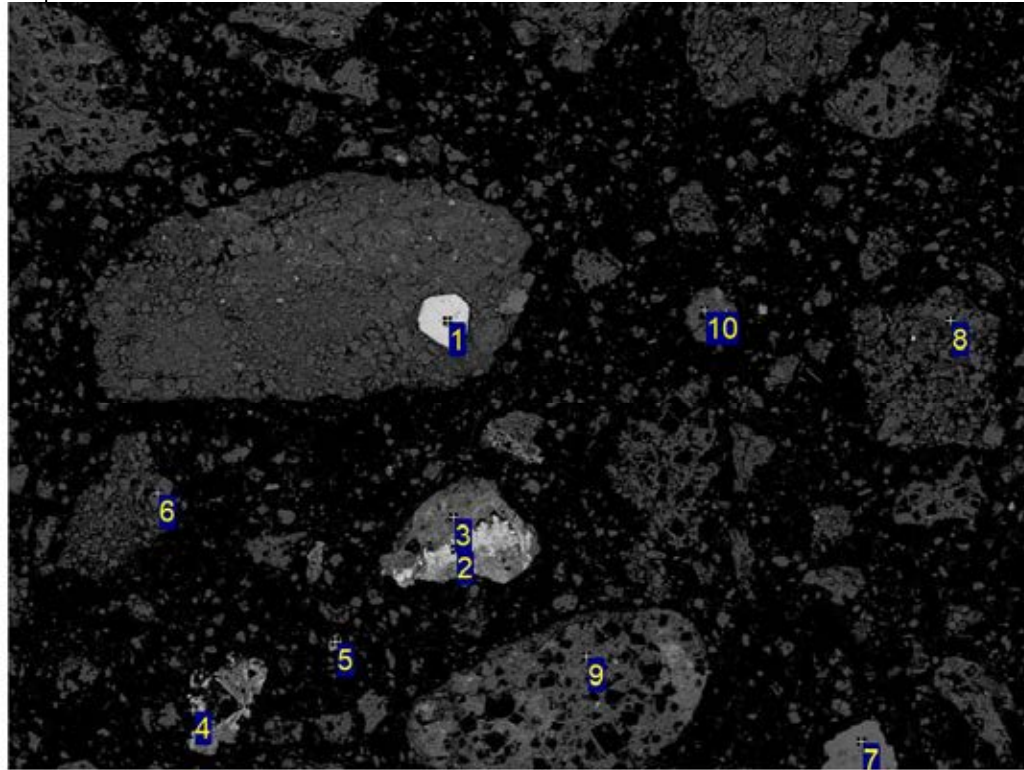


Processing option : All elements analysed (Normalised)

Spectrum	In stats.	O	Mg	Al	Si	K	Ca	Ti	Fe	Total	Mineral ID
1	Yes	42.2			4.3		0.5		53.0	100.0	FeOx
2	Yes	52.2			47.6				0.2	100.0	Quartz
3	Yes	49.3	2.5	14.6	26.2	5.0		0.2	2.1	100.0	Micas
4	Yes	52.1			47.9					100.0	Quartz
5	Yes	43.9	0.5	1.0	21.7	0.2	0.3		32.4	100.0	Quartz/FeOx
Max.		52.2	2.5	14.6	47.9	5.0	0.5	0.2	53.0		
Min.		42.2	0.5	1.0	4.3	0.2	0.3	0.2	0.2		

All results in weight%

Sample Notes:
S-6195-3

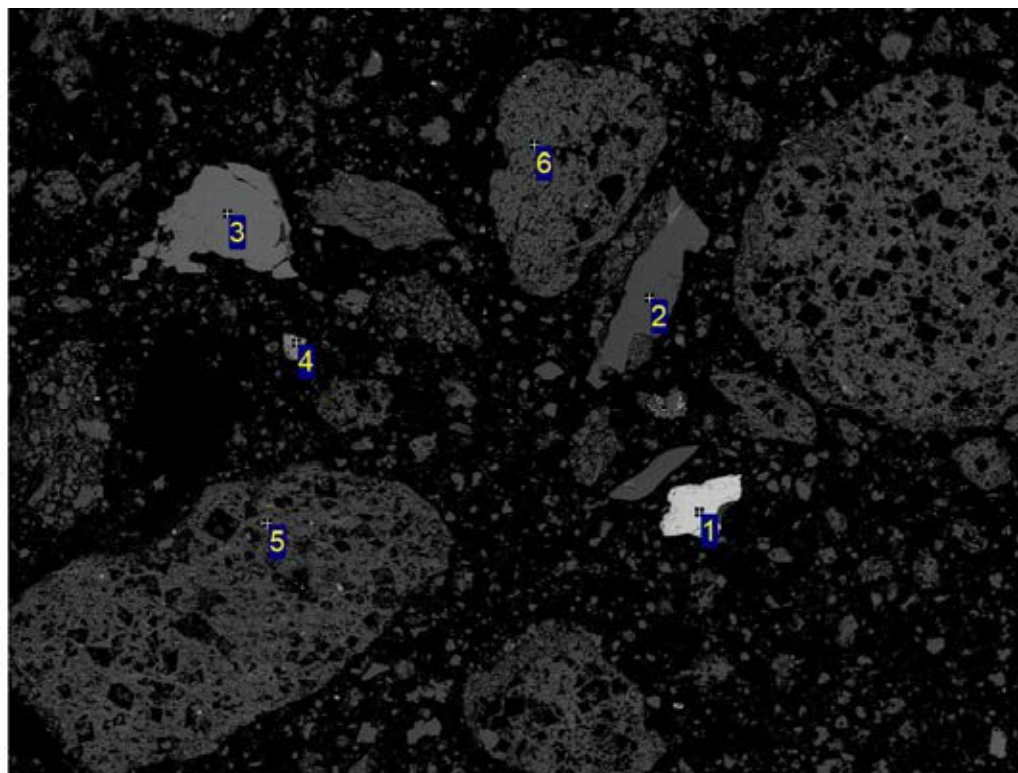


500µm

Electron Image 1

Spectrum	In stats.	O	F	Na	Mg	Al	Si	P	S	K	Ca	Ti	Fe	Total	Mineral ID
1	Yes	37.9					1.7				0.3		60.1	100.0	FeOx
2	Yes	38.5				0.6	1.4	0.3				0.5	58.7	100.0	FeOx
3	Yes	44.7		3.5	1.4	10.2	22.8		0.3	3.5	0.7	1.2	11.7	100.0	Micas
4	Yes	40.7				3.0	4.1	0.5		0.2	0.4		51.1	100.0	FeOx
5	Yes	38.4	5.5					18.6			37.2		0.3	100.0	Apatite
6	Yes	49.5		8.2		9.8	32.4							100.0	Plagioclase
7	Yes	53.0			0.8	1.0	4.3				40.6		0.3	100.0	Calcite
8	Yes	44.5			1.9	13.9	26.8			3.8	0.6	0.3	8.2	100.0	Micas
9	Yes	49.8		0.4	1.5	8.6	34.2			3.6		0.2	1.7	100.0	Micas
10	Yes	52.7			0.7	3.0	42.1			1.0			0.5	100.0	Quartz
Max.		53.0	5.5	8.2	1.9	13.9	42.1	18.6	0.3	3.8	40.6	1.2	60.1		
Min.		37.9	5.5	0.4	0.7	0.6	1.4	0.3	0.3	0.2	0.3	0.2	0.3		

Sample Notes:
S-6195-3



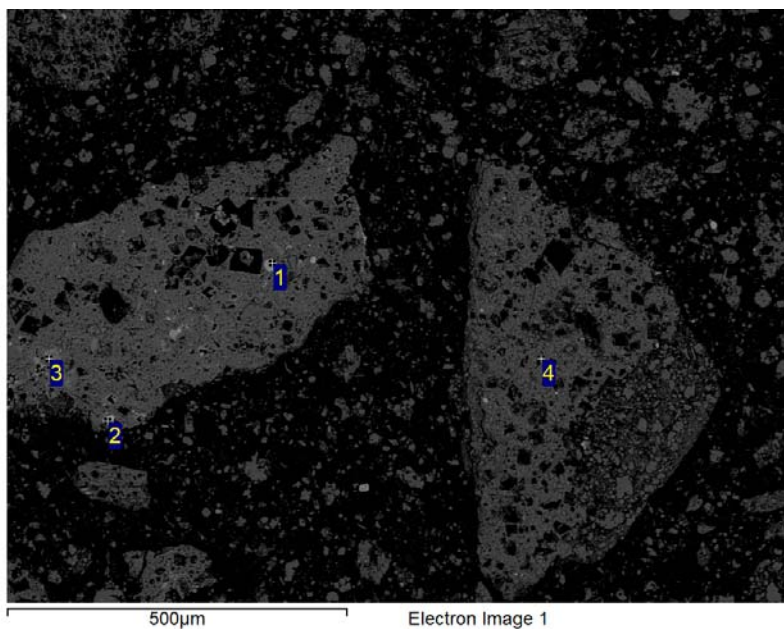
500µm

Electron Image 1

Spectrum	In stats.	O	F	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	W	Total	Mineral ID
1	Yes	32.3								31.2	2.2	34.4		100.0	Ilmenite
2	Yes	52.3				47.7								100.0	Quartz
3	Yes	53.5		0.4					45.8			0.4		100.0	Calcite
4	Yes	37.3	7.2				17.3		37.0				1.3	100.0	Apatite
5	Yes	40.0	6.7		0.6	0.9	16.7		33.3			1.8		100.0	Apatite
6	Yes	50.9		0.4	1.7	46.1		0.4				0.5		100.0	Quartz
Max.		53.5	7.2	0.4	1.7	47.7	17.3	0.4	45.8	31.2	2.2	34.4	1.3		
Min.		32.3	6.7	0.4	0.6	0.9	16.7	0.4	33.3	31.2	2.2	0.4	1.3		

All results in weight%

Sample Notes:
S-6195-3

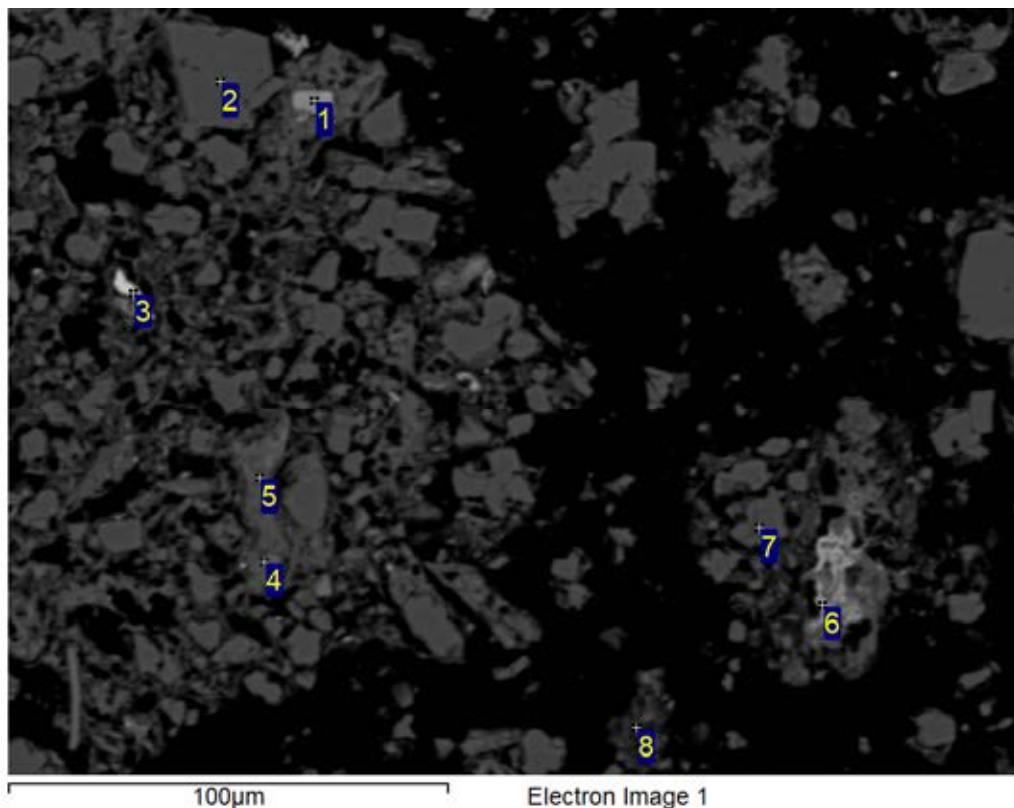


Processing option : All elements analysed (Normalised)

Spectrum	In stats.	O	F	Na	Mg	Al	Si	P	S	K	Ca	Mn	Fe	Co	Ni	W	Total	Mineral ID
1	Yes	36.2	6.5					18.5			36.9		0.6			1.3	100.0	Apatite
2	Yes	39.8		0.5	0.5	1.7	0.9				5.3	39.1	8.9	1.2	2.2		100.0	MnOx
3	Yes	34.8			0.6	5.2	4.5	0.6	0.4		0.5		53.4				100.0	FeOx
4	Yes	50.6			2.5	8.9	32.4			2.4	0.2		3.1				100.0	Silicates
Max.		50.6	6.5	0.5	2.5	8.9	32.4	18.5	0.4	2.4	36.9	39.1	53.4	1.2	2.2	1.3		
Min.		34.8	6.5	0.5	0.5	1.7	0.9	0.6	0.4	2.4	0.2	39.1	0.6	1.2	2.2	1.3		

All results in weight%

Sample Notes:
S-6195-3 Rep

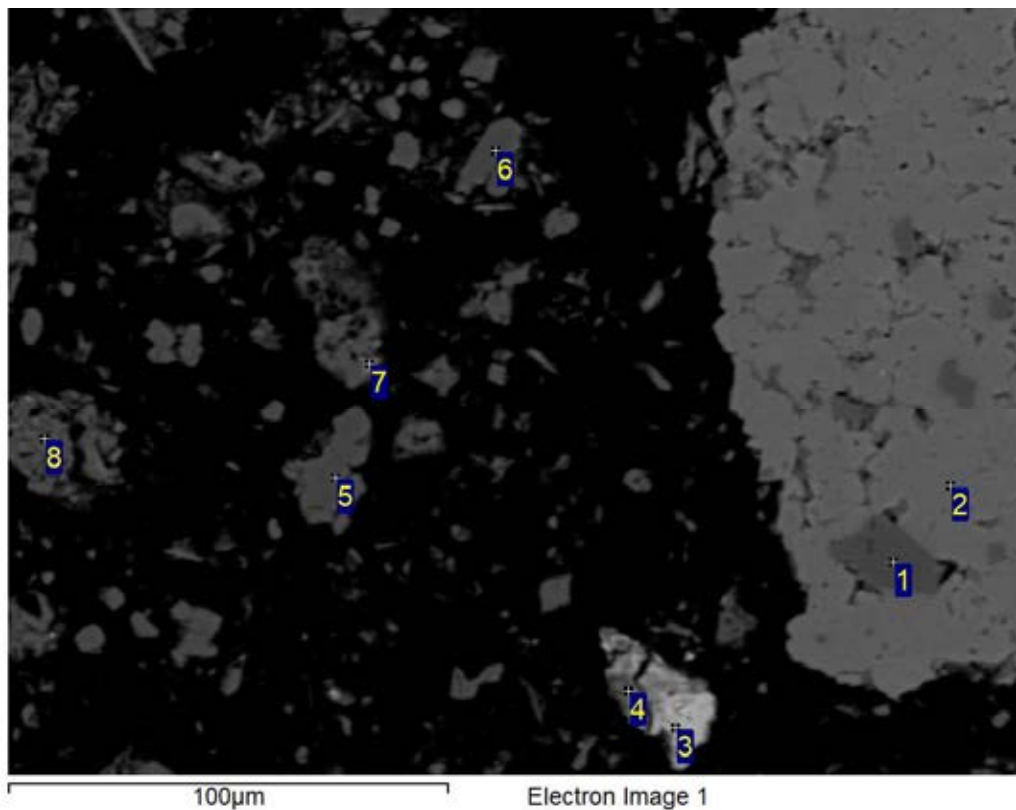


Processing option : All elements analysed (Normalised)

Spectrum	In stats.	O	F	Na	Mg	Al	Si	P	Cl	K	Ca	Ti	Fe	Total	Mineral ID
1	Yes	37.9	6.7			0.3		17.6			37.1		0.3	100.0	Apatite
2	Yes	48.5		7.4		10.9	31.5			0.6	0.8		0.2	100.0	Silicates
3	Yes	40.3				1.2	4.0	0.5			0.6		53.4	100.0	FeOx
4	Yes	52.4			1.3	5.7	36.4			2.7			1.5	100.0	Silicates
5	Yes	46.3			4.3	10.5	20.8	1.0		2.8	3.3	0.3	10.7	100.0	Silicates
6	Yes	25.0			1.0	8.1	19.0		1.2	1.4	0.7		43.6	100.0	Silicates
7	Yes	55.5				0.7	42.6			0.1			1.0	100.0	Quartz
8	Yes	43.2			1.9	12.0	28.5		0.4	2.7	0.7		10.6	100.0	Silicates
Max.		55.5	6.7	7.4	4.3	12.0	42.6	17.6	1.2	2.8	37.1	0.3	53.4		
Min.		25.0	6.7	7.4	1.0	0.3	4.0	0.5	0.4	0.1	0.6	0.3	0.2		

All results in weight%

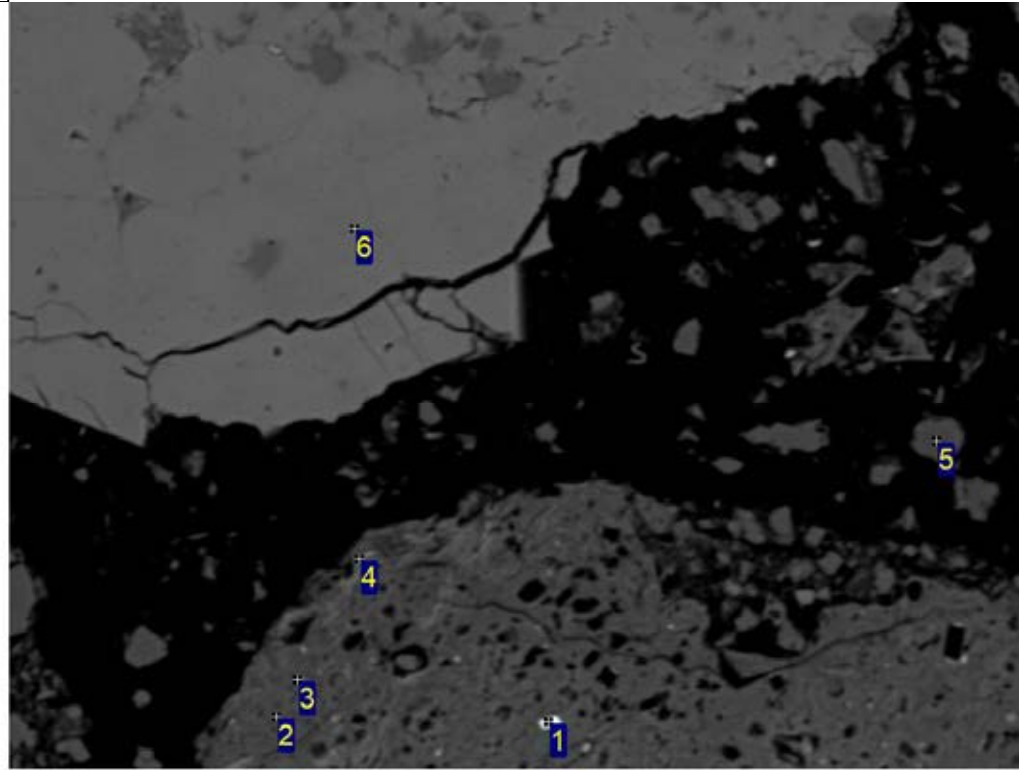
Sample Notes:
S-6195-3 Rep



Processing option : All elements analysed (Normalised)

Spectrum	In stats.	O	Na	Mg	Al	Si	P	K	Ca	Ti	Fe	Total	Mineral ID
1	Yes	48.9	8.2		9.7	32.8			0.4			100.0	Albite
2	Yes	55.1		0.6					44.3			100.0	Calcite
3	Yes	41.9			1.6	5.6	0.6		1.0		49.3	100.0	FeOx
4	Yes	42.6		1.9	7.4	21.6		2.2	0.8	1.0	22.6	100.0	Silicates
5	Yes	52.1		0.2	0.4	47.3						100.0	Quartz
6	Yes	53.7				46.3						100.0	Quartz
7	Yes	51.5		1.8	6.7	15.8	5.9	2.0	13.3	0.3	2.7	100.0	Silicates
8	Yes	52.0		1.4	4.1	40.1		1.0			1.3	100.0	Quartz
Max.		55.1	8.2	1.9	9.7	47.3	5.9	2.2	44.3	1.0	49.3		
Min.		41.9	8.2	0.2	0.4	5.6	0.6	1.0	0.4	0.3	1.3		

Sample Notes:
S-6195-3 Rep



100µm

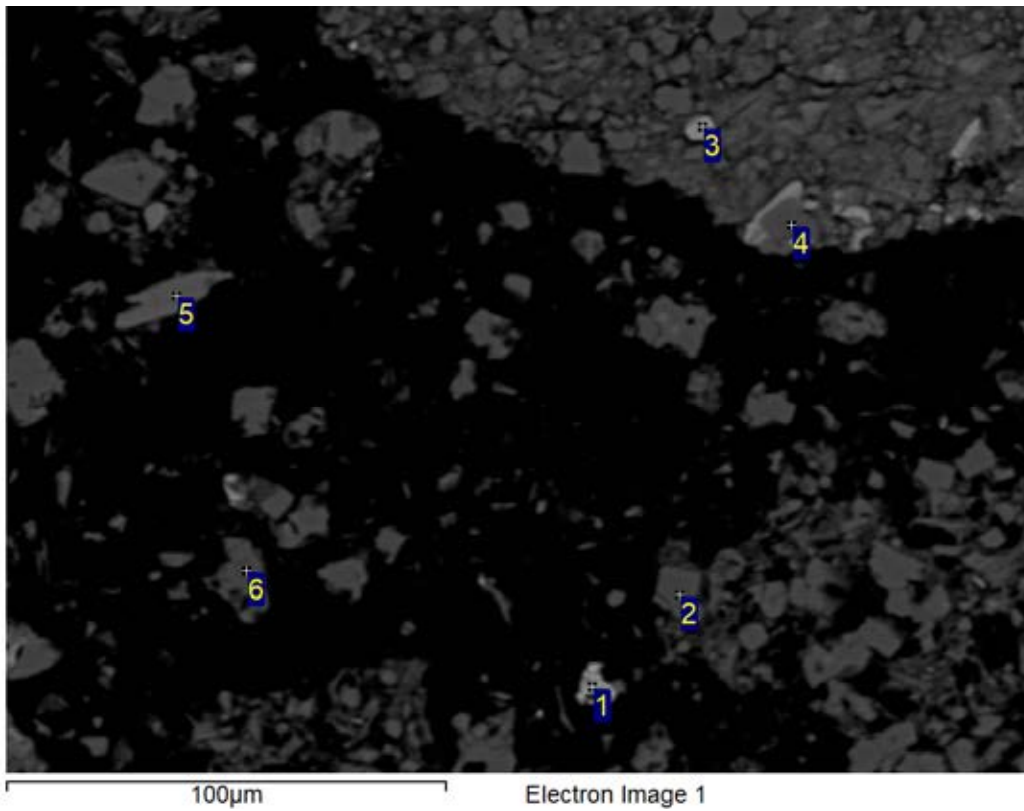
Electron Image 1

Processing option : All elements analysed (Normalised)

Spectrum	In stats.	O	Mg	Al	Si	P	S	K	Ca	Ti	Fe	Zr	Hf	Total	Mineral ID
1	Yes	39.0	0.3	1.2	15.1			0.4			0.6	42.3	1.2	100.0	Zircon
2	Yes	46.8	3.3	15.0	25.8			4.4		0.4	4.4			100.0	Micas
3	Yes	49.1	2.4	10.0	16.0			2.6		16.9	2.9			100.0	Ti-Silicates
4	Yes	40.3	2.7	11.3	15.9	0.5	0.3	2.2	0.5		26.4			100.0	Silicates
5	Yes	52.0			48.0									100.0	Quartz
6	Yes	54.6	0.3						45.1					100.0	Calcite
Max.		54.6	3.3	15.0	48.0	0.5	0.3	4.4	45.1	16.9	26.4	42.3	1.2		
Min.		39.0	0.3	1.2	15.1	0.5	0.3	0.4	0.5	0.4	0.6	42.3	1.2		

All results in weight%

Sample Notes:
S-6195-3 Rep

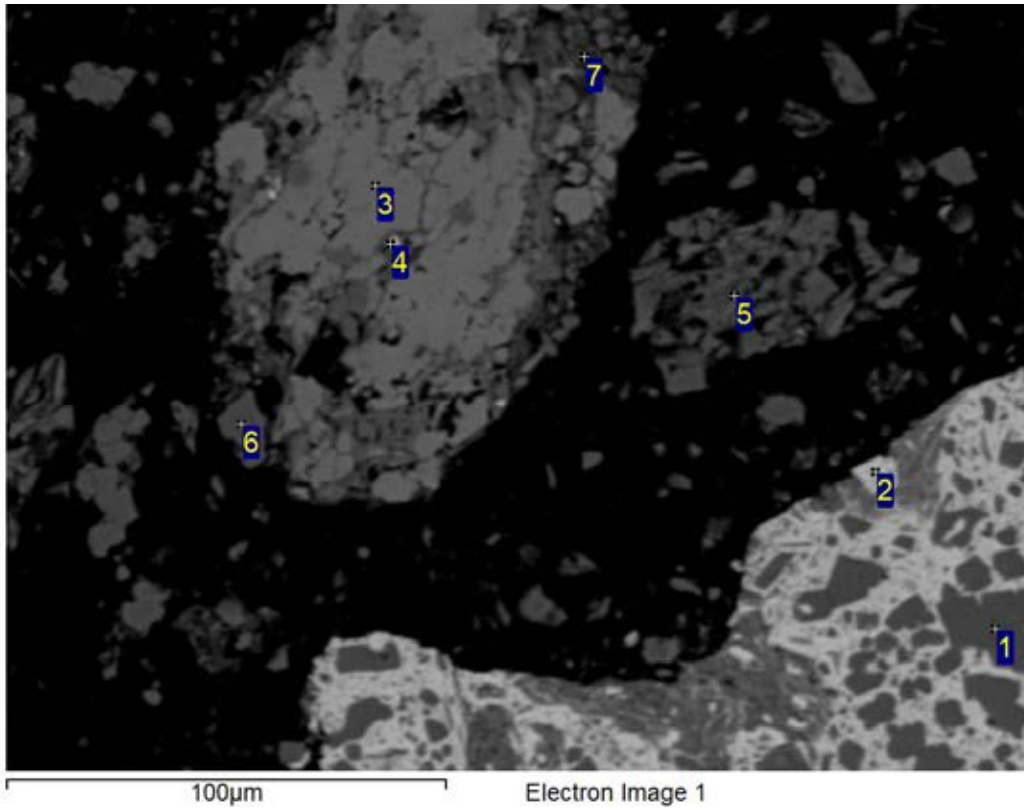


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	S	Cl	K	Ca	Ti	Fe	Total	Mineral ID
1	42.0		0.9	4.9	9.4	0.4		0.2	1.0	0.5		40.7	100.0	FeOx
2	52.3			0.4	46.9				0.0			0.3	100.0	Quartz
3	40.7		2.5	9.2	19.7	4.7	0.6		2.3	10.5	0.3	9.6	100.0	Pyroxene
4	52.6				44.8	1.1				1.4			100.0	Quartz
5	47.7	0.3	0.7	17.2	23.2				8.6		0.6	1.7	100.0	Mica
6	52.7		0.9	3.9	40.3				1.0			1.2	100.0	Quartz

All results in weight%

Sample Notes:
S-6195-3 Rep

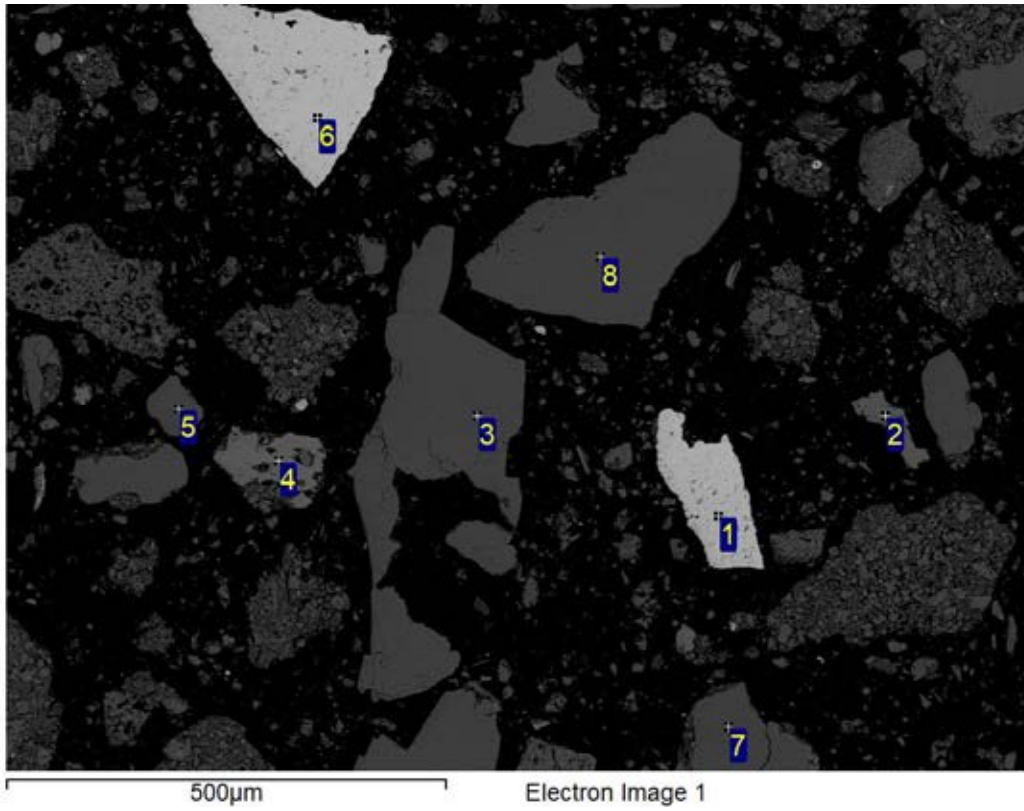


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	S	K	Ca	Ti	Fe	Total	Mineral ID
1	51.8				47.6					0.6	100.0	Quartz
2	42.6			0.7	8.2			0.4		48.2	100.0	FeOx
3	55.3		0.7					43.3		0.6	100.0	Calcite
4	51.4	0.4	1.8	7.6	17.1		2.1	3.3	15.0	1.3	100.0	Rutile
5	46.1		3.9	9.4	31.4	0.2	2.3	0.4	0.3	5.9	100.0	Feldspar
6	52.4				47.6						100.0	Quartz
7	44.6		2.0	9.1	20.4		2.4	15.8		5.9	100.0	Pyroxene

All results in weight%

Sample Notes:
S-6195-4

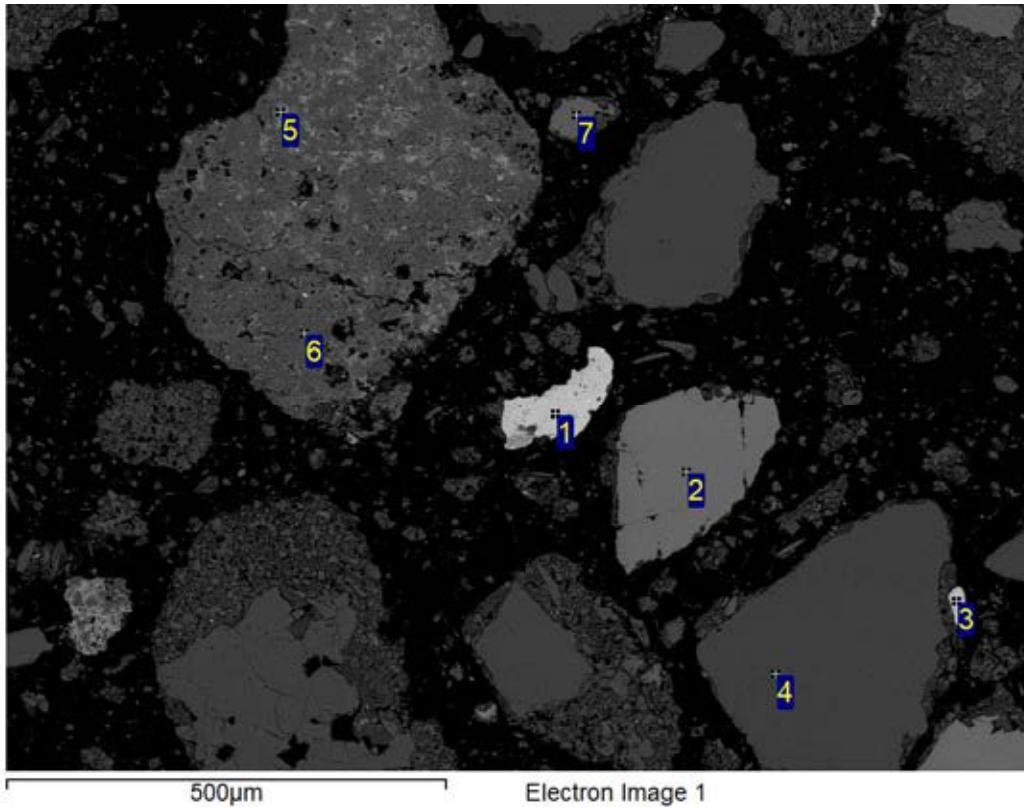


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ca	Fe	Total	Mineral ID
1	40.7		0.8	3.5	0.9			54.1	100.0	FeOx
2	45.4		9.3	31.6		13.6			100.0	Mica
3	51.6			48.4					100.0	Quartz
4	54.5	0.4					45.0		100.0	Calcite
5	52.0			48.0					100.0	Quartz
6	40.6		0.5	2.8	0.4			55.7	100.0	FeOx
7	51.2			48.8					100.0	Quartz
8	51.8			48.2					100.0	Quartz

All results in weight%

Sample Notes:
S-6195-4

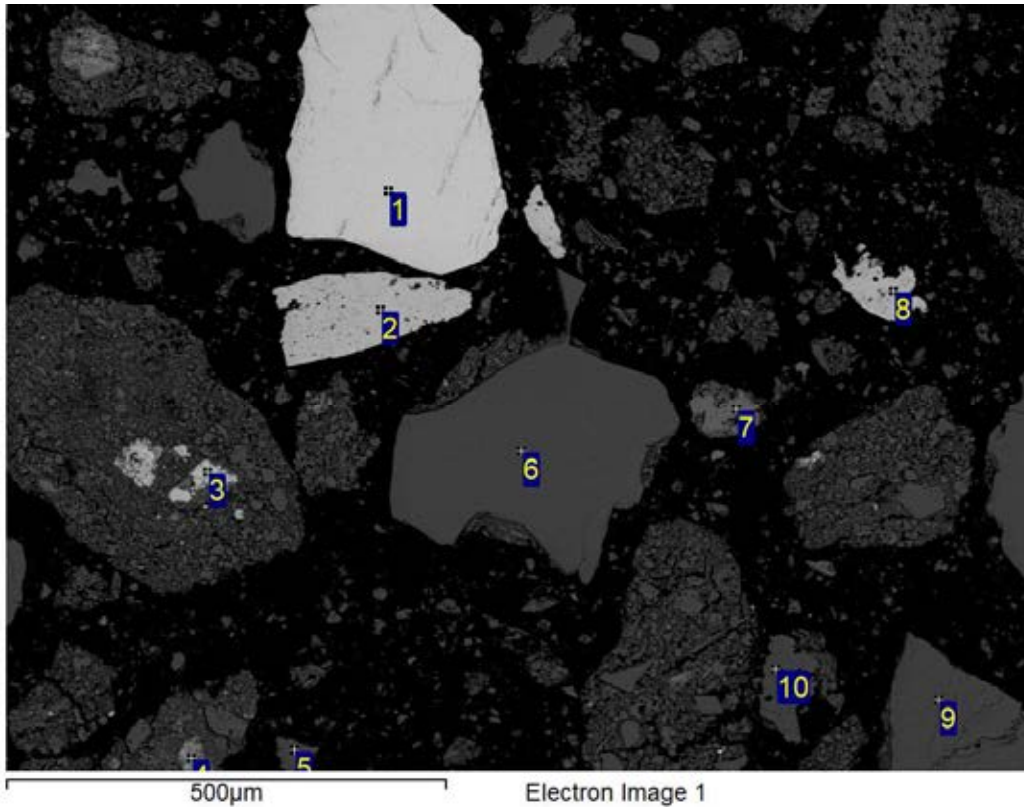


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	35.2								32.2		32.7	100.0	Ilmenite
2	44.4			12.7	18.9			16.3			7.7	100.0	Epidote
3	35.3								30.5	0.4	33.7	100.0	Ilmenite
4	51.6				48.4							100.0	Quartz
5	37.3		1.1	6.0	10.1	0.6	1.0	0.7			43.2	100.0	FeOx/Feldspar
6	49.6	3.4	2.1	11.9	26.2		2.5	0.5			3.8	100.0	FeOx/Feldspar
7	54.5							45.5				100.0	Calcite

All results in weight%

Sample Notes:
S-6195-4

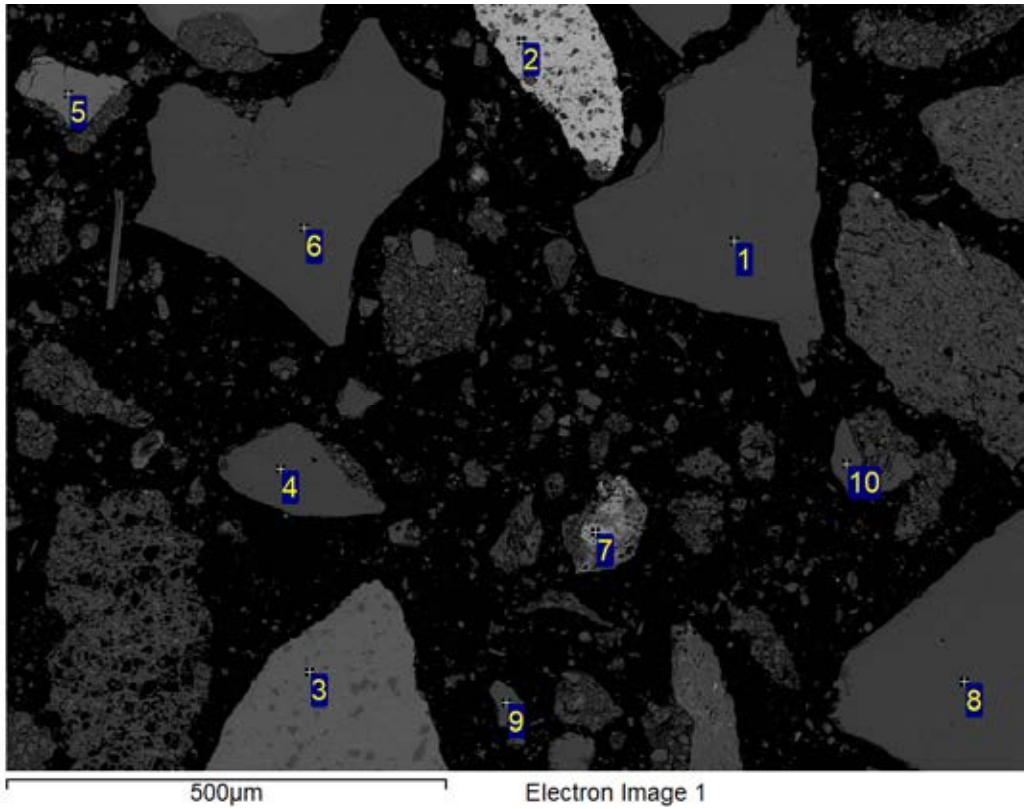


Processing option : All elements analysed (Normalised)

Spectrum	O	F	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Ni	Total	Mineral ID
1	33.9								31.0	0.6	34.5		100.0	Ilmenite
2	41.3			1.2	3.5	0.8	0.3			0.8	52.2		100.0	FeOx
3	40.2			0.7	2.0	0.9		0.3			56.0		100.0	FeOx
4	42.7	1.9	1.3	6.4	11.3		1.4	4.0		26.9	3.7	0.4	100.0	MnOx/Silc
5	52.3				47.7								100.0	Quartz
6	51.8				48.2								100.0	Quartz
7	54.9		0.4					44.2			0.4		100.0	Calcite
8	41.9			0.9	2.7	1.0		0.2			53.3		100.0	FeOx
9	51.6				48.4								100.0	Quartz
10	49.9				50.1								100.0	Quartz

All results in weight%

Sample Notes:
S-6195-4

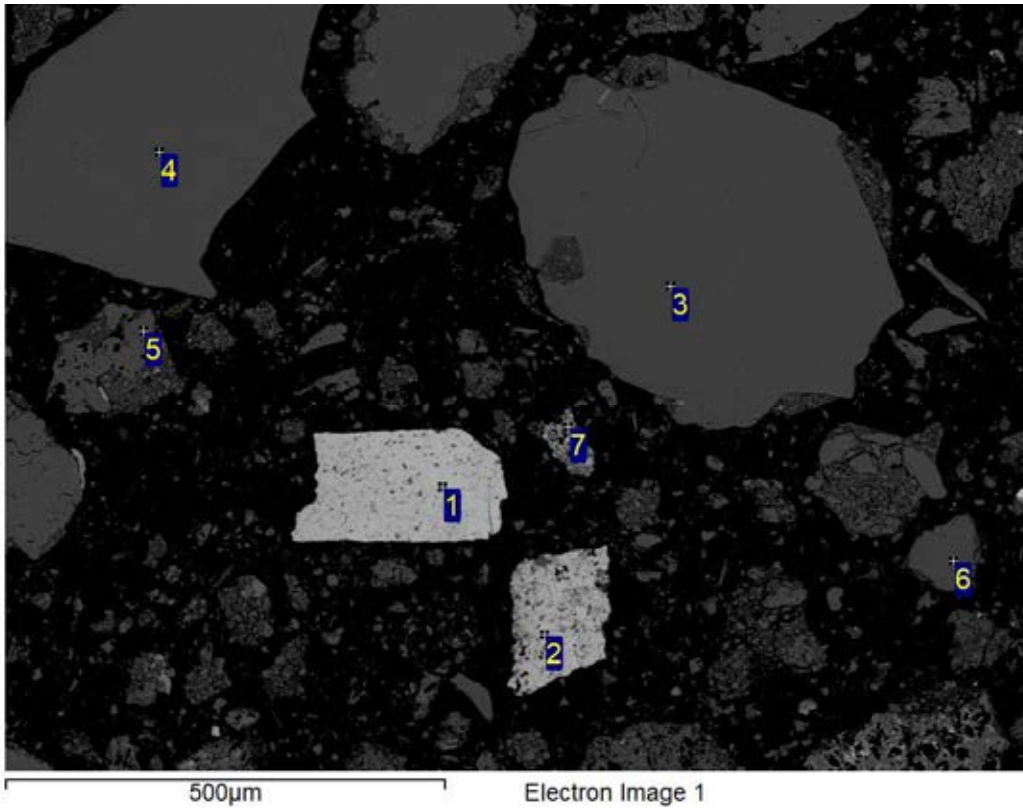


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	K	Ca	Mn	Fe	Ba	Total	Mineral ID
1	52.1				47.9							100.0	Quartz
2	40.2			0.8	2.8	0.6				55.5		100.0	FeOx
3	54.9		0.4					44.8				100.0	Calcite
4	52.3				47.7							100.0	Quartz
5	45.0	0.7		9.6	30.7		11.6				2.4	100.0	Mica
6	52.2				47.8							100.0	Quartz
7	39.7			2.6	2.4	1.6		0.7	4.4	48.6		100.0	FeOx
8	51.8				48.2							100.0	Quartz
9	49.1	8.3		9.7	32.9							100.0	Plagioclase
10	51.7				48.3							100.0	Quartz

All results in weight%

Sample Notes:
S-6195-4

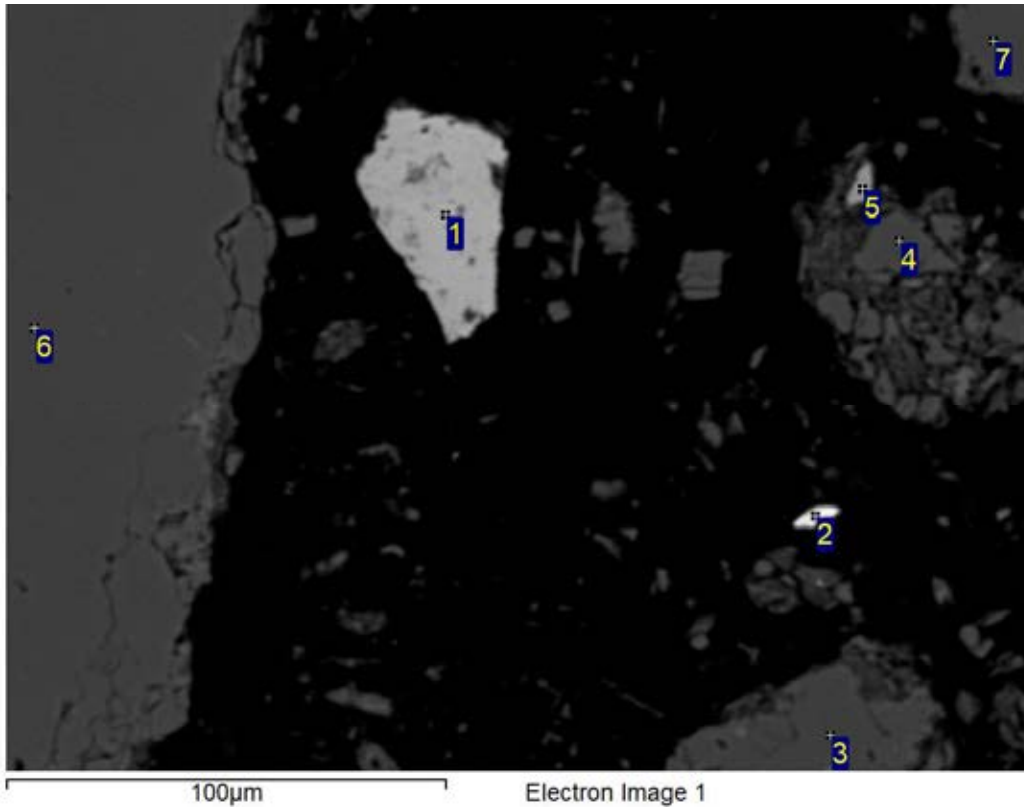


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ca	Fe	Total	Mineral ID
1	39.0	0.4	1.5	5.2	0.6	0.2		53.0	100.0	FeOx
2	40.8		2.6	3.5	1.1	0.4		51.7	100.0	FeOx
3	51.6			48.4					100.0	Quartz
4	51.4			48.6					100.0	Quartz
5	51.8			48.2					100.0	Quartz
6	51.5			48.5					100.0	Quartz
7	44.2		2.4	25.0	0.4	0.4	0.2	27.5	100.0	FeOx/Plagioclase

All results in weight%

Sample Notes:
S-6195-4

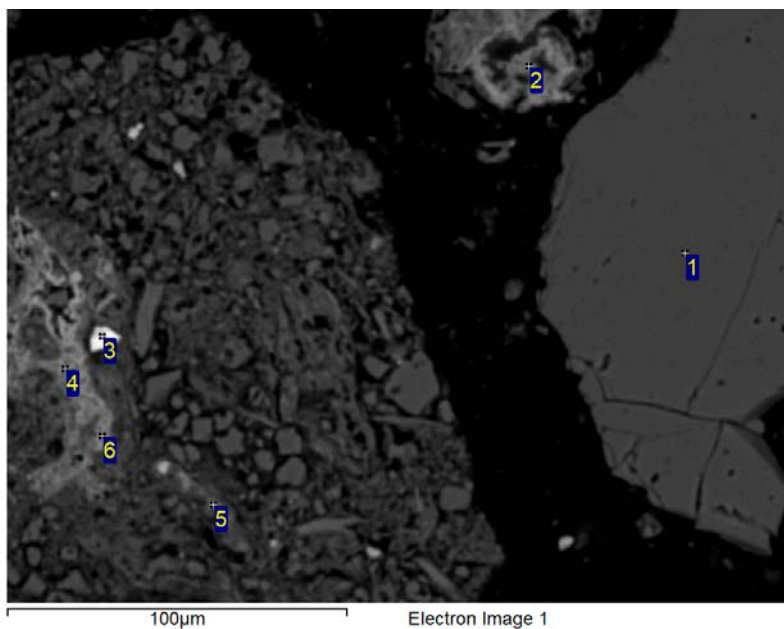


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	K	Ca	Ti	Fe	Zr	Total	Mineral ID
1	40.8	0.8	1.9	1.6		0.3		54.6		100.0	FeOx
2	43.2	0.4	13.9			0.3		0.3	41.9	100.0	Zircon
3	51.9		48.1							100.0	Quartz
4	51.6		48.4							100.0	Quartz
5	47.5	0.9	2.1		0.2		48.8	0.4		100.0	Rutile
6	51.7		48.3							100.0	Quartz
7	51.7		48.3							100.0	Quartz

All results in weight%

Sample Notes:
S-6195-4 Rep

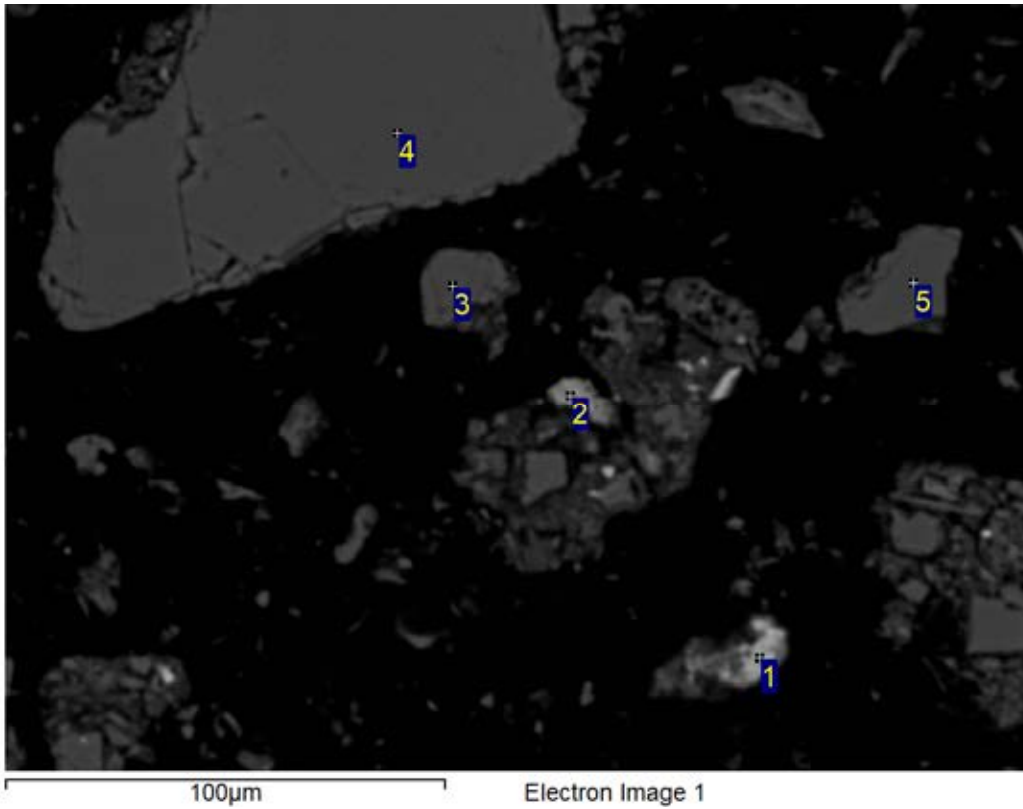


Processing option : All elements analysed (Normalised)

Spectrum	O	F	Al	Si	P	S	Cl	K	Ca	Mn	Fe	Co	Zr	Ce	Total	Mineral ID
1	50.6			49.4											100.0	Quartz
2	36.6		5.8	3.6	1.1		0.3		1.4	23.3	24.3	2.5		1.1	100.0	FeMnOx
3	40.0			14.5							0.4		45.0		100.0	Zircon
4	31.5		4.3	5.4	1.8			0.6	0.7		55.7				100.0	FeOx
5	35.6	2.8	1.1	0.7		0.4	0.4		6.2	43.3	9.6				100.0	MnOx
6	38.7		4.6	6.1	1.6			0.7	0.8		47.4				100.0	FeOx

All results in weight%

Sample Notes:
S-6195-4 Rep

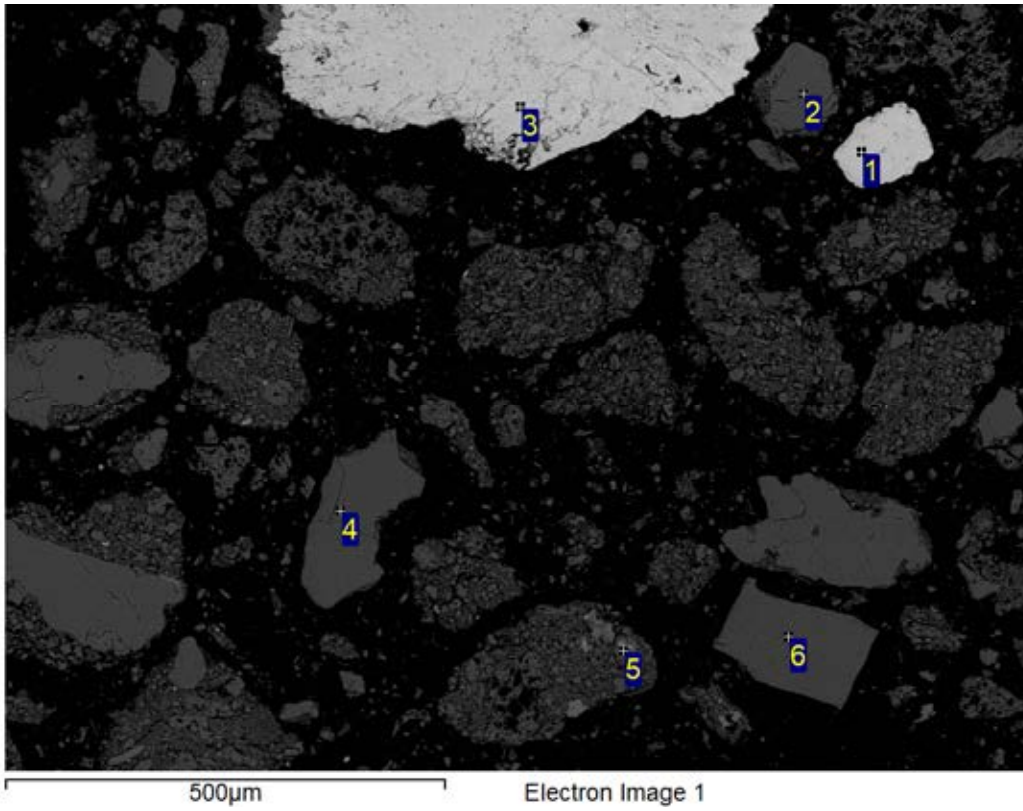


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Al	Si	P	K	Ca	Mn	Fe	Total	Mineral ID
1	41.8		1.9	7.3	0.8	0.3	0.3		47.7	100.0	FeOx
2	29.9		2.3	4.0	1.6		0.6	0.4	61.1	100.0	FeOx
3	46.6	7.7	10.7	33.8			0.8		0.3	100.0	Feldspar
4	50.2			49.5					0.2	100.0	Quartz
5	50.7			49.0					0.2	100.0	Quartz

All results in weight%

Sample Notes:
S-6195-4 Rep

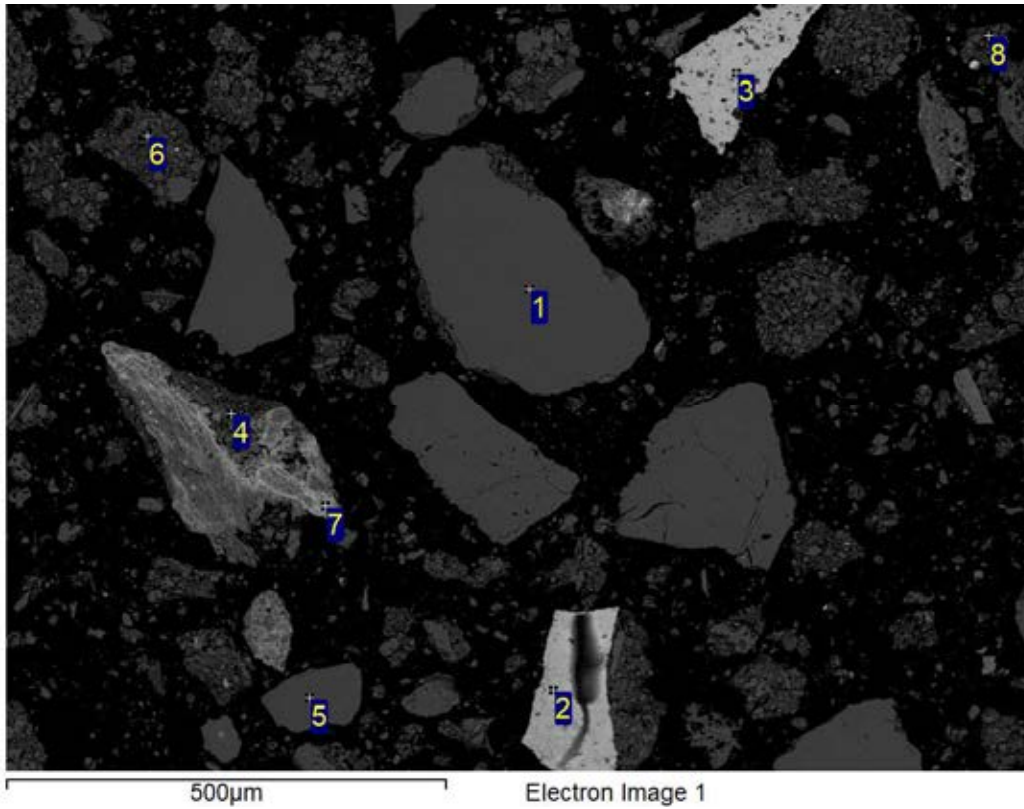


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	34.2						31.2	2.5	32.1	100.0	Ilmenite
2	49.5			50.5						100.0	Quartz
3	37.0			1.5					61.6	100.0	FeOx
4	50.7			49.3						100.0	Quartz
5	54.1	0.2	1.3	34.7	0.2	0.3	0.2	7.3	1.7	100.0	MnOx/Quartz
6	51.6			48.4						100.0	Quartz

All results in weight%

Sample Notes:
S-6195-4 Rep

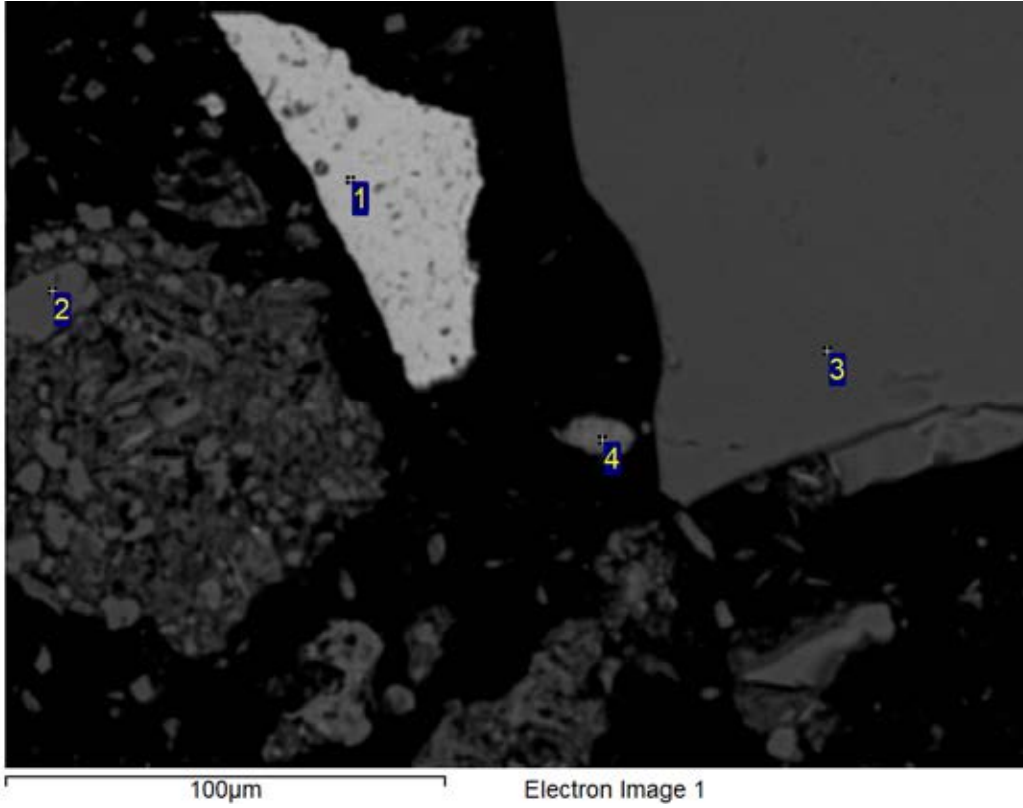


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	Cl	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	50.0				50.0								100.0	Quartz
2	39.4			1.4	1.9	1.3			0.5			55.4	100.0	FeOx
3	39.5			0.6	2.8	1.2			0.2			55.5	100.0	FeOx
4	40.9		1.3	10.8	36.8		0.3	1.9	0.7		0.5	6.8	100.0	Feldspar
5	50.8				49.2								100.0	Quartz
6	38.9		1.4	11.3	39.5		0.8	3.8	0.7	0.9		2.7	100.0	Feldspar
7	40.8	0.4	0.8	5.8	13.3	0.4		0.8	0.8		2.2	34.7	100.0	FeOx/Feldspar
8	50.3			1.2	47.6			0.1				0.9	100.0	Quartz

All results in weight%

Sample Notes:
S-6195-4 Rep

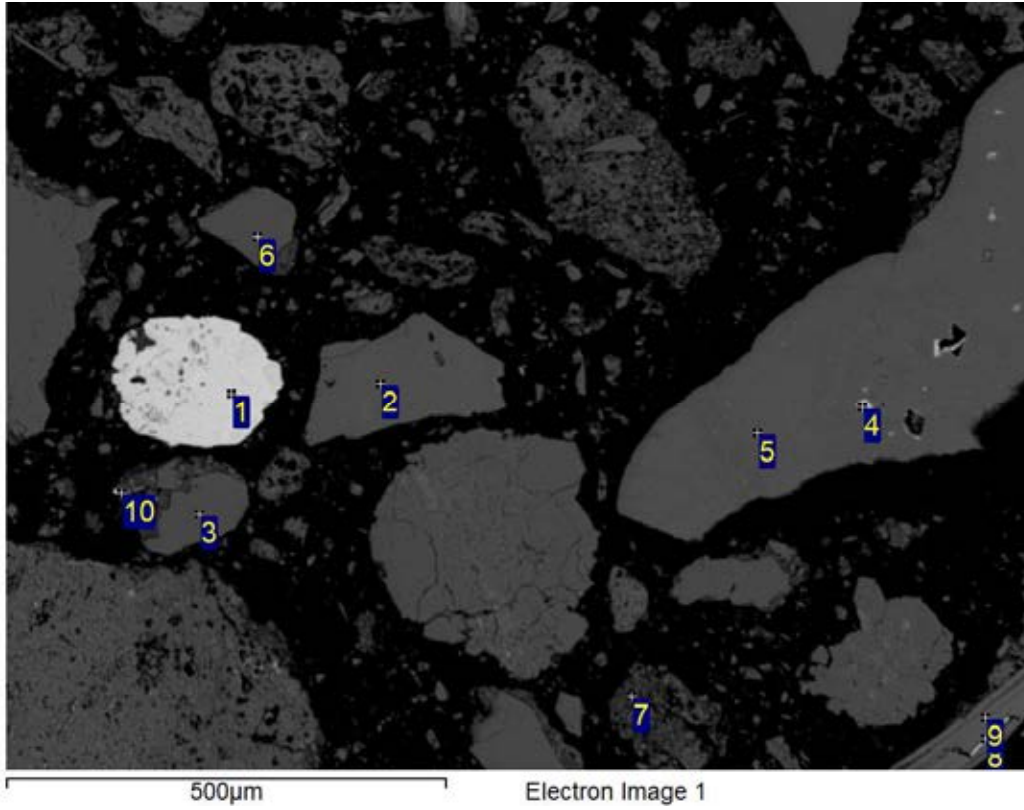


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	Ca	Fe	Total	Mineral ID
1	39.9		0.7	3.7	0.5	0.3	54.9	100.0	FeOx
2	51.7			48.1			0.2	100.0	Quartz
3	50.3			49.7				100.0	Quartz
4	48.8	6.0	13.1	15.8		0.3	16.0	100.0	Feldpsar

All results in weight%

Sample Notes:
S-6195-5

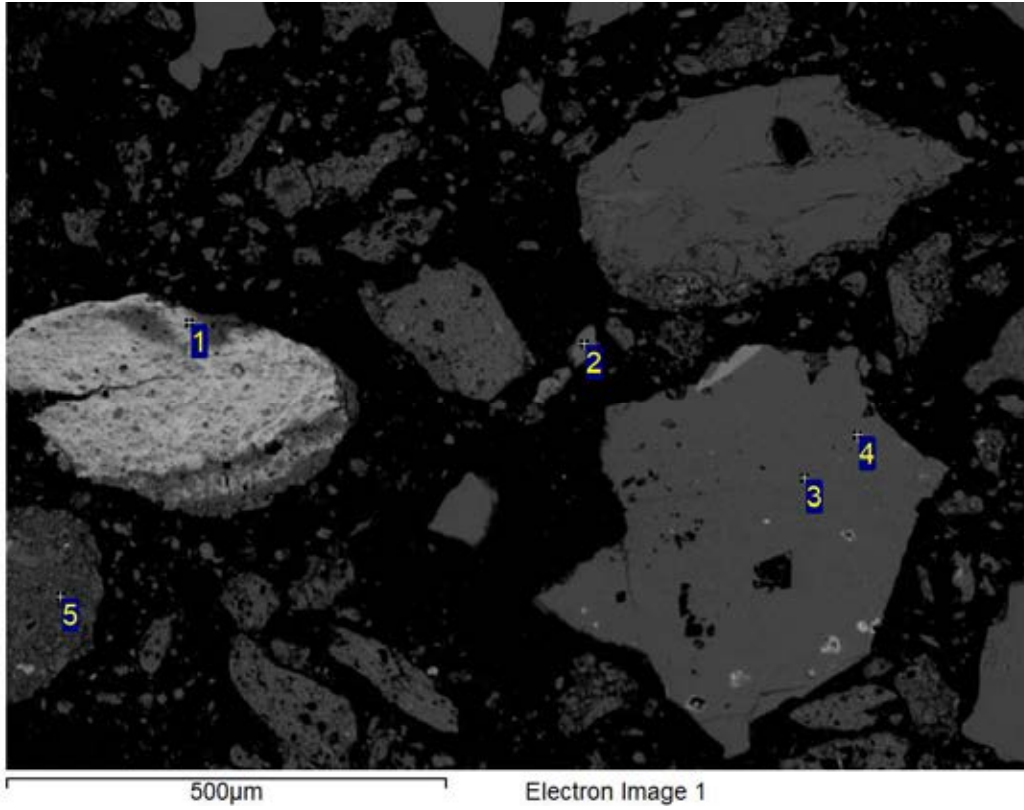


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	K	Ca	Ti	Mn	Fe	Zr	Total	Mineral ID
1	36.0		0.4	0.6	1.6						61.4		100.0	FeOx
2	52.0				48.0								100.0	Quartz
3	52.1				47.9								100.0	Quartz
4	36.6			0.7	2.4	0.3					60.1		100.0	FeOx
5	51.2				47.0						1.8		100.0	Quartz
6	51.5				48.5								100.0	Quartz
7	42.4		1.3	9.0	40.1		3.6		0.3		3.2		100.0	Quartz
8	36.5			1.4	1.3		0.5		27.9	2.7	29.6		100.0	Ilmenite
9	47.0	0.6	0.7	17.9	23.4		8.7		0.4		1.3		100.0	Mica
10	44.7		0.5	11.6	17.2		1.5	0.3	10.1		12.1	2.1	100.0	Felspar

All results in weight%

Sample Notes:
S-6195-5

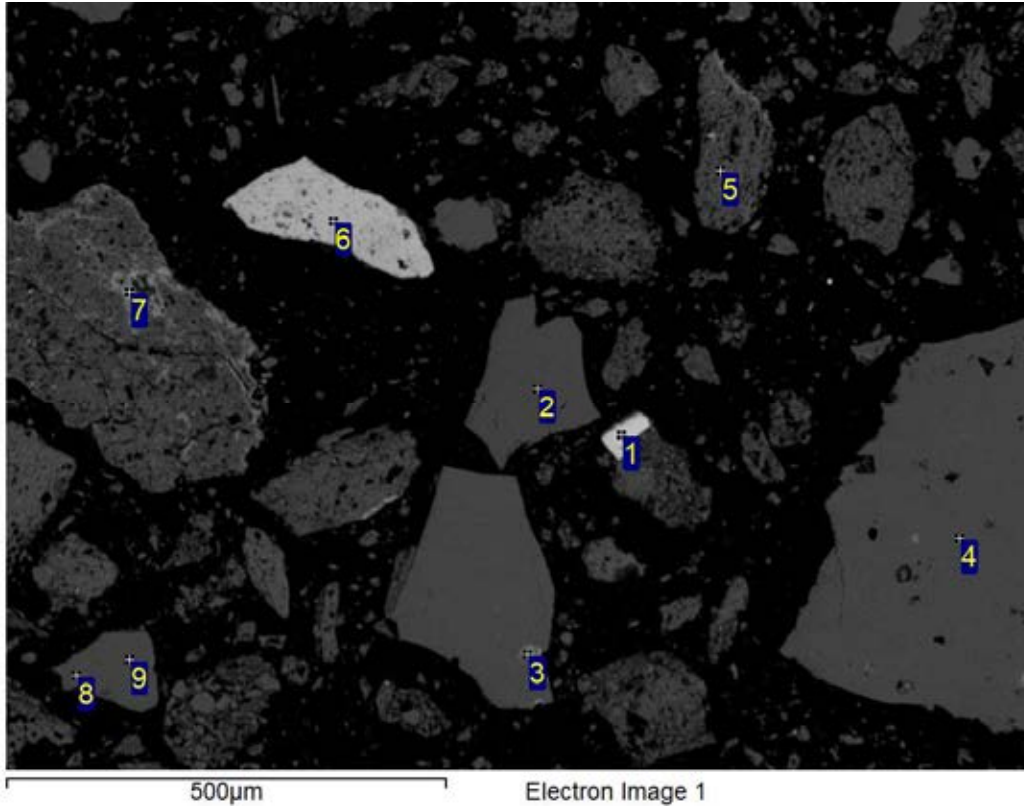


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	Cl	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	42.9	0.4	2.6	12.3	0.3		0.6				40.9	100.0	FeOx
2	47.8	1.1	15.0	23.1			9.2		0.2		3.6	100.0	Mica
3	51.6			48.4								100.0	Quartz
4	47.8		0.4	41.9							9.8	100.0	Quartz
5	42.2	1.3	12.5	23.3		0.5	2.6	0.4		0.4	16.8	100.0	Pyroxene

All results in weight%

Sample Notes:
S-6195-5

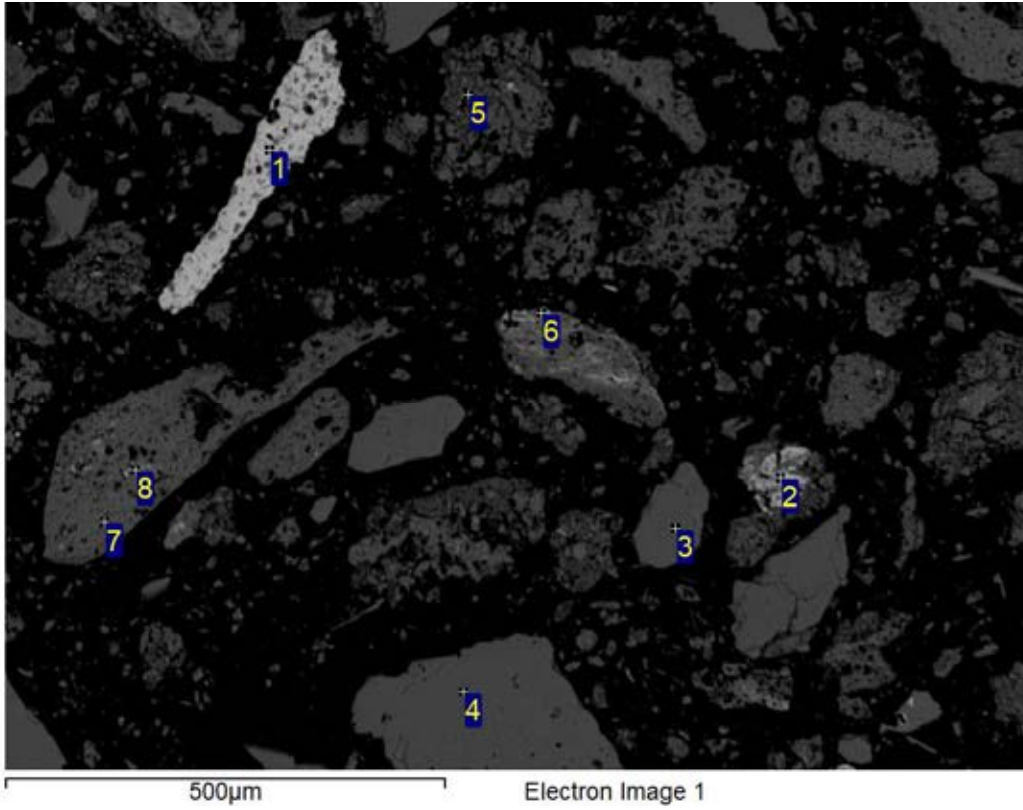


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ti	Mn	Fe	Total	Mineral ID
1	33.9						31.7	2.4	32.1	100.0	Ilmenite
2	51.6			48.4						100.0	Quartz
3	23.5		1.4	6.2		0.3		0.6	68.0	100.0	FeOx
4	52.2		0.4	46.6		0.1			0.6	100.0	Quartz
5	48.9	1.8	13.7	26.7		5.5	0.3		3.1	100.0	Mica
6	42.5		1.7	3.2	0.6				51.9	100.0	FeOx
7	42.7	0.6	8.0	13.0	0.6	2.8			32.2	100.0	Feldspar
8	52.2			14.6			33.1		0.2	100.0	Titanite
9	52.2			47.8						100.0	Quartz

All results in weight%

Sample Notes:
S-6195-5

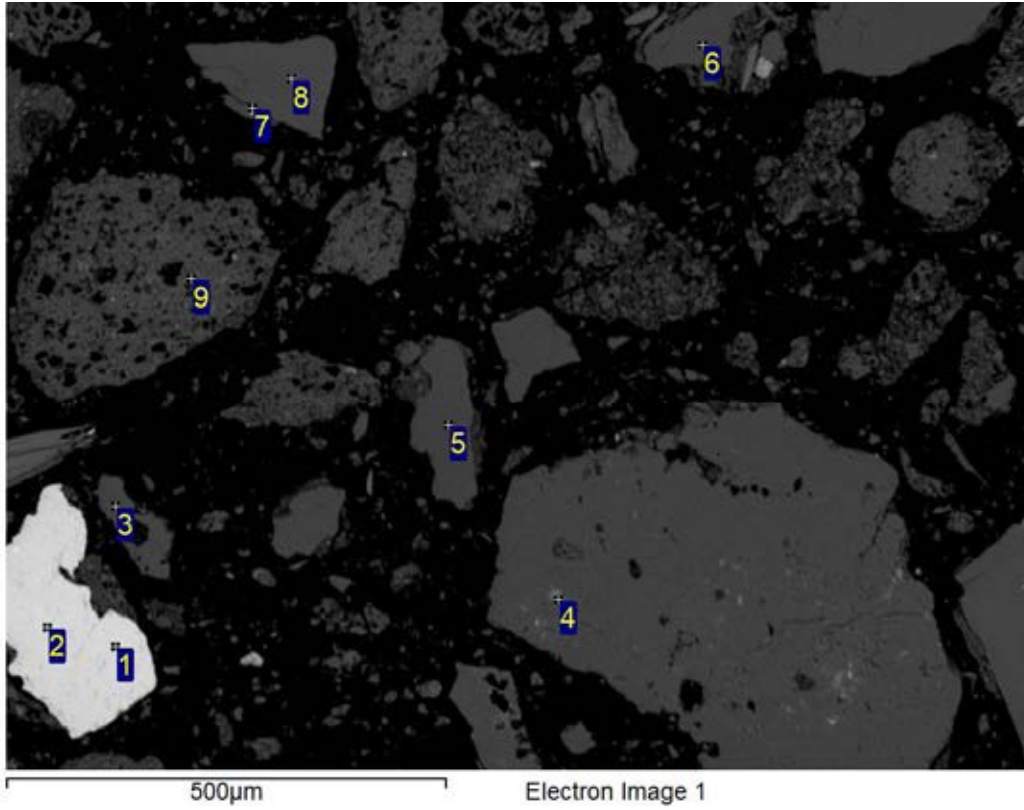


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	S	K	Ti	Mn	Fe	Total	Mineral ID
1	41.9		1.7	3.9	0.5					52.0	100.0	FeOx
2	38.7	0.4	3.9	6.6	0.4		0.7			49.3	100.0	FeOx
3	51.7			48.3							100.0	Quartz
4	52.1			47.9							100.0	Quartz
5	49.0		1.2	46.7			0.2			2.8	100.0	Quartz
6	36.7	0.8	7.5	13.2	0.8	0.3	1.1		0.4	39.2	100.0	FeOx/Feldspar
7	56.2	1.7	10.2	26.2			3.1	0.4		2.3	100.0	Feldspar
8	36.1		7.3	3.9	1.0		0.3			51.4	100.0	FeOx

All results in weight%

Sample Notes:
S-6195-5

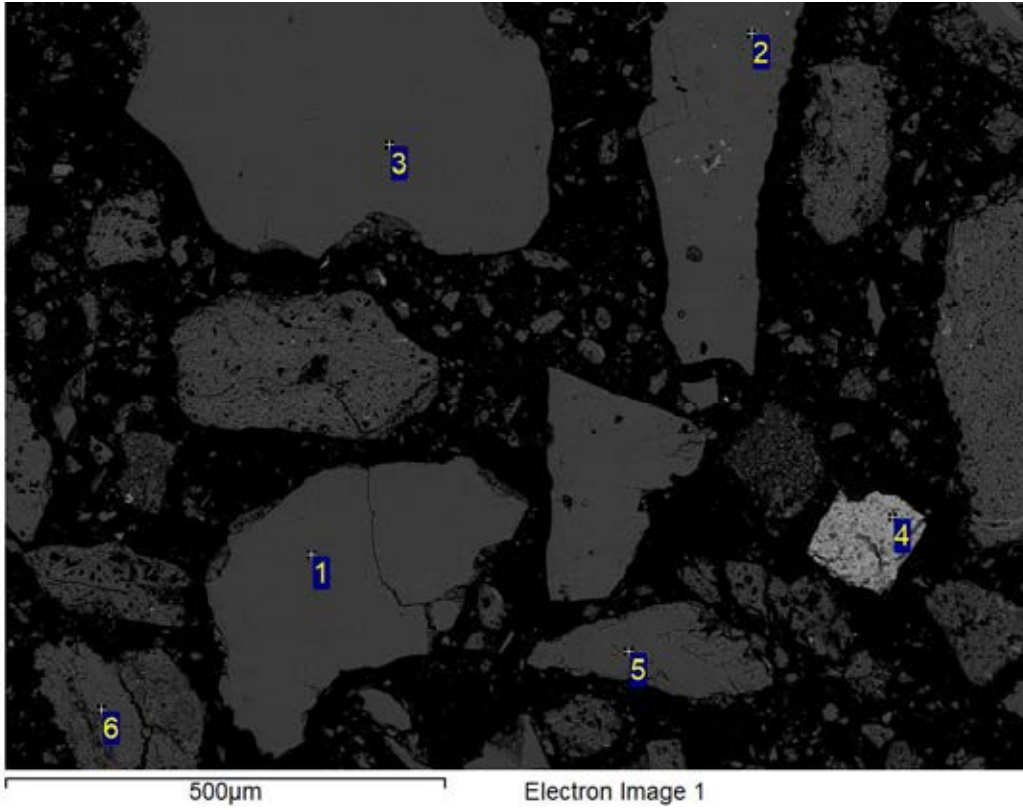


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	32.1					6.5	61.4	100.0	FeOx
2	31.9					6.4	61.7	100.0	FeOx
3	53.3			46.7				100.0	Quartz
4	55.7		0.7	38.8			4.8	100.0	Quartz
5	51.4			48.6				100.0	Quartz
6	51.4			48.6				100.0	Quartz
7	50.0			47.9			2.1	100.0	Quartz
8	51.5			48.1			0.4	100.0	Quartz
9	44.9	1.2	15.4	24.6	7.5	0.8	5.6	100.0	Amphibole

All results in weight%

Sample Notes:
S-6195-5 Rep

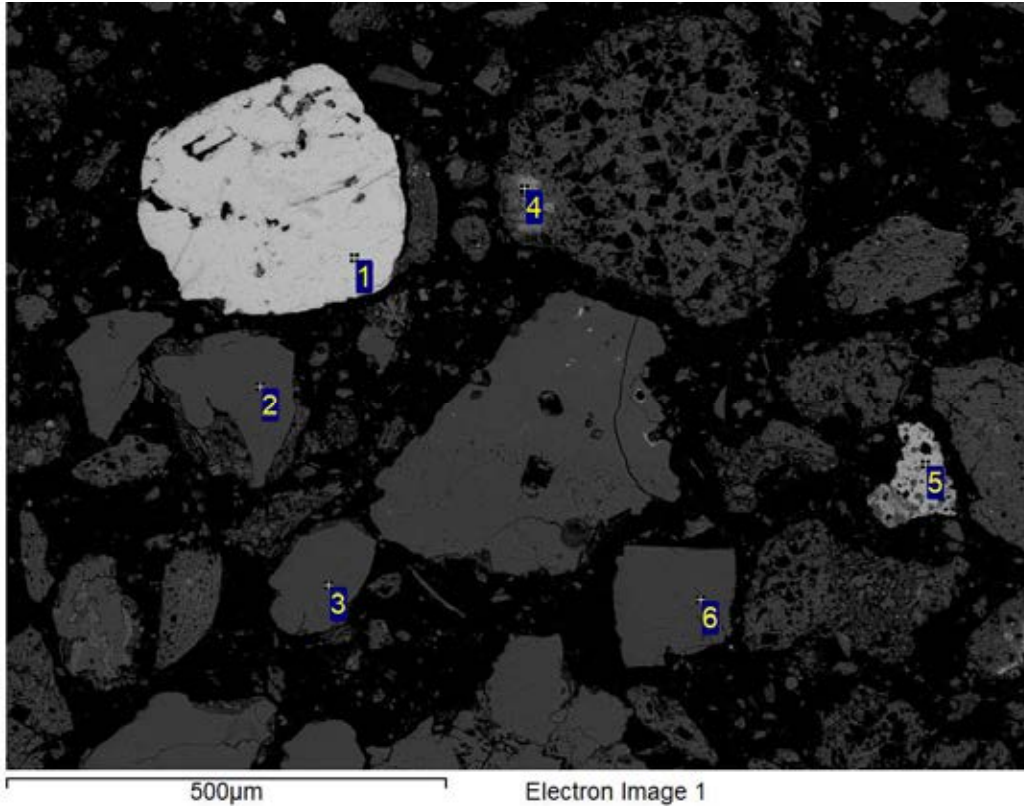


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Fe	Total	Mineral ID
1	51.9		48.1			100.0	Quartz
2	51.2	0.4	47.8		0.6	100.0	Quartz
3	52.1		47.9			100.0	Quartz
4	39.4	2.0	4.1	0.6	54.0	100.0	FeOx
5	51.5		48.5			100.0	Quartz
6	52.4	0.6	46.6		0.5	100.0	Quartz

All results in weight%

Sample Notes:
S-6195-5 Rep

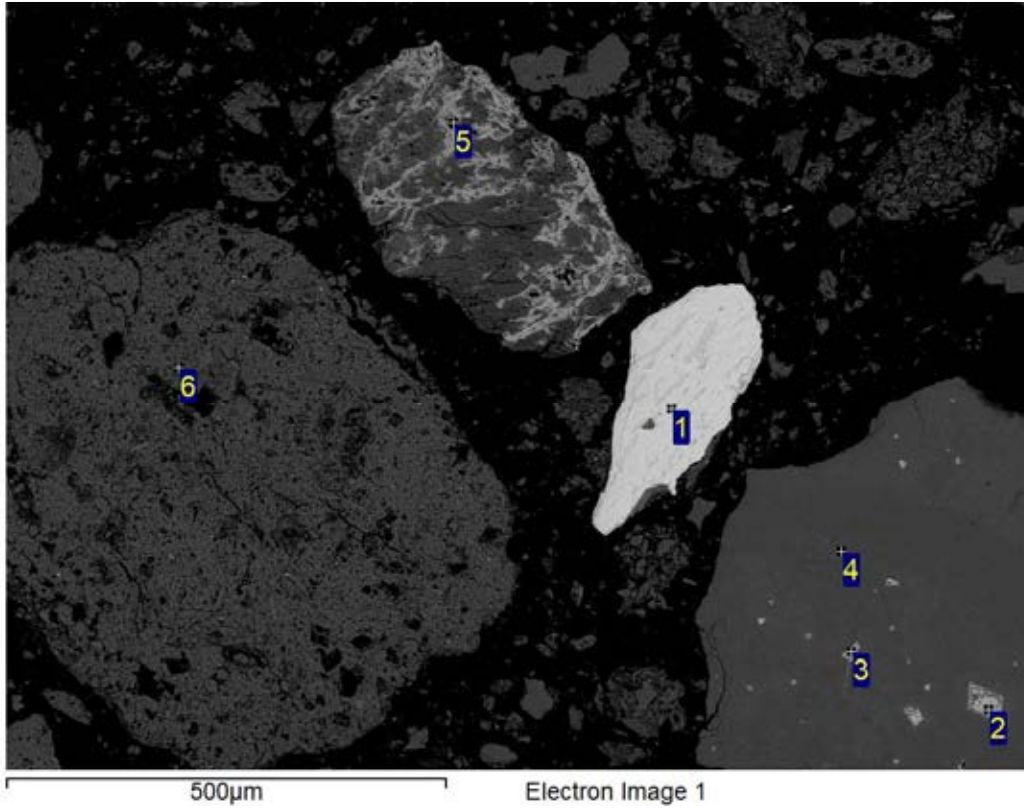


Processing option : All elements analysed (Normalised)

Spectrum	O	Al	Si	P	Ca	Ti	Mn	Fe	Co	Ni	Ba	Total	Mineral ID
1	34.4					31.1	0.9	33.7				100.0	Ilmenite
2	52.1		47.9									100.0	Quartz
3	51.8		48.2									100.0	Quartz
4	27.5	5.6	1.9		2.2		53.0	6.0	1.3	1.2	1.3	100.0	MnOx
5	42.7	1.5	8.6	0.3				46.8				100.0	FeOx
6	51.6		48.4									100.0	Quartz

All results in weight%

Sample Notes:
S-6195-5 Rep

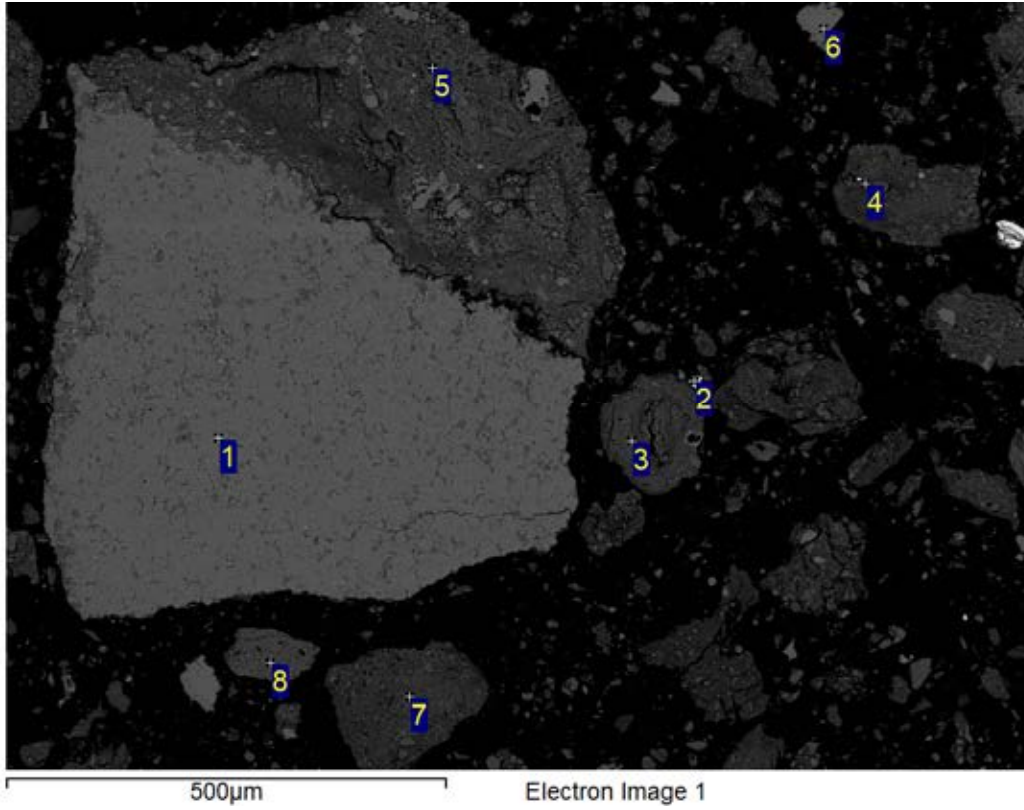


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	K	Ti	V	Fe	Total	Mineral ID
1	31.5						9.7	0.3	58.5	100.0	FeOx
2	53.9		0.9	16.4					28.9	100.0	FeOx/Quartz
3	29.7		0.9	24.9	0.4				44.1	100.0	FeOx/Quartz
4	52.0			47.5					0.5	100.0	Quartz
5	38.7	0.4	5.0	8.0		1.0			46.9	100.0	FeOx
6	50.9	2.8	14.7	25.5		3.3	0.4		2.4	100.0	Feldspar

All results in weight%

Sample Notes:
S-6195-6

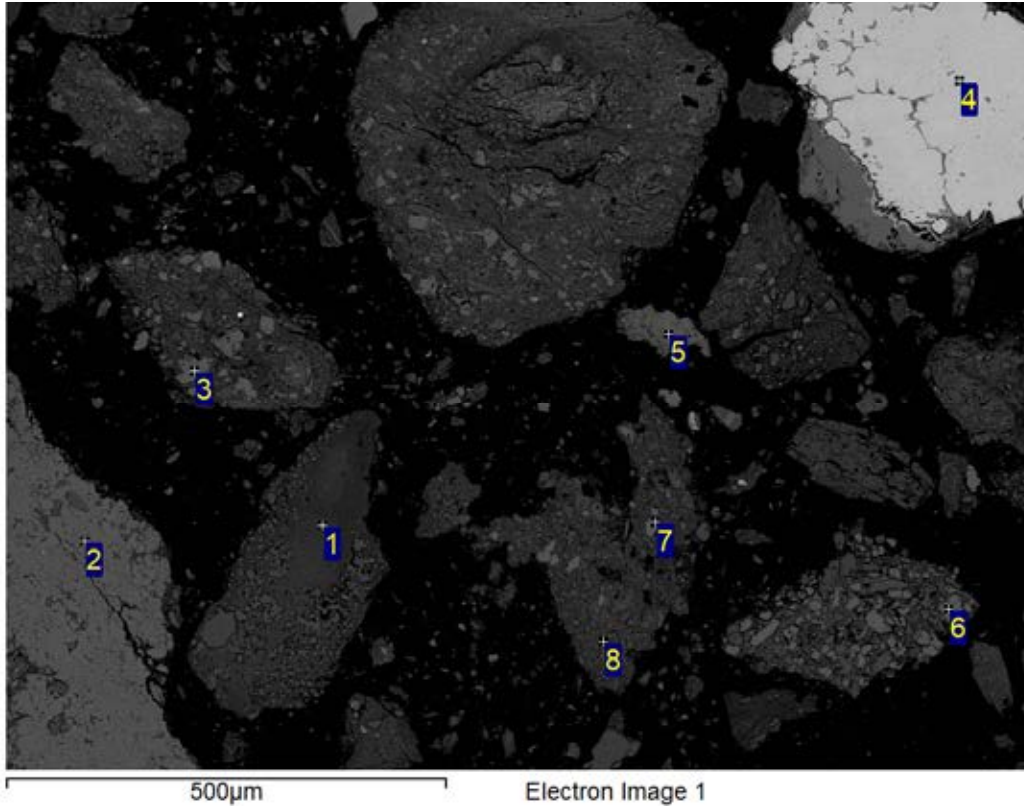


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ca	Ti	Fe	Ba	Total	Mineral ID
1	54.4	0.7		0.6			44.3				100.0	Calcite
2	31.4				14.3					54.2	100.0	Baryte
3	47.7	1.7	14.2	28.2		3.1	0.6	0.6	3.8		100.0	Feldspar
4	42.8	0.7	15.0	23.4	0.6	2.0	0.8	0.3	14.4		100.0	Feldspar
5	47.1	2.7	13.2	28.4		5.2	0.4	0.2	2.8		100.0	Feldspar
6	54.8	0.2					44.6		0.4		100.0	Calcite
7	46.6	2.0	12.0	27.5		4.8	0.4	0.5	6.3		100.0	Feldspar
8	51.0	2.2	11.8	26.3		4.1	0.3	0.4	3.9		100.0	Feldspar

All results in weight%

Sample Notes:
S-6195-6

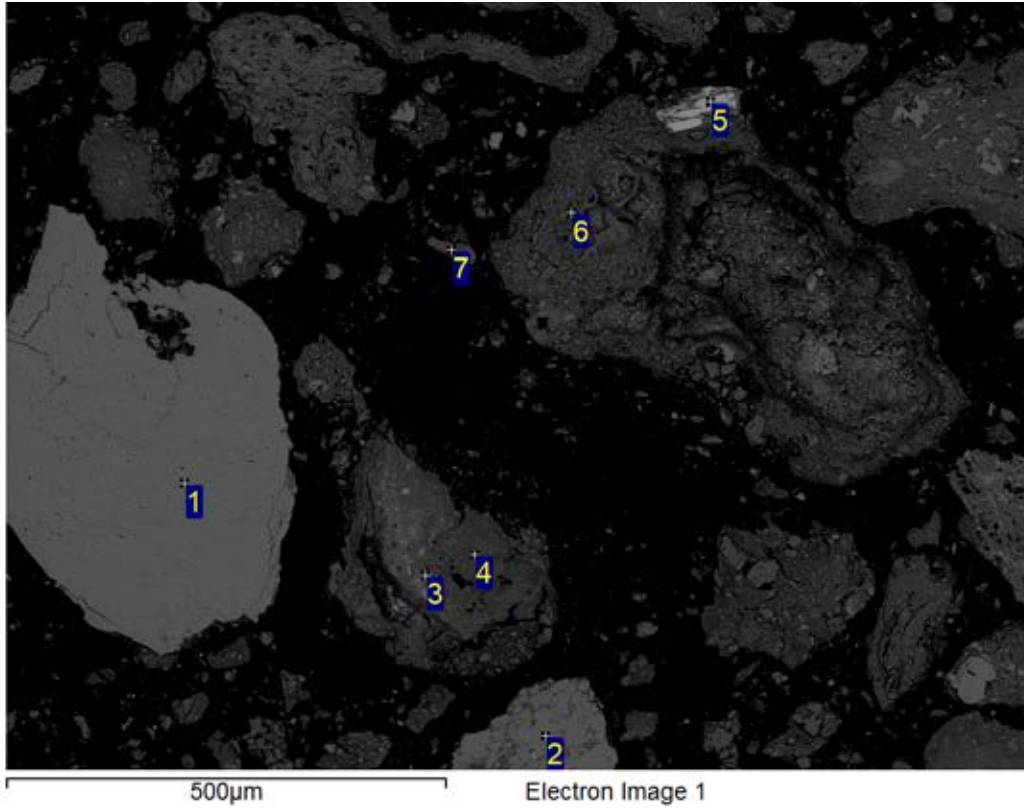


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ca	Ti	Fe	Total	Mineral ID
1	48.7	1.6	14.6	25.9		3.4	0.7	0.4	4.6	100.0	Feldspar
2	54.9	0.4	2.7	5.0		0.7	35.4	0.3	0.5	100.0	Calcite
3	53.0	0.4					46.1		0.6	100.0	Calcite
4	38.6			1.8			0.3		59.3	100.0	FeOx
5	54.5		1.9	4.2		0.2	38.8		0.3	100.0	Calcite
6	54.0	0.4		0.4			45.2			100.0	Calcite
7	56.2	0.5	0.4	0.7			41.7		0.5	100.0	Calcite
8	44.1	1.2	7.5	40.0	1.4	2.2	0.6	0.3	2.8	100.0	Quartz/ Feldspar

All results in weight%

Sample Notes:
S-6195-6

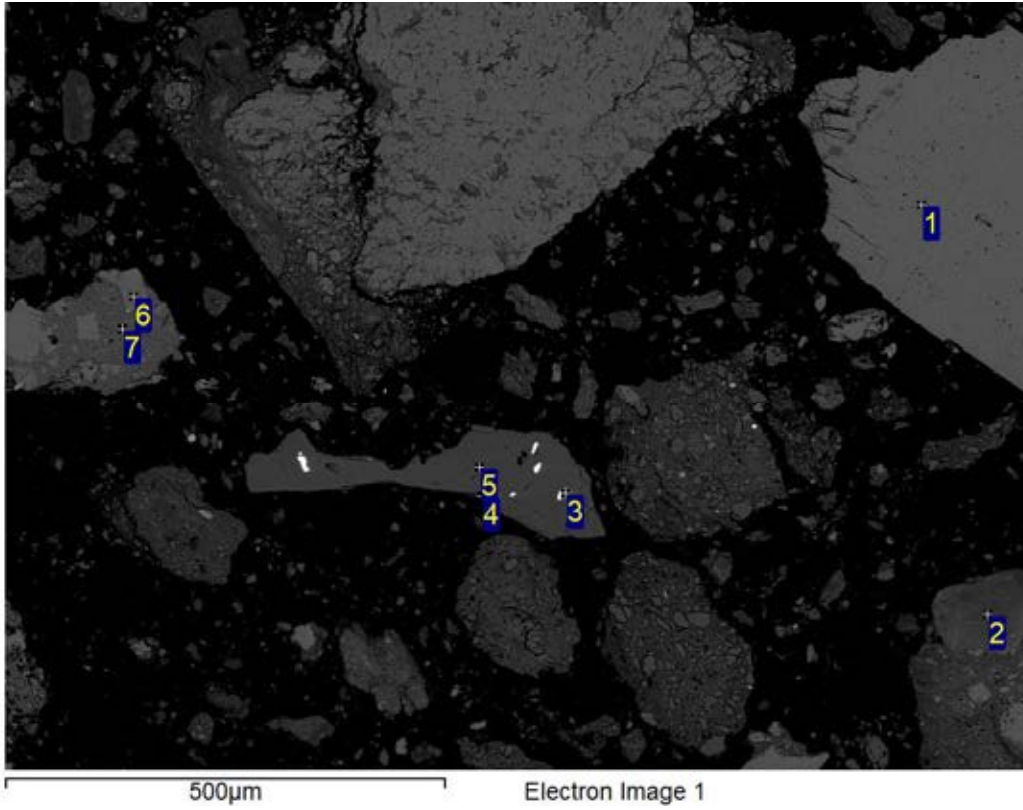


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ca	Ti	V	Fe	Total	Mineral ID
1	54.9						45.1				100.0	Calcite
2	54.2						45.8				100.0	Calcite
3	44.0	1.3	9.0	17.1		1.5	0.7	0.6		25.9	100.0	Feldspar/FeOx
4	46.7	0.9	14.5	26.9	0.4	1.4	0.8	0.6		7.9	100.0	Feldspar
5	41.1							57.9	1.0		100.0	Rutile
6	45.1	0.7	14.6	30.8		4.3	0.5	1.9		2.1	100.0	Quartz/Feldspar
7	51.5			48.5							100.0	Quartz

All results in weight%

Sample Notes:
S-6195-6

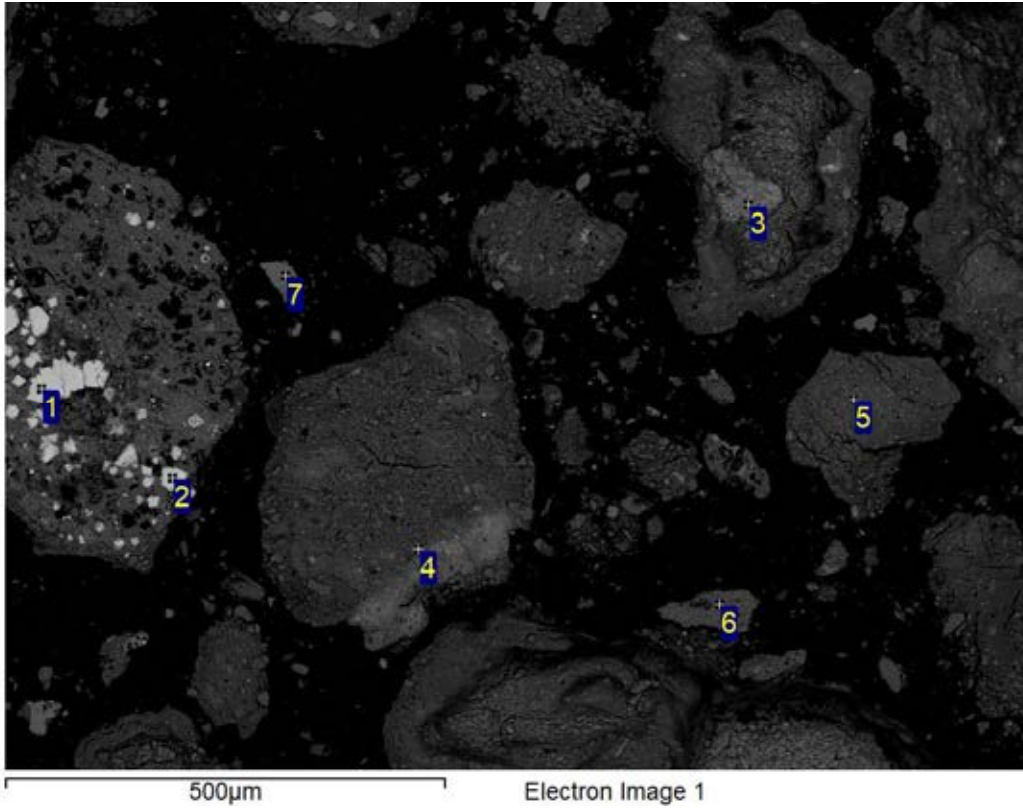


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	S	K	Ca	Ti	Fe	Sr	Ba	Total	Mineral ID
1	53.4		0.4					45.9		0.3			100.0	Calcite
2	42.5		0.8	13.0	22.9		1.5	0.8	0.5	18.1			100.0	Feldspar
3	21.3				0.5	14.4					3.6	60.1	100.0	Baryte
4	39.8	0.3			59.1	0.3			0.4				100.0	Quartz
5	51.3				48.7								100.0	Quartz
6	55.0		0.9		0.6			42.7		0.8			100.0	Calcite
7	53.3		2.2	9.5	21.7		3.7	5.2	0.5	4.0			100.0	Feldspar

All results in weight%

Sample Notes:
S-6195-6 Rep

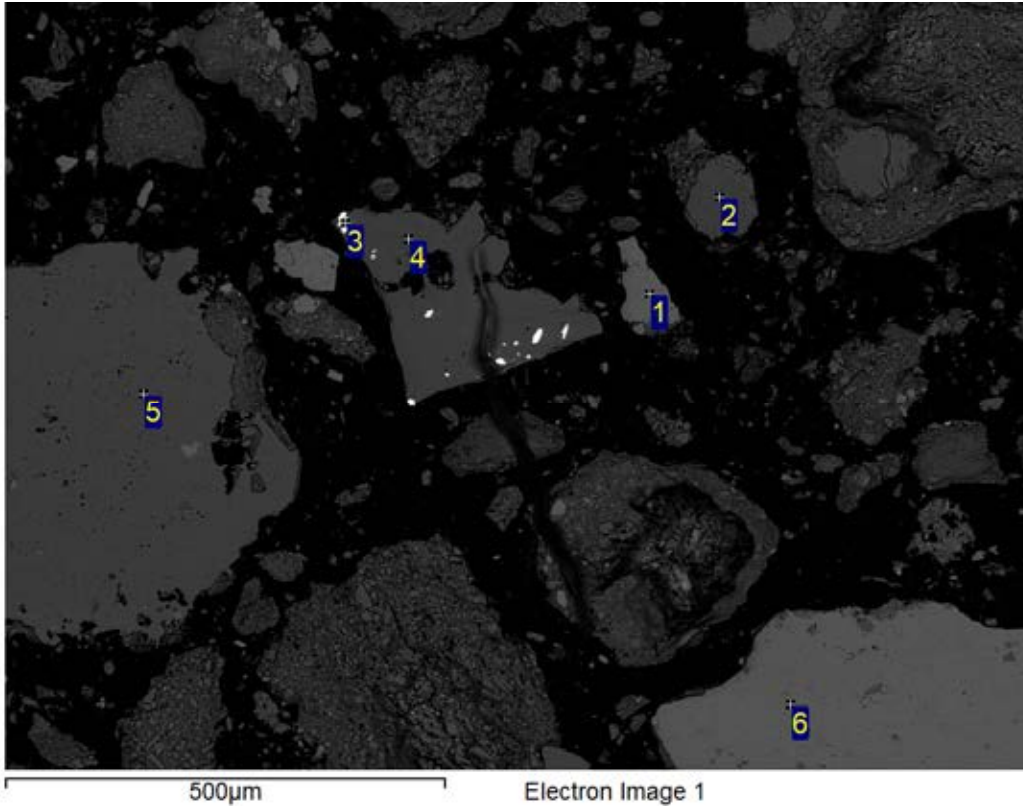


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	P	S	K	Ca	Ti	Mn	Fe	Total	Mineral ID
1	35.6			1.6	0.4			0.5		0.9	61.0	100.0	FeOx
2	36.5			1.5				0.4		1.4	60.2	100.0	FeOx
3	44.1	0.5	5.5	29.2		0.2	0.6	0.4			19.5	100.0	Feldspar/FeOx
4	42.5	0.4	7.9	7.5	0.4	0.3	0.4	0.4	0.3		39.8	100.0	FeOx/Feldspar
5	41.5	1.5	8.5	25.2			2.5	0.8	0.3		19.7	100.0	Feldspar/FeOx
6	46.3	2.5	11.1	32.1			4.8				3.2	100.0	Mica
7	54.0							45.6			0.3	100.0	Calcite

All results in weight%

Sample Notes:
S-6195-6 Rep

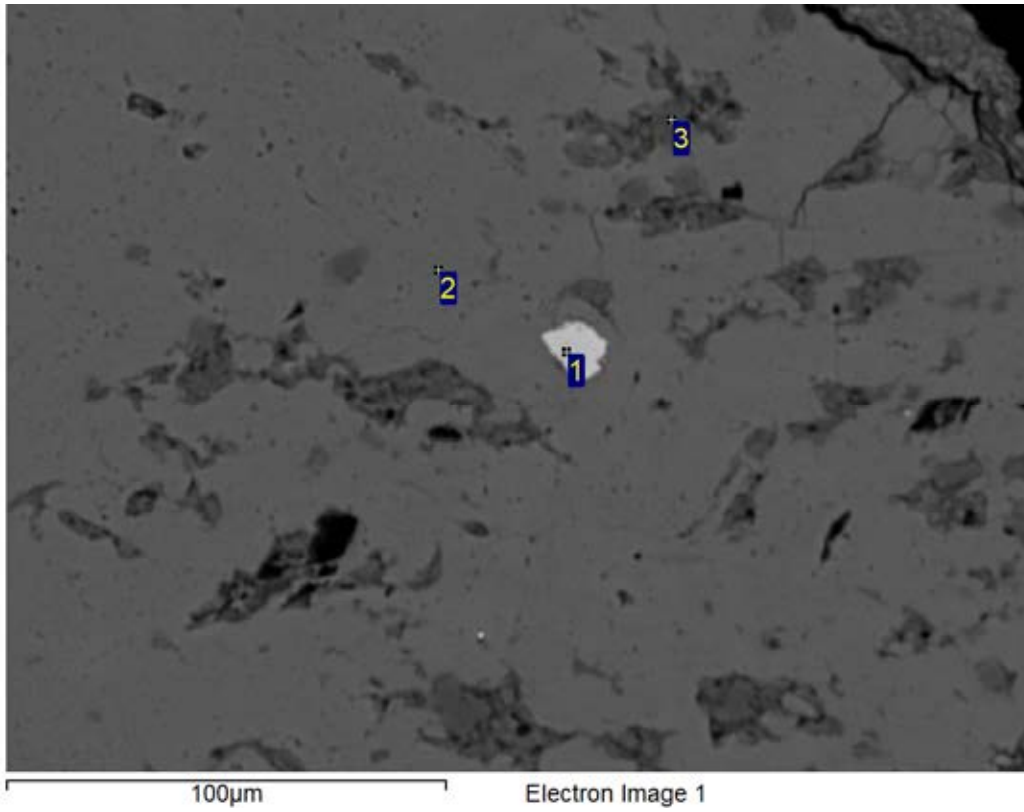


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Si	S	Ca	Fe	Co	Sr	Ba	Total	Mineral ID
1	52.6				47.4					100.0	Calcite
2	51.2		48.8							100.0	Quartz
3	26.2			14.7			0.0	2.5	56.7	100.0	Baryte
4	50.6		49.4							100.0	Quartz
5	51.2		48.8							100.0	Quartz
6	53.1	0.4			46.1	0.3				100.0	Calcite

All results in weight%

Sample Notes:
S-6195-6 Rep

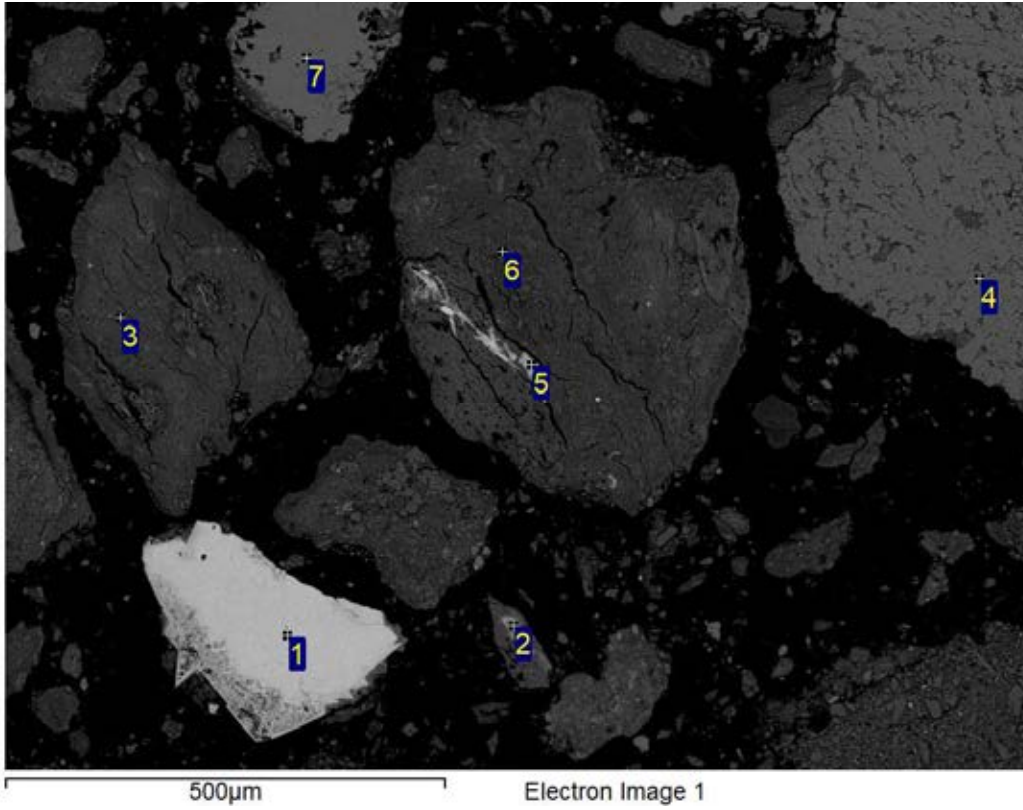


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ca	Fe	Cu	Total	Mineral ID
1	36.8	0.5	0.7	2.2		1.7	57.5	0.6	100.0	FeOx
2	53.5	0.4				46.1			100.0	Calcite
3	55.5	0.3	0.9	40.0	0.2	3.1			100.0	Quartz

All results in weight%

Sample Notes:
S-6195-6 Rep

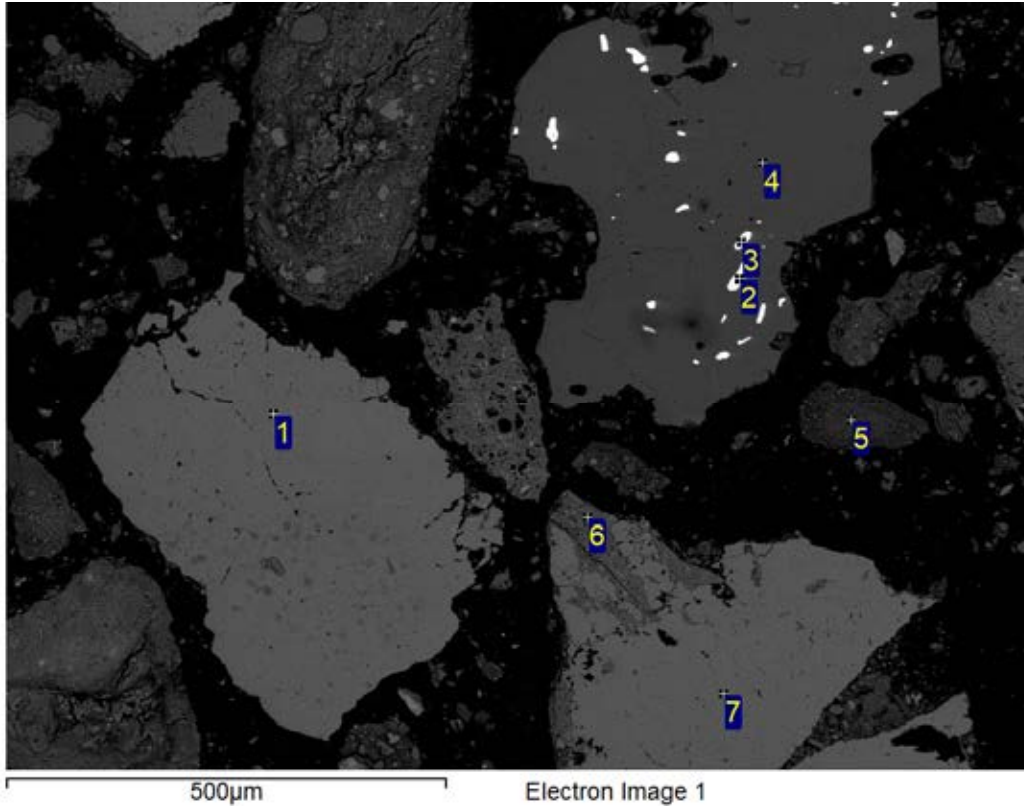


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	Cl	K	Ca	Ti	Mn	Fe	Co	Ba	Total	Mineral ID
1	37.2			1.7			0.4			60.7			100.0	FeOx
2	31.7		1.2	0.9			2.6		50.4	4.9	0.6	7.8	100.0	MnOx
3	46.0	1.7	15.2	27.5		2.9	0.6	0.3		5.7			100.0	Feldspar/Mica
4	53.1		1.5	3.0		0.3	42.1						100.0	Calcite
5	27.4		1.4	1.8		0.3	1.8		52.0	3.4		12.0	100.0	MnOx
6	43.7	2.0	13.0	25.7	0.3	4.1	0.9	1.0		9.2			100.0	Feldspar/Mica
7	53.9	0.3					45.5			0.3			100.0	Calcite

All results in weight%

Sample Notes:
S-6195-6 Rep



Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ca	Ti	Fe	Co	Sr	Ba	Total	Mineral ID
1	57.6						42.4						100.0	Calcite
2	21.0			0.9	14.8					0.0	3.9	59.5	100.0	Baryte
3	20.4			21.0	11.0					0.1		47.5	100.0	Baryte
4	52.2			47.8									100.0	Quartz
5	46.7	0.9	13.0	34.3		1.6	0.9	0.3	2.3				100.0	Feldspar/Quartz
6	49.7	0.3	0.7	48.5		0.1	0.1		0.6				100.0	Quartz
7	53.5						46.5						100.0	Calcite

All results in weight%



Report # 565002

Analytical Report

Page 1 of 2

Email

SGS LAKEFIELD - Catharine Arnold - S6195 Pulp
 CEC
 185 Concession St.
 Lakefield, ON K0L 2H0

Fax: 705-652-6365

Date Received: Sep-29-2020

Email: catharine.arnold@sgs.com; lisa.thompson@sgs.com

Date Reported: Oct-16-2020

Laboratory Number:	32182101	32182102	32182103	32182104
Sample ID:	S-6195-1	S-6195-2	S-6195-3	S-6195-4
Sample Description:	Pulp			
CEC - Actual (MEQ/100g)	15.80	19.00	19.40	20.20

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Authorized By: *Jack Legg*
 CCA-ON, 4R NMS

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Report # 565002

Analytical Report

Page 2 of 2

Email

SGS LAKEFIELD - Catharine Arnold - S6195 Pulp
CEC
185 Concession St.
Lakefield, ON K0L 2H0

Fax: 705-652-6365

Email: catharine.arnold@sgs.com; lisa.thompson@sgs.com

Date Received: Sep-29-2020

Date Reported: Oct-16-2020

Laboratory Number: 32182105 32182107

Sample ID: S-6195-5 S-6195-6

Sample Description:

CEC - Actual (MEQ/100g) 15.70 5.70

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Authorized By: Jack Legg
CCA-ON, 4R NMS

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Report # 565002

Analytical Report

Page 1 of 2

Email

SGS LAKEFIELD - Catharine Arnold - S6195 Pulp
 CEC
 185 Concession St.
 Lakefield, ON K0L 2H0

Fax: 705-652-6365

Date Received: Sep-29-2020

Email: catharine.arnold@sgs.com; lisa.thompson@sgs.com

Date Reported: Oct-16-2020

Laboratory Number:	32182101	32182102	32182103	32182104
Sample ID:	S-6195-1	S-6195-2	S-6195-3	S-6195-4
Sample Description:	Pulp			
CEC - Actual (MEQ/100g)	15.80	19.00	19.40	20.20

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Authorized By: *Jack Legg*
 CCA-ON, 4R NMS

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Report # 565002

Analytical Report

Page 2 of 2

Email

SGS LAKEFIELD - Catharine Arnold - S6195 Pulp
CEC
185 Concession St.
Lakefield, ON K0L 2H0

Fax: 705-652-6365

Email: catharine.arnold@sgs.com; lisa.thompson@sgs.com

Date Received: Sep-29-2020

Date Reported: Oct-16-2020

Laboratory Number: 32182105 32182107

Sample ID: S-6195-5 S-6195-6

Sample Description:

CEC - Actual (MEQ/100g) 15.70 5.70

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Authorized By: Jack Legg
CCA-ON, 4R NMS

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Analysis Report

GS21-05060

F402001 SGS LAKEFIELD RESEARCH
PO BOX 4300
185 CONCESSION STREET
LAKEFIELD, ONTARIO ON K0L 2H0
CANADA

Received : 04-Nov-2021
Completed : 11-Nov-2021
Order Reference : Lisa/Catharine - S-8083-DPT04XRFAP1

Laboratory ID:	GS21-05060.001
Client Sample #:	S-8083_DPT04XRFAP1
Description:	CA19128-Sep21

CEC Actual (meq/100g)	3.10
-----------------------	------

NOTE:
The analysis report above refers to the time and place of testing, and strictly to the supplied sample(s) only, without reference to any other matter. This report does not evidence or refer to any consignment or shipment or/and SGS sampling and inspection.

Report File Reference Number: 0000198571

Page 1 of 1

**Signed and dated in Guelph, ON
On 11-Nov-2021**

For and on behalf of SGS Canada Inc., Agriculture and Food

**Jack Legg, CCA-ON, 4R NMS
Branch Manager, Agronomist**

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Specialty Analytical

9011 SE Janssen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

October 21, 2020

Kela Ashworth
SiREM Lab
130 Stone Road West
Guelph, Ontario N1G3Z2

TEL: (519) 822-2265

FAX

RE: S-6195

Dear Kela Ashworth:

Order No.: 2009184

Specialty Analytical received 6 sample(s) on 9/25/2020 for the analyses presented in the following report.

REVISED REPORT: Please see case narrative for information on revision.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications, except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "Marty French". The signature is fluid and cursive, written over a white background.

Marty French
Lab Director

Case Narrative

WO#: 2009184

Date: 10/21/2020

Specialty Analytical

CLIENT: SiREM Lab

Project: S-6195

Revision 1.

This report has been revised to include sample 006.

Specialty Analytical

Date Reported: 21-Oct-20

CLIENT: SiREM Lab
Project: S-6195

Lab Order: 2009184

Lab ID: 2009184-001

Collection Date: 9/24/2020

Client Sample ID: S-6195-1

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY		SW9081				Analyst: SH
Anion Exchange Capacity	8.48	0.000200		meq/100g	1	10/5/2020 12:10:00 AM

Lab ID: 2009184-002

Collection Date: 9/24/2020

Client Sample ID: S-6195-2

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY		SW9081				Analyst: SH
Anion Exchange Capacity	6.58	0.000200		meq/100g	1	10/5/2020 12:12:00 AM

Lab ID: 2009184-003

Collection Date: 9/24/2020

Client Sample ID: S-6195-3

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY		SW9081				Analyst: SH
Anion Exchange Capacity	8.09	0.000200		meq/100g	1	10/5/2020 12:14:00 AM

Lab ID: 2009184-004

Collection Date: 9/24/2020

Client Sample ID: S-6195-4

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY		SW9081				Analyst: SH
Anion Exchange Capacity	7.85	0.000200		meq/100g	1	10/5/2020 12:16:00 AM

Lab ID: 2009184-005

Collection Date: 9/24/2020

Client Sample ID: S-6195-5

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY		SW9081				Analyst: SH
Anion Exchange Capacity	6.74	0.000200		meq/100g	1	10/5/2020 12:18:00 AM

Specialty Analytical

Date Reported: 21-Oct-20

CLIENT: SiREM Lab
Project: S-6195

Lab Order: 2009184

Lab ID: 2009184-006

Collection Date: 9/24/2020

Client Sample ID: S-6195-6

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY		SW9081				Analyst: SH
Anion Exchange Capacity	4.57	0.000200		meq/100g	1	10/21/2020 4:37:16 PM

KEY TO FLAGS

Rev. May 12, 2010

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- A4 The product appears to be aged or degraded diesel.
- B The blank exhibited a positive result great than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- G Result may be biased high due to biogenic interferences. Clean up is recommended.
- H Sample was analyzed outside recommended holding time.
- HT At clients request, samples was analyzed outside of recommended holding time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits; post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.

Specialty Analytical
 9011 SE Janssen Rd
 Clackamas, OR 97015
 Phone: 503-607-1331
 Fax: 503-607-1338

Chain of Custody Record 2009184

Date: *9/24/2020* Page: 1 of 1
 Project Name: *S-6195* Laboratory Project No (Internal): *2009184*
 Project No: *S-6195* PO No. *5.9* °C

Client: **SIREM Lab**
 Address: 130 Stone Road West
 City, State, Zip: **Guelph, Ontario, N1G 3Z2**
 Telephone: 519-822-2265
 State Collected: OR WA OTHER
 Collected by: **Kela Ashworth**
 Cooling: *ice* Shipped Via: *FedEx*
 Custody Seal: *Y* Intact / Broken Cooler / Bottle
 MDL TIER IV EDD

AP Email: **accountspayablecan@siremlab.com** Report To (PM): **Kela Ashworth** Sample Disposed: Return to client Disposed by lab (later 90 days)
 PM Email: **kashworth@siremlab.com**

Sample Name	Sample Date	Sample Time	Sample Matrix*	# of Containers	Anion Exchange Capacity	Requested Tests	Anion Exchange Capacity	Comments
1 S-6195-1	24-Sep-20		S	1	✓			
2 S-6195-2	24-Sep-20		S	1	✓			
3 S-6195-3	24-Sep-20		S	1	✓			
4 S-6195-4	24-Sep-20		S	1	✓			
5 S-6195-5	24-Sep-20		S	1	✓			
6 S-6195-6	24-Sep-20		S	1	✓			
7								
8								
9								
10								

*Matrix: A = Air, AQ = Aqueous L = Liquid, O = Oil, P = Product, S = Soil, SD = Sediment, G = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Wastewater, M = Miscellaneous
 Turn-around Time: Standard (5-7 Business) 3 Day 2 Day Next Day Same Day
 Expedited turn-around requests should be coordinated in advance

Relinquished Date Time: *9/24/2020 14:30pm*
 Received Date Time: *9/24/2020 9:25/2020 9:50*

Relinquished Date Time: *9/24/2020 14:30pm*
 Received Date Time: *9/24/2020 9:25/2020 9:50*

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

Project : S-7677

12-January-2022

SiREM Laboratory

Attn : Kela Ashworth

130 Stone Rd. W
 Guelph, ON
 N1G 3Z2, Canada

Phone: 519-822-2265
 Fax:519-822-3151

Date Rec. : 26 March 2021
LR Report: CA14601-MAR21

Copy: #1

CERTIFICATE OF ANALYSIS

S-7677_1_DPT07AP1

Sample ID	Sample Date & Time	Ag µg/g	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g
1: Analysis Start Date		15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time		19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date		16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time		10:28	10:28	10:28	10:28	10:28	10:28	10:28
5: S-7677_1_DPT07AP1	25-Mar-21	< 1	42000	7.8	220	1.1	0.18	830

Sample ID	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g	Fe µg/g	K µg/g	Li µg/g	Mg µg/g
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	10:28	10:28
5: S-7677_1_DPT07AP1	0.02	7	40	8.2	20000	7900	24	1600

Sample ID	Mn µg/g	Mo µg/g	Ni µg/g	Pb µg/g	Sb µg/g	Se µg/g	Sn µg/g	Sr µg/g
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	19:04	19:04
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	10:28	10:28
5: S-7677_1_DPT07AP1	100	1.4	14	15	< 0.8	< 0.7	< 6	38

Sample ID	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	S %	C %
1: Analysis Start Date	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	15-Apr-21	12-Apr-21	12-Apr-21
2: Analysis Start Time	19:04	19:04	19:04	19:04	19:04	19:04	10:54	10:54
3: Analysis Completed Date	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	16-Apr-21	13-Apr-21	13-Apr-21

Online LIMS

000269721

SGS Canada Inc.


P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - KOL 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

Project : S-7677

LR Report : CA14601-MAR21

Sample ID	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	S %	C %
4: Analysis Completed Time	10:28	10:28	10:28	10:28	10:28	10:28	11:02	11:00
5: S-7677_1_DPT07AP1	3500	0.34	2.0	53	16	39	0.022	0.078

Sample ID	Sulphide %	TOC %
1: Analysis Start Date	13-Apr-21	12-Apr-21 ---
2: Analysis Start Time	07:21	13:24 ---
3: Analysis Completed Date	13-Apr-21	13-Apr-21 ---
4: Analysis Completed Time	11:02	11:00 ---
5: S-7677_1_DPT07AP1	< 0.04	0.066 1

Catharine Arnold 
Catharine Arnold, B.Sc., C.Chem
 Project Specialist,
 Environment, Health & Safety

LOI is included in the matrix correction calculations, which are performed by the XRF software.

6. Data reduction by:

Computer, on line, data fed to Laboratory Information Management System with secure audit trail.

7. Figures of Merit:

This method has been fully validated for the range of samples typically analyzed. Method validation includes the use of reference materials, replicates, duplicates and blanks to calculate accuracy, precision, linearity, range, limit of detection, reporting limit, specificity and measurement uncertainty.

The reporting limits has been determined according to the following

Element	Report Limit %
SiO ₂	0.01
Al ₂ O ₃	0.01
MgO	0.01
Na ₂ O	0.01
K ₂ O	0.01
CaO	0.01
P ₂ O ₅	0.01
TiO ₂	0.01
Cr ₂ O ₃	0.01
V ₂ O ₅	0.01
Fe ₂ O ₃	0.01
MnO	0.01
LOI	-10

*upper limit for all elements is 100%. A negative LOI indicates a gain on ignition

8. Quality control:

Quality control materials include method blanks, replicates and reference materials and are randomly inserted with the frequency set according to method protocols at ~12% for ore grade analysis and 18% for process control analysis. Quality control materials will also include BRM (Barren reference materials, or preparations blanks) and preparation duplicates if samples have been taken through the sample reduction process. Party quality samples are assayed in replicate, umpire quality samples are in triplicate. Calibration materials that cover the range upon method set-up; calibration check performed daily.

9. Accreditation:

The Standards Council of Canada has accredited this test in conformance with the requirements of ISO/IEC 17025. See www.scc.ca/en/search/palcan for scope of accreditation.

Note: Scopes of accreditation are site specific, please check with the local representative.

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Project : S-7677

12-January-2022

SiREM Laboratory
Attn : Kela Ashworth

130 Stone Rd. W, Guelph
Canada, N1G 3Z2
Phone: 519-822-2265, Fax:519-822-3151

Date Rec. : 26 March 2021
LR Report: CA14602-MAR21
Reference: P.O# 800003210A

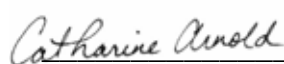

Copy: #1

CERTIFICATE OF ANALYSIS

S-7677_1_DPT07AP1

Sample ID	Sample Date & Time	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %
5: S-7677_1_DPT07AP1	25-Mar-21	80.8	9.02	3.21	0.29	0.12	0.10	1.07	0.90	0.04	0.01	< 0.01

Sample ID	V2O5 %	LOI %	Sum %
5: S-7677_1_DPT07AP1	0.02	4.02	99.6



Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



Quantitative X-Ray Diffraction by Rietveld Refinement

Report Prepared for: Environmental Services

Project Number/ LIMS No. Custom MIN/MI5060-MAR21

Sample Receipt: March 30, 2021

Sample Analysis: April 12, 2021

Reporting Date: May 5, 2021

Instrument: BRUKER AXS D8 Advance Diffractometer

Test Conditions: Co radiation, 35 kV, 40 mA
Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°

Interpretations : PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.

Detection Limit : 0.5-2%. Strongly dependent on crystallinity.

Contents:

- 1) Method Summary
- 2) Quantitative XRD Results
- 3) XRD Pattern(s)

Kim Gibbs, H.B.Sc., P.Ge.
Senior Mineralogist

Huyun Zhou, Ph.D., P.Ge.
Senior Mineralogist

ACCREDITATION: SGS Minerals Services Lakefield is accredited to the requirements of ISO/IEC 17025 for specific tests as listed on our scope of accreditation, including geochemical, mineralogical and trade mineral tests. To view a list of the accredited methods, please visit the following website and search SGS Canada - Minerals Services - Lakefield: <http://palcan.scc.ca/SpecsSearch/GLSearchForm.do>.



Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Minerals Services is accredited to the requirements of ISO/IEC 17025.

Mineral Identification and Interpretation:

Mineral identification and interpretation involves matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

Quantitative Rietveld Analysis:

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

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WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

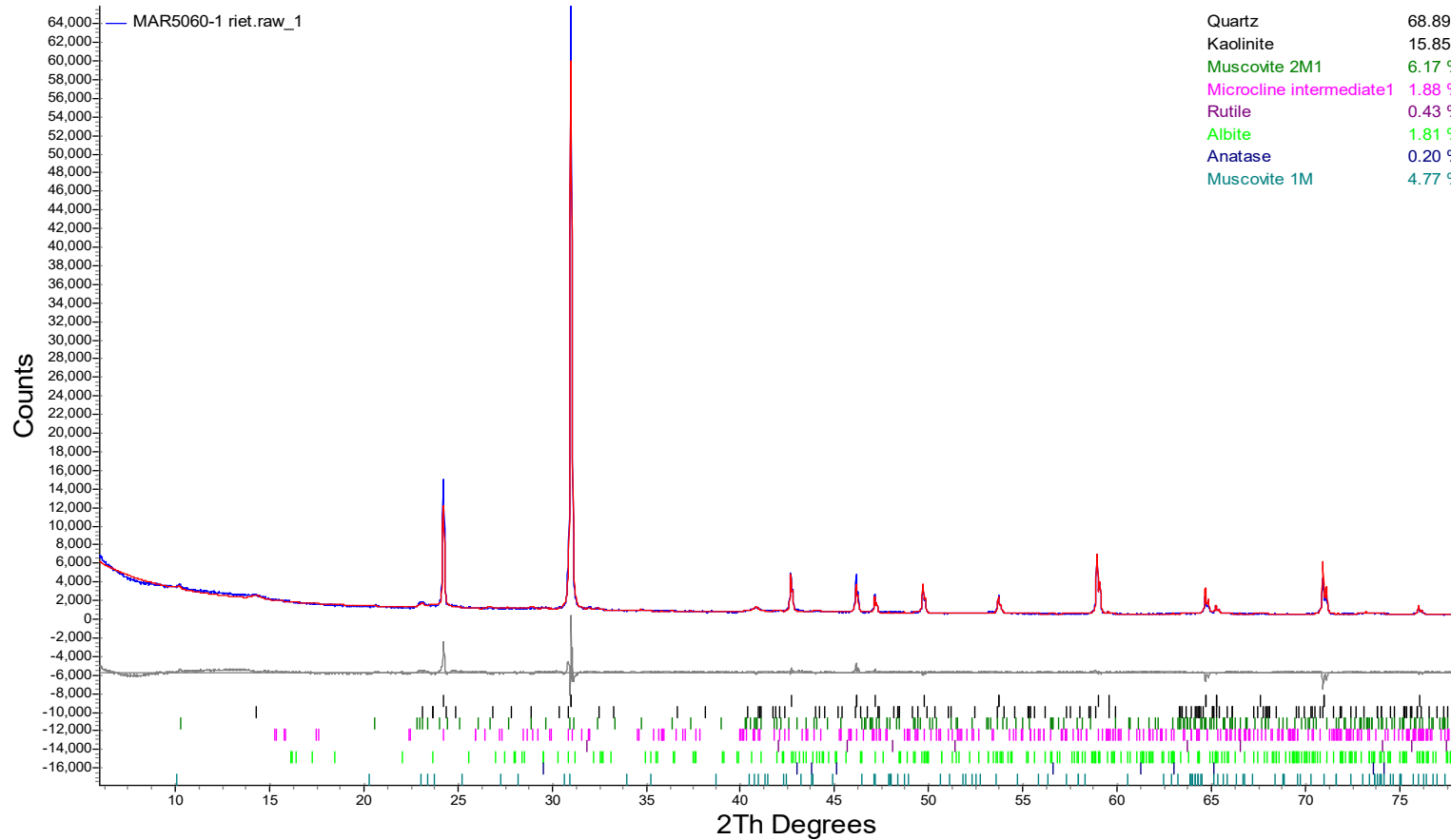
Mineral/Compound	S-7677_1_DPT07AP1
	MAR5060-01 (wt %)
Quartz	68.9
Kaolinite	15.8
Muscovite	10.9
Microcline	1.9
Rutile	0.4
Albite	1.8
Anatase	0.2
TOTAL	100

The weight percent quantities indicated have been normalized to a sum of 100%.

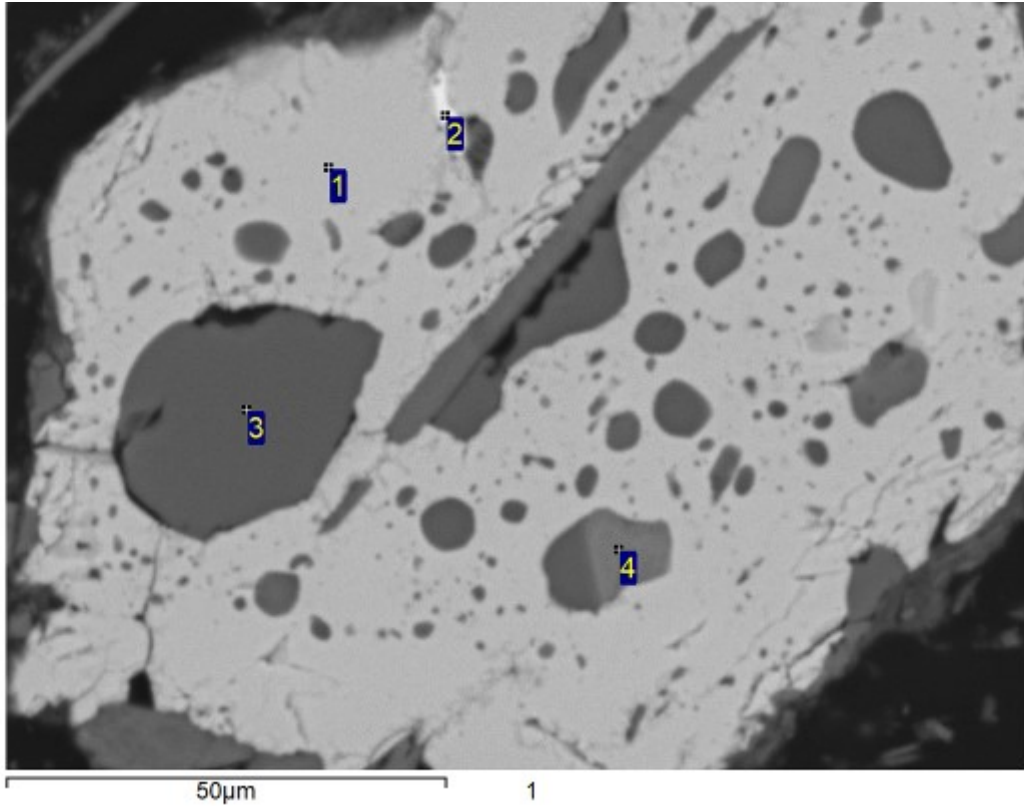
The quantity of amorphous material has not been determined.

Mineral/Compound	Formula
Quartz	SiO ₂
Kaolinite	Al ₂ Si ₂ O ₅ (OH) ₄
Muscovite	KAl ₂ (AlSi ₃ O ₁₀)(OH) ₂
Microcline	KAlSi ₃ O ₈
Rutile	TiO ₂
Albite	NaAlSi ₃ O ₈
Anatase	TiO ₂

S-7677_1_DPT07AP1



Sample Notes:
S-7677_1_DPT07AP1

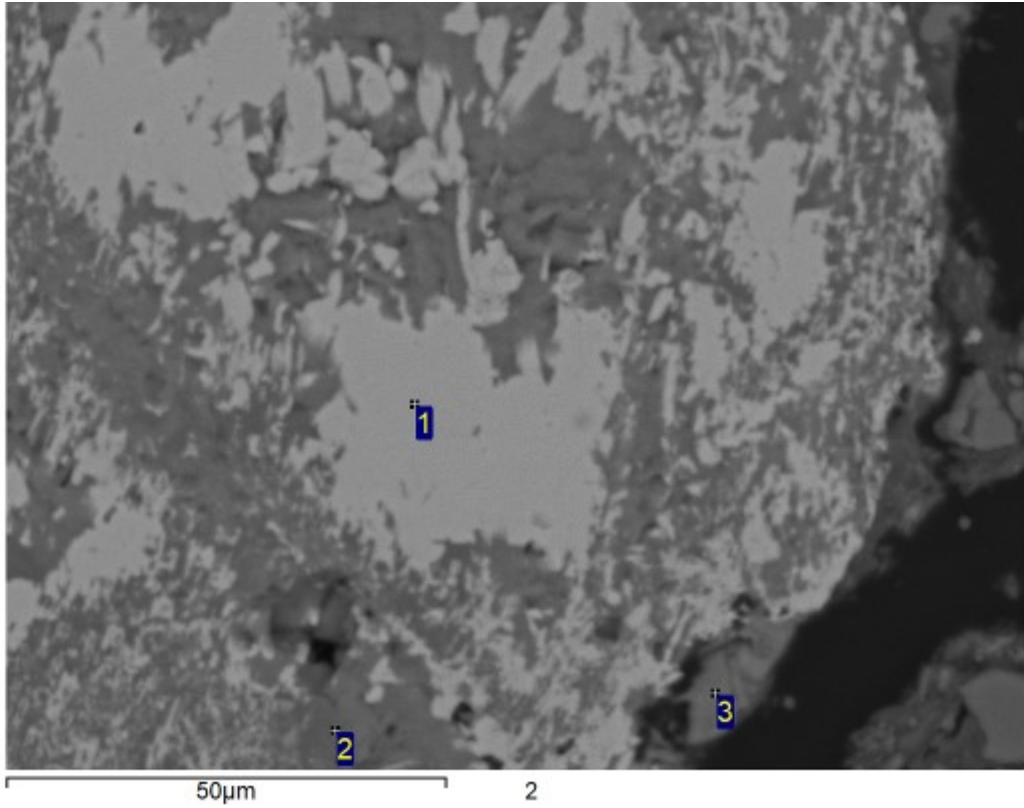


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	Ti	Mn	Fe	Zr	Total	Mineral ID
1	33.8				31.3	1.1	33.8		100.0	Ilmenite
2	34.9			10.8	12.4	0.4	9.4	32.0	100.0	Zircon
3	51.0			48.3	0.3		0.4		100.0	Quartz
4	41.9	7.0	12.0	13.1	0.8		25.3		100.0	Chlorite

All results in weight%

Sample Notes:
S-7677_1_DPT07AP1

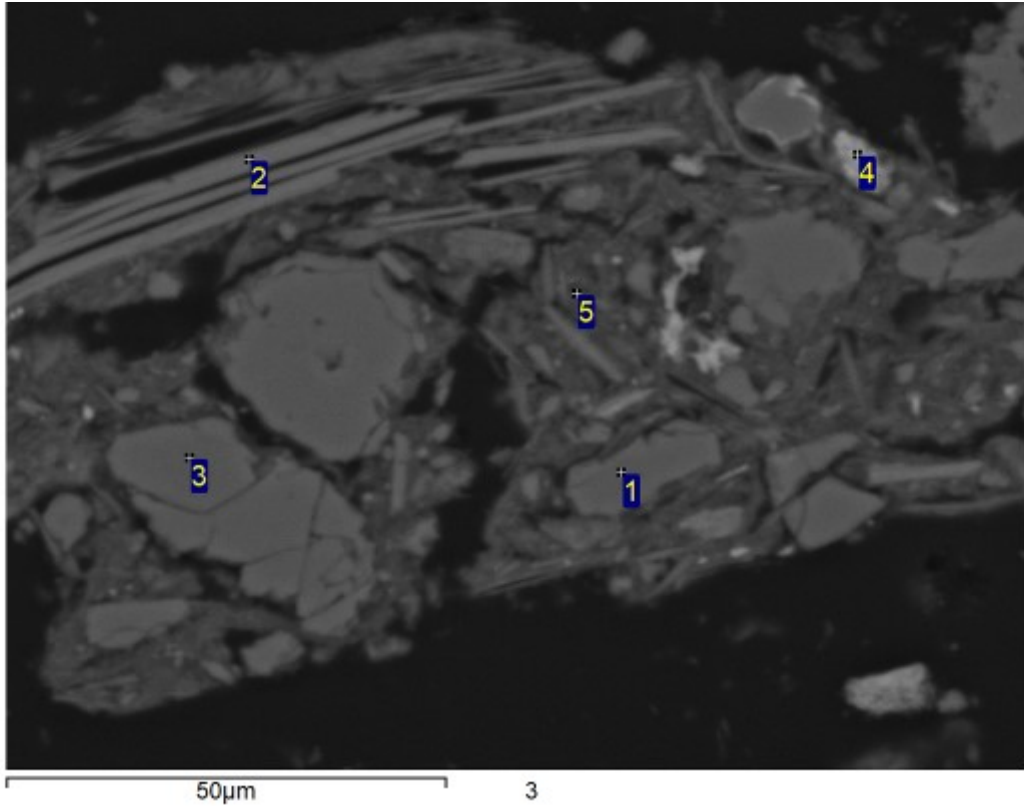


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ti	Fe	Total	Mineral ID
1	41.1					58.9		100.0	Rutile
2	50.3		2.6	44.4	1.5	0.8	0.4	100.0	Quartz
3	51.3	1.1	15.5	22.5	7.7	0.7	1.2	100.0	Muscovite

All results in weight%

Sample Notes:
S-7677_1_DPT07AP1

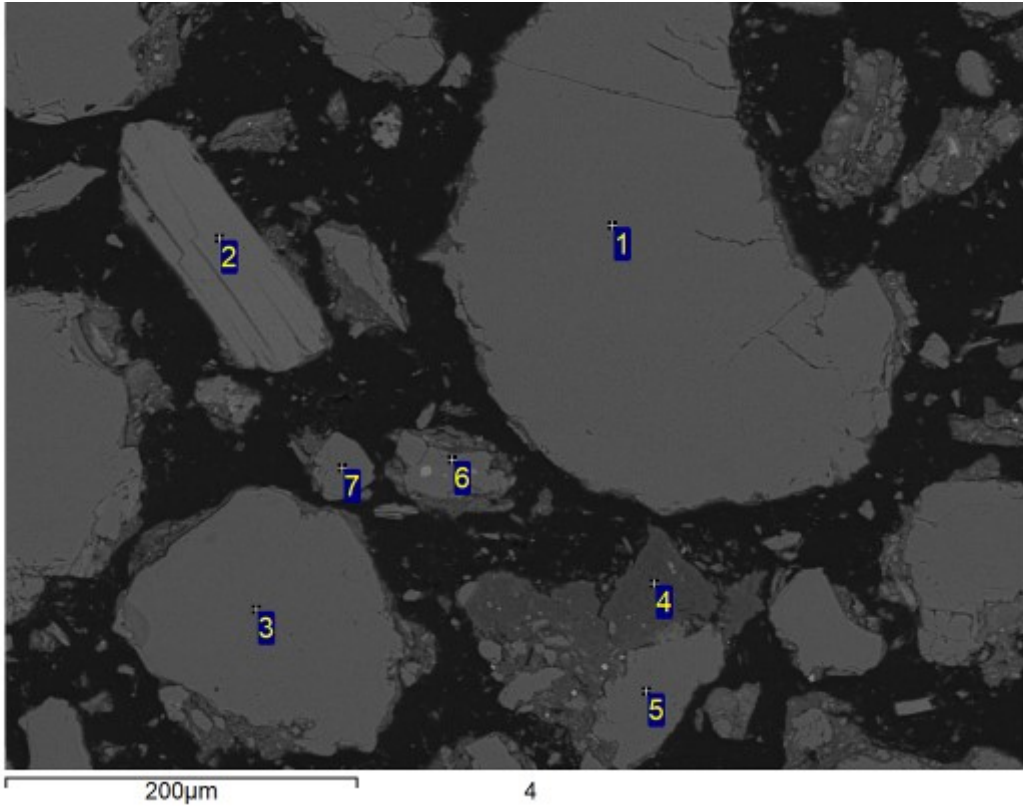


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	Cl	K	Ti	Fe	Total	Mineral ID
1	52.2			47.8					100.0	Quartz
2	46.5	0.9	17.1	24.9		8.4	0.6	1.5	100.0	Muscovite
3	50.8			49.2					100.0	Quartz
4	38.8		8.0	8.5		0.6		44.1	100.0	Fe-Oxide/Oxyhydroxide/Kaolinite mixture
5	42.2	0.5	18.5	27.1	0.4	3.7		7.6	100.0	Mineral mixtures Micas/Clays

All results in weight%

Sample Notes:
S-7677_1_DPT07AP1

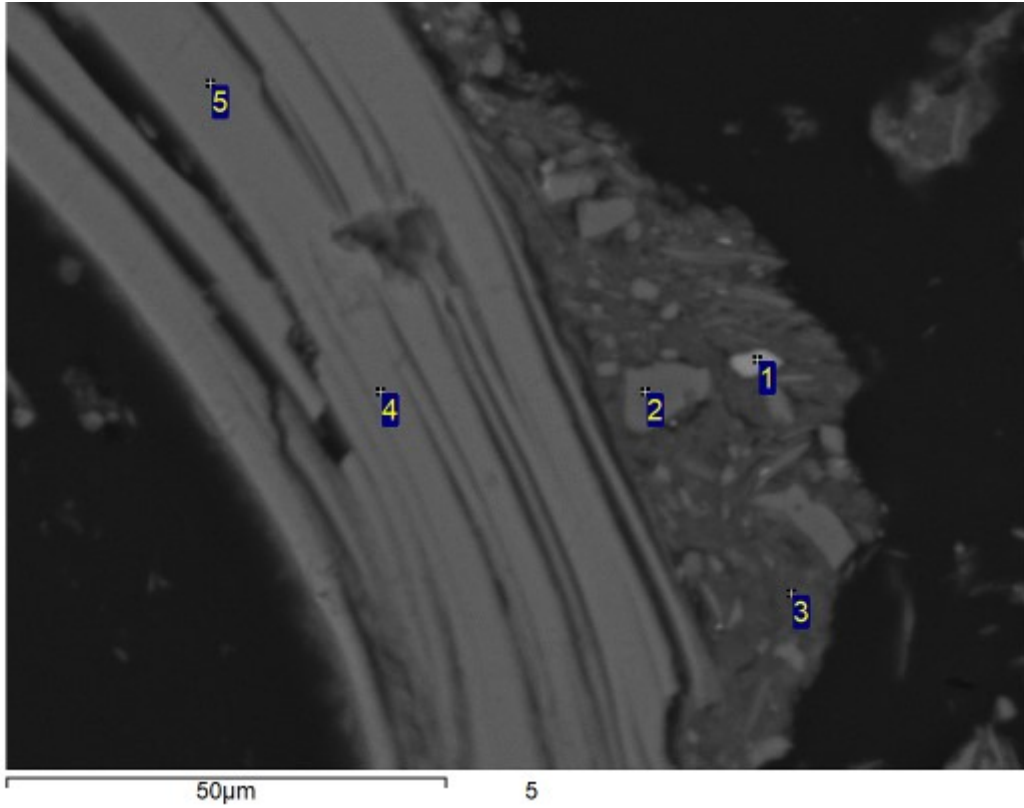


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	S	K	Ti	Fe	Total	Mineral ID
1	50.6				49.4					100.0	Quartz
2	47.8	1.1		18.7	23.2		8.1	0.3	0.9	100.0	Muscovite
3	50.6				49.4					100.0	Quartz
4	48.9		0.7	18.5	26.7	1.4	1.8	0.3	1.6	100.0	Muscovite
5	50.9				49.1					100.0	Quartz
6	51.6				48.4					100.0	Quartz
7	51.0				49.0					100.0	Quartz

All results in weight%

Sample Notes:
S-7677_1_DPT07AP1

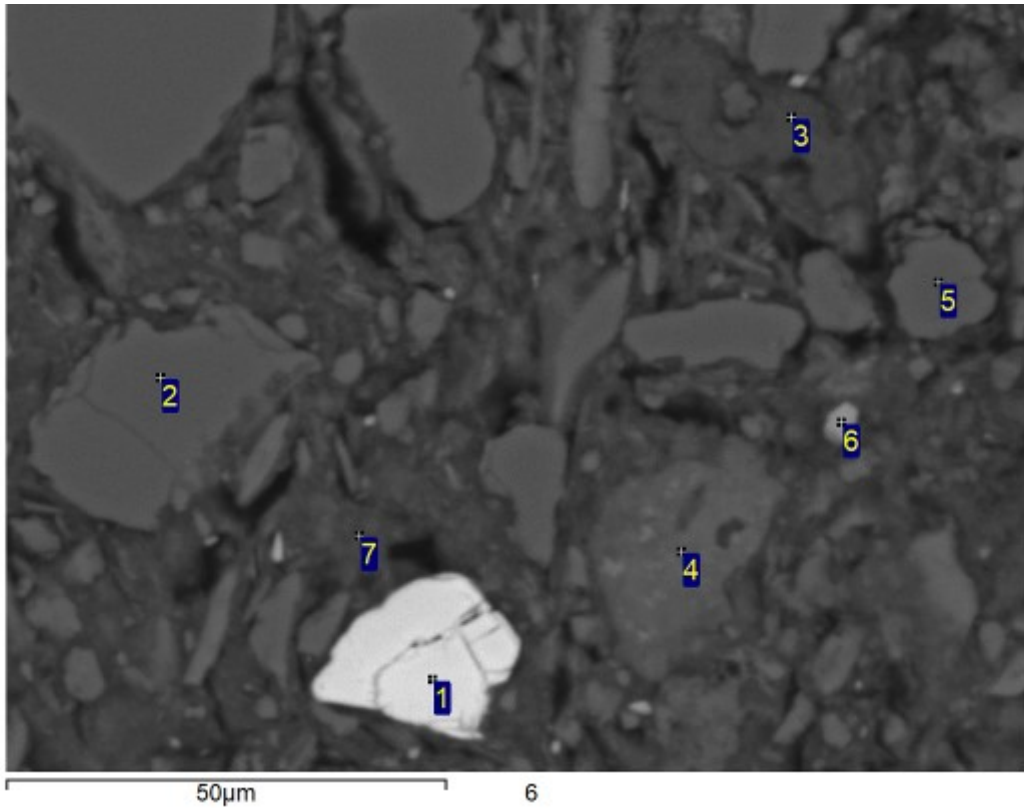


Processing option : All elements analysed (Normalised)

Spectrum	O	Na	Mg	Al	Si	P	K	Ti	Cr	Fe	Total	Mineral ID
1	49.6			5.0	3.2	0.5	0.2	36.3	0.5	4.6	100.0	Rutile
2	52.3				47.7						100.0	Quartz
3	47.0		0.7	18.6	28.7		2.0	0.9		2.1	100.0	Kaolinite/Muscovite
4	47.3	0.6	0.7	17.1	23.1		8.2	0.3		2.7	100.0	Muscovite
5	46.5	0.7	0.7	17.3	23.1		8.8			2.8	100.0	Muscovite

All results in weight%

Sample Notes:
S-7677_1_DPT07AP1

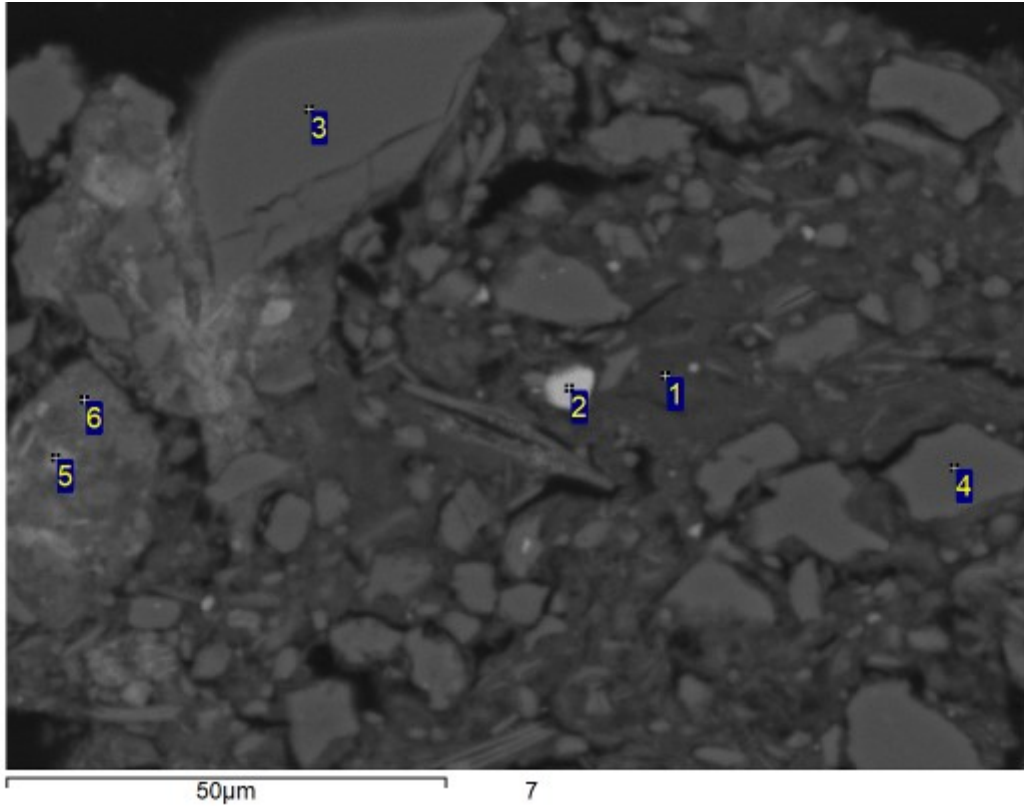


Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	K	Ti	Fe	Zr	Total	Mineral ID
1	34.1			16.0				49.9	100.0	Zircon
2	50.7			49.3					100.0	Quartz
3	47.0		21.8	29.0			2.2		100.0	Kaolinite
4	49.1	1.0	16.0	23.8	4.8	0.4	4.9		100.0	Muscovite
5	51.2		0.3	48.5					100.0	Quartz
6	54.2		1.8	2.7		41.3			100.0	Rutile
7	44.9	0.5	20.7	29.6	2.4		1.8		100.0	Kaolinite

All results in weight%

Sample Notes:
S-7677_1_DPT07AP1



Processing option : All elements analysed (Normalised)

Spectrum	O	Mg	Al	Si	S	K	Ti	Fe	Total	Mineral ID
1	44.8	0.8	18.2	30.4	0.6	2.5	0.6	2.1	100.0	Kaolinite
2	37.0	0.9					21.2	40.9	100.0	Ilmenite
3	50.5			49.5					100.0	Quartz
4	51.0			49.0					100.0	Quartz
5	34.7		9.9	11.2		0.5		43.6	100.0	Fe-Oxide/Oxyhydroxide/Kaolinite Mixtures
6	43.4		8.3	27.8		0.9		19.6	100.0	Fe-Oxide/Oxyhydroxide/Kaolinite Mixtures

All results in weight%

F402001 SGS LAKEFIELD RESEARCH
 PO BOX 4300
 185 CONCESSION STREET
 LAKEFIELD, ONTARIO ON K0L 2H0
 CANADA

Received: 31-Mar-2021
Completed: 29-Apr-2021
Order Reference: Kela Ashworth - S767 CEC

Laboratory ID:	GS21-00731.001
Client Sample #:	S-7677-1
Description:	S-7677_1_DPT07AP1

CEC Actual (meq/100g)	7.83
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Report File Reference Number: 0000206179

Page 1 of 1

NOTE:
 The analysis report above refers to the time and place of testing, and strictly to the supplied sample(s) only, without reference to any other matter. This report does not evidence or refer to any consignment or shipment or/and SGS sampling and inspection.

For and on behalf of SGS Canada Inc., Agriculture and Food



Jack Legg, CCA-ON, 4R NMS
 Branch Manager, Agronomist

Signed and dated in Guelph, ON
On 13-Jan-2022

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Specialty Analytical

9011 SE Janssen Rd
Clackamas, OR 97015
TEL: (503) 607-1331

Website: www.specialtyanalytical.com

January 25, 2022

Kela Ashworth
SiREM Lab
130 Stone Road West
Guelph, Ontario N1G3Z2
TEL: (519) 822-2265
FAX:

RE: S-7677

Order No.: 2103288

Dear Kela Ashworth:

REVISED REPORT: Please see case narrative for information on revision.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications, except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

Marty French
Lab Director



Specialty Analytical
9011 SE Jannsen Ra
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Case Narrative

WO#: 2103288

Date: 1/25/2022

CLIENT: SiREM Lab

Project: S-7677

Revision 1.

Report revised at client request to separate selected samples into separate jobs. See Specialty Analytical job numbers 2201248 and 2201249

Specialty Analytical

WO#: 2103288
Date Reported: 1/25/2022

CLIENT: SiREM Lab
Project: S-7677

Lab ID: 2103288-001
Client Sample ID S-7677_1_DPT07AP1

Matrix: SOIL
Collection Date: 3/25/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY						Analyst: EG
Anion Exchange Capacity	5.13	0.000200		meq/100g	1	4/1/2021 10:38:06 AM

Qualifiers: H Holding times for preparation or analysis exceeded

QC SUMMARY REPORT

WO#: 2103288

1/25/2022

Specialty Analytical

Client: SiREM Lab

Project: S-7677

TestCode: AEC_S

Sample ID: 2201248-003ADUP	SampType: DUP	TestCode: AEC_S	Units: meq/100g	Prep Date:	RunNo: 39875						
Client ID: BatchQC	Batch ID: R39875	TestNo: SW9081	Analysis Date: 4/1/2021	SeqNo: 513304							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Anion Exchange Capacity	7.21	0.000200						6.836	5.36	20	

Qualifiers: H Holding times for preparation or analysis exceeded



Specialty Analytical
 9011 SE Jannsen Rd
 Clackamas, Oregon 97015
 TEL: 503-607-1331 FAX: 503-607-1336
 Website: www.specialtyanalytical.com

Sample Receipt Checklist

Client Name SIREM

Work Order Number 2103288

RcptNo: 1

Date and Time Received 3/29/2021 9:11:17 AM

Received by: Katherine Lynch

Completed by

Reviewed by:

Completed Date: 3/29/2021 9:24:09 AM

Reviewed Date: 3/29/2021 3:51:52 PM

Carrier name: FedEx

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>	
Are matrices correctly identified on Chain of custody?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Is it clear what analyses were requested?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Were correct preservatives used and noted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Were container labels complete (ID, Pres, Date)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Was an attempt made to cool the samples?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	
All samples received at a temp. of > 0° C to 6.0° C?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>	
Response when temperature is outside of range:				
Preservative added to bottles:				
Sample Temp. taken and recorded upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	To 10.1°C	
Water - Were bubbles absent in VOC vials?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No Vials <input checked="" type="checkbox"/>	
Water - Was there Chlorine Present?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>	
Are Samples considered acceptable?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Custody Seals present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
Traffic Report or Packing Lists present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
Airbill or Sticker?	Air Bill <input type="checkbox"/>	Sticker <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>	
Airbill No:				
Sample Tags Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
Sample Tags Listed on COC?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
Tag Numbers:				
Sample Condition?	Intact <input checked="" type="checkbox"/>	Broken <input type="checkbox"/>	Leaking <input type="checkbox"/>	

Case Number:

SDG:

SAS:

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the comments section below

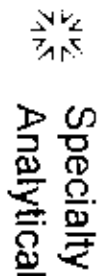


Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Sample Receipt Checklist

Client Contacted? Yes No NA Person Contacted: _____
Contact Mode: Phone: Fax: Email: In Person: _____
Client Instructions: _____
Date Contacted: 3/29/2021 Contacted By: Katherine Lynch
Regarding: Temp of samples upon receipt
CorrectiveAction: _____

Comments:
Samples received in cooler with ice packs. Client contacted.



9011 SE Jamison Rd
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Chain of Custody Record

Date: 10/1 Page 1 of 1

Laboratory Project No (Internal) 2103288

Temperature on Receipt 10.1 °C

Cooling Yes (Cooler *100 Shipped Via FedEx)

Custody Seal Y Intact / Broken Cooler / Bottle

MDL TIER IV EDD

Sample Destroyed Retained for Replaced by the lab (5/12/20)

Project Name: S-7677 PO No:

Collected by: Kela Ashworth

State Collected: OR WA OTHER

Report To (PM): Kela Ashworth

PM Email: kashworth@siemlab.com

Requested Tests

Sample Name	Sample Date	Sample Time	Sample Matrix	# of Containers	Am or Exchange Capacity	Requested Tests	Am or Exchange Capacity	Comments
S-7677_1_DPT07AP1	25-Mar-21		S	1	✓			
S-7677_2_DPT11AP2	25-Mar-21		S	1	✓			
S-7677_3_DPT08AP2	25-Mar-21		S	1	✓			
S-7677_4_DPT07AP2	25-Mar-21		S	1	✓			
S-7677_5_DPT01AP3	25-Mar-21		S	1	✓			
S-7677_6_DPT03AP3	25-Mar-21		S	1	✓			
S-7677_7_DPT02AP3	25-Mar-21		S	1	✓			
S-7677_8_DPT04AP3	25-Mar-21		S	1	✓			
S-7677_9_DPT09AP2	25-Mar-21		S	1	✓			
S-7677_10_DPT10AP2	25-Mar-21		S	1	✓			

Matrix: A = Air; AG = Aerosol; L = Liquid; O = Oil; H = High; S = Sol; S3 = Solvent; A = Solid; W = Water; FW = Drinking Water; GW = Groundwater; SW = Stormwater; WW = Wastewater; V = Volatiles

Turn-around Time: Standard (5-7 Business): 3 Day: 2 Day: Next Day: Same Day:

Expedited turn-around requests should be coordinated in advance

Requested by: Kelashworth Date: 25 March 21 Time: 10:30

Received by: [Signature] Date: 3-29-2021 Time: 9:10



Specialty Analytical
9011 SE Jannsen Ra
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Definition Only

WO#: 2103288
Date: 1/25/2022

Definitions:

KEY TO FLAGS

A: This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was qualified against gasoline calibration standards.

A1: This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was qualified against diesel calibration standards.

A2: This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was qualified against lube oil calibration standards.

A3: The results was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.

A4: The product appears to be aged or degraded.

B: The blank exhibited a positive result greater than the reporting limit for this compound.

CN: See Case Narrative.

E: Result exceeds the calibration range for this compound. The result should be considered an estimate.

F: The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.

FS: Follow-up testing is suggested.

G: Result may be biased high due to biogenic interferences. Clean up is recommended.

H: Sample was analyzed outside recommended holding time.

HT: At client's request, samples was analyzed outside of recommended holding time.

HP: Sample was analyzed outside recommended holding time due to VOA having pH >2.

J: The results for this analyte is between the MDL and the PQL and should be considered an



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Definition Only

WO#: 2103288
Date: 1/25/2022

Definitions:

estimated concentration.

K: Diesel result is biased high due to amount of Oil contained in the sample.

L: Diesel result is biased high due to amount of Gasoline contained in the sample.

M: Oil result is biased high due to amount of Diesel contained in the sample.

N: Gasoline result is biased high due to amount of Diesel contained in the sample.

MC: Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.

MI: Result is outside control limits due to matrix interference.

NH: Sample matrix is non-homogeneous

MSA: Value determined by Method of Standard Addition.

O: Laboratory Control Standard (LCS) exceeded laboratory control limits but meets CCV criteria. Data meets EPA requirements.

Q: Detection levels elevated due to sample matrix.

R: RPD control limits were exceeded

RF: Duplicate failed due to result being at or near the method-reporting limit.

RP: Matrix spike values exceed established QC limits; post digestion spike is in control.

S: Recovery is outside control limits.

SC: CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.

SL: LCS exceeded recovery control limits, but associated MS/MSD passing. Data meets EPA requirements.



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Project : Hammond MNA

25-August-2021

SiREM Laboratory

Attn : Kela Ashworth

130 Stone Rd. W
Guelph, ON
N1G 3Z2, Canada

Phone: 519-822-2265
Fax:519-822-3151

Date Rec. : 12 August 2021
LR Report: CA15239-AUG21
Reference: P.O# 800003210A

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: S-8083_DPT 04XRFAP1
Sample Date & Time					11-Aug-21
Ag [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	< 0.5
Al [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	13000
As [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	13
Ba [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	100
Be [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	1
Bi [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	< 0.09
Ca [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	500
Cd [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	0.03
Co [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	4
Cr [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	11
Cu [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	5.8
Fe [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	14000
K [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	2800
Li [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	12
Mg [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	420
Mn [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	120
Mo [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	1.4
Ni [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	8.5
Pb [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	6
Sb [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	< 0.8
Se [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	< 0.7
Sn [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	< 6
Sr [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	16
Ti [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	1600
Tl [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	0.08
U [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	1.16
V [µg/g]	18-Aug-21	21:15	19-Aug-21	16:32	15

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

Project : Hammond MNA

LR Report : CA15239-AUG21

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: S-8083_DPT 04XRFAP1
Y [$\mu\text{g/g}$]	18-Aug-21	21:15	19-Aug-21	16:32	9.70
Zn [$\mu\text{g/g}$]	18-Aug-21	21:15	19-Aug-21	16:32	20

Catharine Arnold



Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

SiREM Laboratory
Attn : Kela Ashworth

130 Stone Rd. W
Guelph, ON
N1G 3Z2, Canada

Phone: 519-822-2265
Fax: 519-822-3151

ABA - Modified Sobek

Project : Hammond MNA

19-October-2021

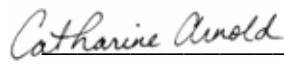

Date Rec. : 30 September 2021
LR Report: CA19125-SEP21
Reference: PO#800003210A

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: S-8083_DPT 04XRFAP1
Sample Date & Time					11-Aug-21
S [%]	15-Oct-21	14:57	18-Oct-21	14:01	0.007
Sulphide [%]	18-Oct-21	11:56	18-Oct-21	14:01	< 0.04
TOC [%]	18-Oct-21	08:11	18-Oct-21	10:55	0.045



Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

Project : Hammond MNA

21-October-2021

SiREM Laboratory

Attn : Kela Ashworth

130 Stone Rd. W
 Guelph, ON
 N1G 3Z2, Canada

Phone: 519-822-2265
 Fax:519-822-3151

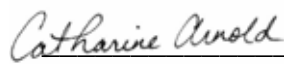

Date Rec. : 30 September 2021
LR Report: CA19126-SEP21
Reference: PO#800003210A

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	3: Analysis Completed Date	5: S-8083_DPT04 XRFAP1
Sample Date & Time			11-Aug-21
SiO2 [%]	19-Oct-21	20-Oct-21	91.9
Al2O3 [%]	19-Oct-21	20-Oct-21	2.69
Fe2O3 [%]	19-Oct-21	20-Oct-21	2.41
MgO [%]	19-Oct-21	20-Oct-21	0.08
CaO [%]	19-Oct-21	20-Oct-21	0.08
Na2O [%]	19-Oct-21	20-Oct-21	0.08
K2O [%]	19-Oct-21	20-Oct-21	0.46
TiO2 [%]	19-Oct-21	20-Oct-21	0.38
P2O5 [%]	19-Oct-21	20-Oct-21	0.04
MnO [%]	19-Oct-21	20-Oct-21	0.02
Cr2O3 [%]	19-Oct-21	20-Oct-21	< 0.01
V2O5 [%]	19-Oct-21	20-Oct-21	< 0.01
LOI [%]	19-Oct-21	20-Oct-21	1.53
Sum [%]	19-Oct-21	20-Oct-21	99.7



Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



Quantitative X-Ray Diffraction by Rietveld Refinement

Report Prepared for: Environmental Services

Project Number/ LIMS No. Custom XRD/MI4521-OCT21

Sample Receipt: October 15, 2021

Sample Analysis: October 30, 2021

Reporting Date: November 11, 2021

Instrument: BRUKER AXS D8 Advance Diffractometer

Test Conditions: Co radiation, 35 kV, 40 mA
Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°

Interpretations : PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.

Detection Limit : 0.5-2%. Strongly dependent on crystallinity.

Contents:

- 1) Method Summary
- 2) Quantitative XRD Results
- 3) XRD Pattern(s)

Kim Gibbs, H.B.Sc., P.Geol.
Senior Mineralogist

Huyun Zhou, Ph.D., P.Geol.
Senior Mineralogist

ACCREDITATION: SGS Natural Resources Lakefield is accredited to the requirements of ISO/IEC 17025 for specific tests as listed on our scope of accreditation, including geochemical, mineralogical and trade mineral tests. To view a list of the accredited methods, please visit the following website and search SGS Canada Inc. - Minerals: <https://www.scc.ca/en/search/palcan>.



Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Natural Resources is accredited to the requirements of ISO/IEC 17025.

Mineral Identification and Interpretation:

Mineral identification and interpretation involves matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

Quantitative Rietveld Analysis:

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

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WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

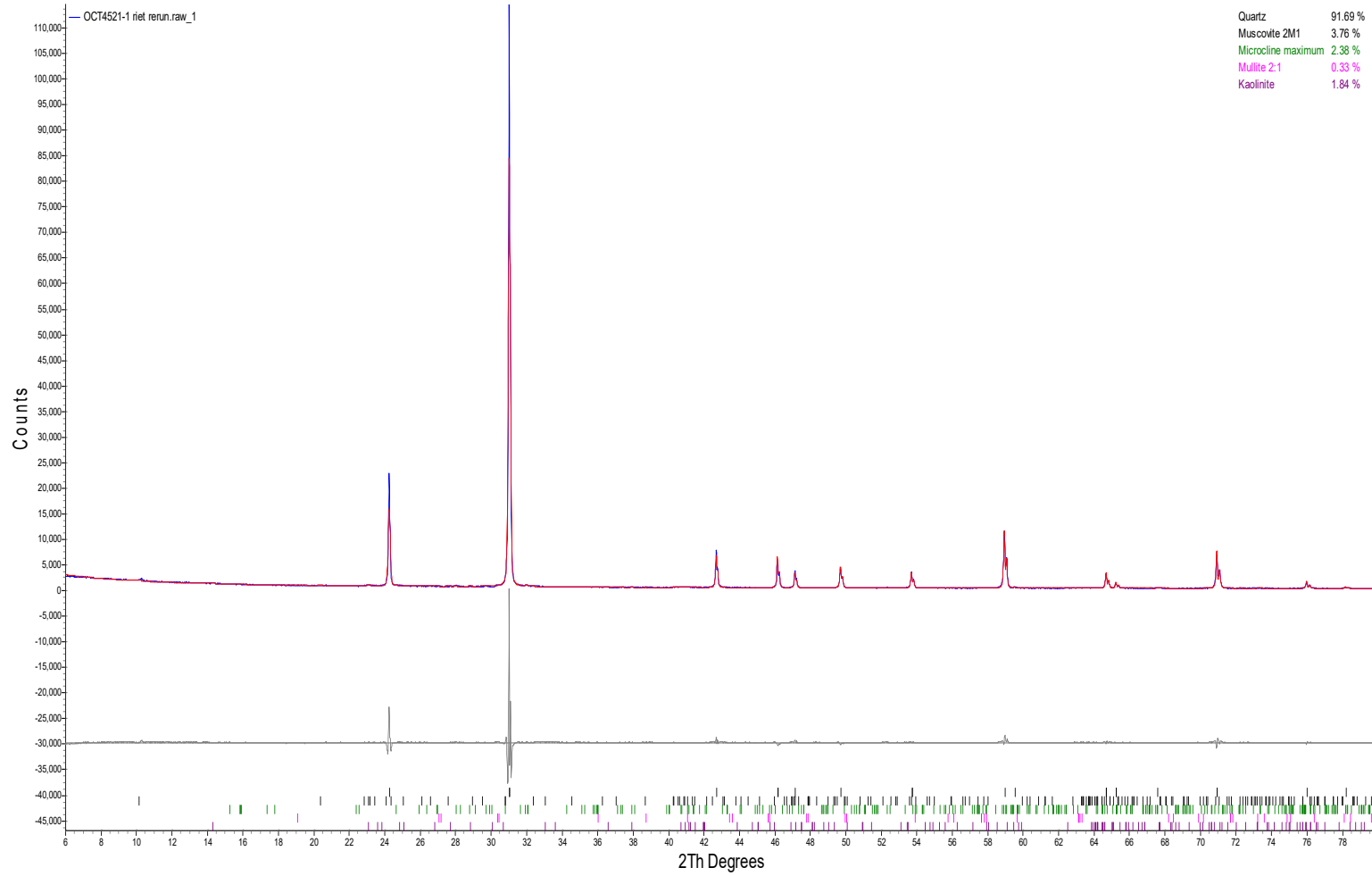
Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

Mineral/Compound	S-8083_DPT04XRFAP1 OCT4521-1 (wt %)
Quartz	91.7
Muscovite	3.8
Microcline	2.4
Mullite	0.3
Kaolinite	1.8
TOTAL	100

The weight percent quantities indicated have been normalized to a sum of 100%. The quantity of amorphous material has not been determined.

Mineral/Compound	Formula
Quartz	SiO ₂
Muscovite	KAl ₂ (AlSi ₃ O ₁₀)(OH) ₂
Microcline	KAlSi ₃ O ₈
Mullite	~Al ₆ Si ₃ O ₁₅
Kaolinite	Al ₂ Si ₂ O ₅ (OH) ₄

S-8083_DPT04XRFAP1





Specialty Analytical

9011 SE Janssen Rd
Clackamas, OR 97015
TEL: (503) 607-1331

Website: www.specialtyanalytical.com

September 16, 2021

Kela Ashworth
SiREM Lab
130 Stone Road West
Guelph, Ontario N1G3Z2
TEL: (519) 822-2265
FAX:

RE: S-8083

Order No.: 2108207

Dear Kela Ashworth:

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications, except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "Marty French". The signature is written in a cursive, flowing style.

Marty French
Lab Director

Specialty Analytical

WO#: 2108207

Date Reported: 9/16/2021

CLIENT: SiREM Lab
Project: S-8083

Lab ID: 2108207-001 **Matrix:** SOIL
Client Sample ID S-8083_DPT04XRFAP1 **Collection Date:** 8/30/2021

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ANION EXCHANGE CAPACITY						Analyst: NK
Anion Exchange Capacity	5.52	0.000200		meq/100g	1	9/16/2021 12:34:37 PM

Qualifiers: H Holding times for preparation or analysis exceeded

QC SUMMARY REPORT

WO#: 2108207

9/16/2021

Specialty Analytical

Client: SiREM Lab

Project: S-8083

TestCode: AEC_S

Sample ID: 2108207-001ADUP	SampType: DUP	TestCode: AEC_S	Units: meq/100g	Prep Date:	RunNo: 41888						
Client ID: S-8083_DPT04XRFA	Batch ID: R41888	TestNo: SW9081	Analysis Date: 9/16/2021	SeqNo: 537224							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Anion Exchange Capacity	4.66	0.000200						5.519	16.9	20	

Qualifiers: H Holding times for preparation or analysis exceeded



Specialty Analytical
 9011 SE Jannsen Rd
 Clackamas, Oregon 97015
 TEL: 503-607-1331 FAX: 503-607-1336
 Website: www.specialtyanalytical.com

Sample Receipt Checklist

Client Name SIREM

Work Order Number 2108207

RcptNo: 1

Date and Time Received 8/31/2021 12:37:55 PM

Received by: Mandy Wehe

Completed by

Reviewed by:

Completed Date:

8/31/2021

Reviewed Date:

8/31/2021 2:28:45 PM

Carrier name: UPS

- | | | | | |
|--|--|--|-------------|-------------------------------------|
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present | <input type="checkbox"/> |
| Are matrices correctly identified on Chain of custody? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Is it clear what analyses were requested? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present | <input checked="" type="checkbox"/> |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Were correct preservatives used and noted? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA | <input type="checkbox"/> |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Were container labels complete (ID, Pres, Date)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Was an attempt made to cool the samples? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA | <input type="checkbox"/> |
| All samples received at a temp. of > 0° C to 6.0° C? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA | <input type="checkbox"/> |
| Response when temperature is outside of range:
Preservative added to bottles: | | | | |
| Sample Temp. taken and recorded upon receipt? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | To | 5.9°C |
| Water - Were bubbles absent in VOC vials? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | No Vials | <input checked="" type="checkbox"/> |
| Water - Was there Chlorine Present? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA | <input checked="" type="checkbox"/> |
| Water - pH acceptable upon receipt? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA | <input checked="" type="checkbox"/> |
| Are Samples considered acceptable? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | | |
| Custody Seals present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | |
| Traffic Report or Packing Lists present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | |
| Airbill or Sticker? | Air Bill <input type="checkbox"/> | Sticker <input type="checkbox"/> | Not Present | <input checked="" type="checkbox"/> |
| Airbill No: | | | | |
| Sample Tags Present? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | |
| Sample Tags Listed on COC? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | | |
| Tag Numbers: | | | | |
| Sample Condition? | Intact <input checked="" type="checkbox"/> | Broken <input type="checkbox"/> | Leaking | <input type="checkbox"/> |

Case Number:

SDG:

SAS:

Adjusted? _____ Checked by _____


Any No and/or NA (not applicable) response must be detailed in the comments section be



Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Sample Receipt Checklist

Client Contacted? Yes No NA Person Contacted: _____ Comments: _____
Contact Mode: Phone: Fax: Email: In Person: _____
Client Instructions: _____
Date Contacted: _____ Contacted By: _____
Regarding: _____
CorrectiveAction: _____

 Specialty Analytical 9011 SE Jannsen Rd Clackamas, OR 97015 Phone: 503-607-1331 Fax: 503-607-1336	Chain of Custody Record	
	Date: _____	Page: 1 of 1
Client: SIREM Lab	Project Name: _____	Laboratory Project No (internal): 2108207
Address: 130 Stone Road West	Project No: S-8083 PO No. _____	Temperature on Receipt: 5.9 °C
City, State, Zip: Guelph, Ontario, N1G 3Z2	Collected by: Kela Ashworth	Cooling: ICE Shipped Via: VPS
Telephone: 519-822-2265	State Collected: OR <input type="checkbox"/> WA <input type="checkbox"/> OTHER <input type="checkbox"/>	Custody Seal Y / (N) Intact / Broken Cooler / Bottle
AP Email: accountspayablecan@siremlab.com	Report To (PM): Kela Ashworth	MDL <input type="checkbox"/> TIER IV <input type="checkbox"/> EDD <input type="checkbox"/>
	PM Email: kashworth@siremlab.com	Sample received <input type="checkbox"/> Return to sender <input checked="" type="checkbox"/> Physical by appropriate means

Sample Name	Sample Date	Sample Time	Sample Matrix	# of Containers	Air or Exchange Capacity	Requested Tests												Comments							
						1	2	3	4	5	6	7	8	9	10	11	12								
S-8083_DPT04XRFAP1	8/30/2021		S	1	✓																				

*VWA = Vapor Aqueous, A3 = Aqueous, U = Urine, P = Protein, S = Saliva, S2 = Serum, B = Blood, W = Water, DW = Drinking Water, CW = Contaminant, SW = Sweat, UR = Urine, WA = Waste Water, M = Miscellaneous

Turn-around Time: Standard (5-7 Business): 3 Day: 2 Day: Next Day: Same Day:

Expedited turn-around requests should be coordinated in advance.

Requested by: <i>Kela Ashworth</i>	Date/Time: <i>30 Aug 21 16:30</i>	Received by: <i>Aluche</i>	Date/Time: <i>8/31/21 12:30</i>
Rel. Instruct:	Date/Time:	Rel. Instruct:	Date/Time:
Rel. Instruct:	Date/Time:	Rel. Instruct:	Date/Time:



Specialty Analytical
9011 SE Jannsen Ra
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Definition Only

WO#: 2108207
Date: 9/16/2021

Definitions:

KEY TO FLAGS

A: This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was qualified against gasoline calibration standards.

A1: This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was qualified against diesel calibration standards.

A2: This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was qualified against lube oil calibration standards.

A3: The results was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.

A4: The product appears to be aged or degraded.

B: The blank exhibited a positive result greater than the reporting limit for this compound.

CN: See Case Narrative.

E: Result exceeds the calibration range for this compound. The result should be considered an estimate.

F: The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.

FS: Follow-up testing is suggested.

G: Result may be biased high due to biogenic interferences. Clean up is recommended.

H: Sample was analyzed outside recommended holding time.

HT: At client's request, samples was analyzed outside of recommended holding time.

HP: Sample was analyzed outside recommended holding time due to VOA having pH >2.

J: The results for this analyte is between the MDL and the PQL and should be considered an



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Definition Only

WO#: 2108207
Date: 9/16/2021

Definitions:

estimated concentration.

K: Diesel result is biased high due to amount of Oil contained in the sample.

L: Diesel result is biased high due to amount of Gasoline contained in the sample.

M: Oil result is biased high due to amount of Diesel contained in the sample.

N: Gasoline result is biased high due to amount of Diesel contained in the sample.

MC: Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.

MI: Result is outside control limits due to matrix interference.

NH: Sample matrix is non-homogeneous

MSA: Value determined by Method of Standard Addition.

O: Laboratory Control Standard (LCS) exceeded laboratory control limits but meets CCV criteria. Data meets EPA requirements.

Q: Detection levels elevated due to sample matrix.

R: RPD control limits were exceeded

RF: Duplicate failed due to result being at or near the method-reporting limit.

RP: Matrix spike values exceed established QC limits; post digestion spike is in control.

S: Recovery is outside control limits.

SC: CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.

SL: LCS exceeded recovery control limits, but associated MS/MSD passing. Data meets EPA requirements.

ANALYTICAL REPORT

Eurofins TestAmerica, Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

Laboratory Job ID: 140-24429-1
Client Project/Site: S-7677 SiREMNA
Revision: 1

For:
Sirem, div of Geosyntec Consultants
130 Stone Rd West
Guelph, Ontario N1G 3Z2

Attn: Kela Ashworth



Authorized for release by:
12/10/2021 3:59:57 PM

Ryan Henry, Project Manager I
(865)291-3000
williamr.henry@eurofinset.com

LINKS

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results through
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www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Qualifiers

Metals

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Job ID: 140-24429-1

Laboratory: Eurofins TestAmerica, Knoxville

Narrative

**Job Narrative
140-24429-1
Revised**

Comments

This report has been revised to report samples in separate jobs.

Receipt

The samples were received on 8/31/2021 at 10:10am and arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.4° C.

Metals

7 Step Sequential Extraction Procedure

These soil samples were prepared and analyzed using Eurofins TestAmerica Knoxville standard operating procedure KNOX-MT-0008, "7 Step Sequential Extraction Procedure". SW-846 Method 6010B as incorporated in Eurofins TestAmerica Knoxville standard operating procedure KNOX-MT-0007 was used to perform the final instrument analyses.

An aliquot of each sample was sequentially extracted using the steps listed below:

- Step 1 - Exchangeable Fraction: A 5 gram aliquot of sample was extracted with 25 mL of 1M magnesium sulfate (MgSO₄), centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 2 - Carbonate Fraction: The sample residue from step 1 was extracted with 25 mL of 1M sodium acetate/acetic acid (NaOAc/HOAc) at pH 5, centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 3 - Non-crystalline Materials Fraction: The sample residue from step 2 was extracted with 25 mL of 0.2M ammonium oxalate (pH 3), centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 4 - Metal Hydroxide Fraction: The sample residue from step 3 was extracted with 25 mL of 1M hydroxylamine hydrochloride solution in 25% v/v acetic acid, centrifuged and filtered. 5 mL of the resulting leachate was digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 5 - Organic-bound Fraction: The sample residue from step 4 was extracted three times with 25 mL of 5% sodium hypochlorite (NaClO) at pH 9.5, centrifuged and filtered. The resulting leachates were combined and 5 mL were digested using method 3010A and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 6 - Acid/Sulfide Fraction: The sample residue from step 5 was extracted with 25 mL of a 3:1:2 v/v solution of HCl-HNO₃-H₂O, centrifuged and filtered. 5 mL of the resulting leachate was diluted to 50 mL with reagent water and analyzed by method 6010B. Results are reported in mg/kg on a dry weight basis.
- Step 7 - Residual Fraction: A 1.0 g aliquot of the sample residue from step 6 was digested using HF, HNO₃, HCl and H₃BO₃. The digestate was analyzed by ICP using method 6010B. Results are reported in mg/kg on a dry weight basis.

In addition, a 1.0 g aliquot of the original sample was digested using HF, HNO₃, HCl and H₃BO₃. The digestate was analyzed by ICP using method 6010B. Total metal results are reported in mg/kg on a dry weight basis.

Results were calculated using the following equation:

$$\text{Result, } \mu\text{g/g or mg/Kg, dry weight} = (C \times V \times V1 \times D) / (W \times S \times V2)$$

Where:

- C = Concentration from instrument readout, $\mu\text{g/mL}$
- V = Final volume of digestate, mL
- D = Instrument dilution factor
- V1 = Total volume of leachate, mL
- V2 = Volume of leachate digested, mL
- W = Wet weight of sample, g

Case Narrative

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Job ID: 140-24429-1 (Continued)

Laboratory: Eurofins TestAmerica, Knoxville (Continued)

S = Percent solids/100

A method blank, laboratory control sample and laboratory control sample duplicate were prepared and analyzed with each SEP step in order to provide information about both the presence of elements of interest in the extraction solutions, and the recovery of elements of interest from the extraction solutions. Results outside of laboratory QC limits do not reflect out of control performance, but rather the effect of the extraction solution upon the analyte.

A laboratory sample duplicate was prepared and analyzed with each batch of samples in order to provide information regarding the reproducibility of the procedure.

SEP Report Notes:

The final report lists the results for each step, the result for the total digestion of the sample, and a sum of the results of steps 1 through 7 by element.

Magnesium was not reported for step 1 because the extraction solution for this step (magnesium sulfate) contains high levels of magnesium. Sodium was not reported for steps 2 and 5 since the extraction solutions for these steps contain high levels of sodium. The sum of steps 1 through 7 is much higher than the total result for sodium and magnesium due to the magnesium and sodium introduced by the extraction solutions.

The digestates for steps 1, 2 and 5 were analyzed at a dilution due to instrument problems caused by the high solids content of the digestates. The reporting limits were adjusted accordingly.

Method 6010B: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following samples: S-8083_DPT06AP1 (140-24429-2) and S-8083_DPT04XRFAP1 (140-24429-3).

Method 6010B SEP: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 140-54486 and 140-54566 and analytical batch 140-55146 recovered outside control limits for the following analyte: Lithium. This analyte was biased high in the LCS/LCSD and was detected in the associated samples as an estimated value; therefore, the data have been reported.

Method 6010B SEP: The following samples were diluted due to the presence of silicon which interferes with Arsenic: S-8083_DPT06AP1 (140-24429-2) and S-8083_DPT04XRFAP1 (140-24429-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

% Moisture: The samples were analyzed for percent moisture using SOP number KNOX-WC-0012 (based on Modified MCAWW 160.3 and SM2540B and on the percent moisture determinations described in methods 3540C and 3550B).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Sample Summary

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-24429-1	S-8083_DPT02AP1	Solid	08/30/21 00:00	08/31/21 10:10
140-24429-2	S-8083_DPT06AP1	Solid	08/30/21 00:00	08/31/21 10:10
140-24429-3	S-8083_DPT04XRFAP1	Solid	08/30/21 00:00	08/31/21 10:10

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Client Sample Results

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Client Sample ID: S-8083_DPT02AP1

Lab Sample ID: 140-24429-1

Date Collected: 08/30/21 00:00

Matrix: Solid

Date Received: 08/31/21 10:10

Percent Solids: 80.5

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.5	0.65	mg/Kg	☼	09/30/21 08:00	10/22/21 12:50	4
Lithium	ND		12	0.75	mg/Kg	☼	09/30/21 08:00	10/22/21 12:50	4
Molybdenum	ND		9.9	0.41	mg/Kg	☼	09/30/21 08:00	10/22/21 12:50	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.9	0.48	mg/Kg	☼	10/01/21 08:00	10/22/21 14:48	3
Lithium	ND		9.3	0.56	mg/Kg	☼	10/01/21 08:00	10/22/21 14:48	3
Molybdenum	ND		7.5	0.31	mg/Kg	☼	10/01/21 08:00	10/22/21 14:48	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.42	J	0.62	0.16	mg/Kg	☼	10/04/21 08:00	10/22/21 16:46	1
Lithium	0.52	J	3.1	0.19	mg/Kg	☼	10/04/21 08:00	10/22/21 16:46	1
Molybdenum	1.6	J	2.5	0.10	mg/Kg	☼	10/04/21 08:00	10/22/21 16:46	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5		0.62	0.27	mg/Kg	☼	10/05/21 08:00	10/25/21 13:03	1
Lithium	6.4		3.1	0.19	mg/Kg	☼	10/05/21 08:00	10/25/21 13:03	1
Molybdenum	1.2	J	2.5	0.10	mg/Kg	☼	10/05/21 08:00	10/25/21 13:03	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		9.3	2.4	mg/Kg	☼	10/07/21 08:00	10/25/21 15:02	5
Lithium	8.5	J B *+	47	2.7	mg/Kg	☼	10/07/21 08:00	10/25/21 15:02	5
Molybdenum	ND		37	1.6	mg/Kg	☼	10/07/21 08:00	10/25/21 15:02	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.1		0.62	0.19	mg/Kg	☼	10/07/21 08:00	10/25/21 17:01	1
Lithium	12		3.1	0.19	mg/Kg	☼	10/07/21 08:00	10/25/21 17:01	1
Molybdenum	0.21	J	2.5	0.12	mg/Kg	☼	10/07/21 08:00	10/25/21 17:01	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.2		0.62	0.16	mg/Kg	☼	10/08/21 08:00	10/26/21 14:00	1
Lithium	23		3.1	0.19	mg/Kg	☼	10/08/21 08:00	10/26/21 14:00	1
Molybdenum	ND		2.5	0.10	mg/Kg	☼	10/08/21 08:00	10/26/21 14:00	1

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.2		0.50	0.13	mg/Kg			11/02/21 16:06	1
Lithium	50		2.5	0.15	mg/Kg			11/02/21 16:06	1
Molybdenum	3.0		2.0	0.082	mg/Kg			11/02/21 16:06	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.6		0.62	0.16	mg/Kg	☼	09/29/21 08:00	10/27/21 14:28	1
Lithium	44		3.1	0.19	mg/Kg	☼	09/29/21 08:00	10/27/21 14:28	1
Molybdenum	3.2		2.5	0.10	mg/Kg	☼	09/29/21 08:00	10/27/21 14:28	1

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Client Sample ID: S-8083_DPT06AP1

Lab Sample ID: 140-24429-2

Date Collected: 08/30/21 00:00

Matrix: Solid

Date Received: 08/31/21 10:10

Percent Solids: 75.8

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.6	0.69	mg/Kg	☼	09/30/21 08:00	10/22/21 12:55	4
Lithium	ND		13	0.79	mg/Kg	☼	09/30/21 08:00	10/22/21 12:55	4
Molybdenum	ND		11	0.43	mg/Kg	☼	09/30/21 08:00	10/22/21 12:55	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.51	mg/Kg	☼	10/01/21 08:00	10/22/21 14:53	3
Lithium	ND		9.9	0.59	mg/Kg	☼	10/01/21 08:00	10/22/21 14:53	3
Molybdenum	ND		7.9	0.32	mg/Kg	☼	10/01/21 08:00	10/22/21 14:53	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.36	J	0.66	0.17	mg/Kg	☼	10/04/21 08:00	10/22/21 16:51	1
Lithium	ND		3.3	0.20	mg/Kg	☼	10/04/21 08:00	10/22/21 16:51	1
Molybdenum	ND		2.6	0.11	mg/Kg	☼	10/04/21 08:00	10/22/21 16:51	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.56	J	0.66	0.29	mg/Kg	☼	10/05/21 08:00	10/25/21 13:08	1
Lithium	4.2		3.3	0.20	mg/Kg	☼	10/05/21 08:00	10/25/21 13:08	1
Molybdenum	ND		2.6	0.11	mg/Kg	☼	10/05/21 08:00	10/25/21 13:08	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		9.9	2.5	mg/Kg	☼	10/07/21 08:00	10/25/21 15:07	5
Lithium	7.5	J B *+	49	2.9	mg/Kg	☼	10/07/21 08:00	10/25/21 15:07	5
Molybdenum	ND		40	1.6	mg/Kg	☼	10/07/21 08:00	10/25/21 15:07	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.2		0.66	0.20	mg/Kg	☼	10/07/21 08:00	10/25/21 17:06	1
Lithium	8.6		3.3	0.20	mg/Kg	☼	10/07/21 08:00	10/25/21 17:06	1
Molybdenum	ND		2.6	0.13	mg/Kg	☼	10/07/21 08:00	10/25/21 17:06	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.77	J	1.3	0.34	mg/Kg	☼	10/08/21 08:00	10/26/21 15:29	2
Lithium	21		3.3	0.20	mg/Kg	☼	10/08/21 08:00	10/26/21 14:05	1
Molybdenum	ND		2.6	0.11	mg/Kg	☼	10/08/21 08:00	10/26/21 14:05	1

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.9		0.50	0.13	mg/Kg			11/02/21 16:06	1
Lithium	41		2.5	0.15	mg/Kg			11/02/21 16:06	1
Molybdenum	ND		2.0	0.082	mg/Kg			11/02/21 16:06	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.6		3.3	0.86	mg/Kg	☼	09/29/21 08:00	10/27/21 17:44	5
Lithium	56		16	0.99	mg/Kg	☼	09/29/21 08:00	10/27/21 17:44	5
Molybdenum	ND		13	0.54	mg/Kg	☼	09/29/21 08:00	10/27/21 17:44	5

Eurofins TestAmerica, Knoxville

Client Sample Results

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Client Sample ID: S-8083_DPT04XRFAP1

Lab Sample ID: 140-24429-3

Date Collected: 08/30/21 00:00

Matrix: Solid

Date Received: 08/31/21 10:10

Percent Solids: 96.9

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.1	0.54	mg/Kg	☼	09/30/21 08:00	10/22/21 13:00	4
Lithium	ND		10	0.62	mg/Kg	☼	09/30/21 08:00	10/22/21 13:00	4
Molybdenum	ND		8.3	0.34	mg/Kg	☼	09/30/21 08:00	10/22/21 13:00	4

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.5	0.40	mg/Kg	☼	10/01/21 08:00	10/22/21 14:58	3
Lithium	ND		7.7	0.46	mg/Kg	☼	10/01/21 08:00	10/22/21 14:58	3
Molybdenum	ND		6.2	0.25	mg/Kg	☼	10/01/21 08:00	10/22/21 14:58	3

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.2		0.52	0.13	mg/Kg	☼	10/04/21 08:00	10/22/21 16:56	1
Lithium	ND		2.6	0.15	mg/Kg	☼	10/04/21 08:00	10/22/21 16:56	1
Molybdenum	0.46	J	2.1	0.085	mg/Kg	☼	10/04/21 08:00	10/22/21 16:56	1

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.7		0.52	0.23	mg/Kg	☼	10/05/21 08:00	10/25/21 13:13	1
Lithium	1.9	J	2.6	0.15	mg/Kg	☼	10/05/21 08:00	10/25/21 13:13	1
Molybdenum	0.85	J	2.1	0.085	mg/Kg	☼	10/05/21 08:00	10/25/21 13:13	1

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.4	J	7.7	2.0	mg/Kg	☼	10/07/21 08:00	10/25/21 15:12	5
Lithium	5.6	J B *+	39	2.3	mg/Kg	☼	10/07/21 08:00	10/25/21 15:12	5
Molybdenum	ND		31	1.3	mg/Kg	☼	10/07/21 08:00	10/25/21 15:12	5

Method: 6010B SEP - SEP Metals (ICP) - Step 6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5		0.52	0.15	mg/Kg	☼	10/07/21 08:00	10/25/21 17:11	1
Lithium	3.0		2.6	0.15	mg/Kg	☼	10/07/21 08:00	10/25/21 17:11	1
Molybdenum	0.13	J	2.1	0.10	mg/Kg	☼	10/07/21 08:00	10/25/21 17:11	1

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.46	J	1.0	0.27	mg/Kg	☼	10/08/21 08:00	10/26/21 15:34	2
Lithium	4.9		2.6	0.15	mg/Kg	☼	10/08/21 08:00	10/26/21 14:20	1
Molybdenum	ND		2.1	0.085	mg/Kg	☼	10/08/21 08:00	10/26/21 14:20	1

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		0.50	0.13	mg/Kg			11/02/21 16:06	1
Lithium	15		2.5	0.15	mg/Kg			11/02/21 16:06	1
Molybdenum	1.4	J	2.0	0.082	mg/Kg			11/02/21 16:06	1

Method: 6010B - SEP Metals (ICP) - Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	59		1.0	0.27	mg/Kg	☼	09/29/21 08:00	10/27/21 16:43	2
Lithium	12		5.2	0.31	mg/Kg	☼	09/29/21 08:00	10/27/21 16:43	2
Molybdenum	1.5	J	4.1	0.17	mg/Kg	☼	09/29/21 08:00	10/27/21 16:43	2

Eurofins TestAmerica, Knoxville

Default Detection Limits

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Method: 6010B SEP - SEP Metals (ICP) - Step 1

Prep: 3010A

SEP: Exchangeable

Analyte	RL	MDL	Units
Arsenic	0.50	0.13	mg/Kg
Lithium	2.5	0.15	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 2

Prep: 3010A

SEP: Carbonate

Analyte	RL	MDL	Units
Arsenic	0.50	0.13	mg/Kg
Lithium	2.5	0.15	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 3

Prep: 3010A

SEP: Non-Crystalline

Analyte	RL	MDL	Units
Arsenic	0.50	0.13	mg/Kg
Lithium	2.5	0.15	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 4

Prep: 3010A

SEP: Metal Hydroxide

Analyte	RL	MDL	Units
Arsenic	0.50	0.22	mg/Kg
Lithium	2.5	0.15	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 5

Prep: 3010A

SEP: Organic-Bound

Analyte	RL	MDL	Units
Arsenic	1.5	0.38	mg/Kg
Lithium	7.5	0.44	mg/Kg
Molybdenum	6.0	0.25	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 6

SEP: Acid/Sulfide

Analyte	RL	MDL	Units
Arsenic	0.50	0.15	mg/Kg
Lithium	2.5	0.15	mg/Kg
Molybdenum	2.0	0.099	mg/Kg

Method: 6010B SEP - SEP Metals (ICP) - Step 7

Prep: Residual

Analyte	RL	MDL	Units
Arsenic	0.50	0.13	mg/Kg
Lithium	2.5	0.15	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Eurofins TestAmerica, Knoxville

Default Detection Limits

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Method: 6010B SEP - SEP Metals (ICP) - Sum of Steps 1-7

Analyte	RL	MDL	Units
Arsenic	0.50	0.13	mg/Kg
Lithium	2.5	0.15	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

Method: 6010B - SEP Metals (ICP) - Total

Prep: Total

Analyte	RL	MDL	Units
Arsenic	0.50	0.13	mg/Kg
Lithium	2.5	0.15	mg/Kg
Molybdenum	2.0	0.082	mg/Kg

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

QC Sample Results

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Method: 6010B - SEP Metals (ICP) - Total

Lab Sample ID: MB 140-54251/17-A
Matrix: Solid
Analysis Batch: 55243

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54251

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.13	mg/Kg		09/29/21 08:00	10/27/21 10:49	1
Lithium	ND		2.5	0.15	mg/Kg		09/29/21 08:00	10/27/21 10:49	1
Molybdenum	ND		2.0	0.082	mg/Kg		09/29/21 08:00	10/27/21 10:49	1

Lab Sample ID: LCS 140-54251/18-A
Matrix: Solid
Analysis Batch: 55243

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54251

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	5.00	5.06		mg/Kg		101	80 - 120
Lithium	5.00	4.90		mg/Kg		98	80 - 120
Molybdenum	25.0	26.0		mg/Kg		104	80 - 125

Lab Sample ID: LCSD 140-54251/19-A
Matrix: Solid
Analysis Batch: 55243

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54251

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	5.00	4.94		mg/Kg		99	80 - 120	2	30
Lithium	5.00	4.86		mg/Kg		97	80 - 120	1	30
Molybdenum	25.0	25.4		mg/Kg		102	80 - 125	3	30

Method: 6010B SEP - SEP Metals (ICP)

Lab Sample ID: MB 140-54252/17-B ^4
Matrix: Solid
Analysis Batch: 55087

Client Sample ID: Method Blank
Prep Type: Step 1
Prep Batch: 54333

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.52	mg/Kg		09/30/21 08:00	10/22/21 11:17	4
Lithium	ND		10	0.60	mg/Kg		09/30/21 08:00	10/22/21 11:17	4
Molybdenum	ND		8.0	0.33	mg/Kg		09/30/21 08:00	10/22/21 11:17	4

Lab Sample ID: LCS 140-54252/18-B ^5
Matrix: Solid
Analysis Batch: 55087

Client Sample ID: Lab Control Sample
Prep Type: Step 1
Prep Batch: 54333

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	5.00	5.07		mg/Kg		101	80 - 120
Lithium	5.00	5.04	J	mg/Kg		101	80 - 120
Molybdenum	25.0	25.2		mg/Kg		101	80 - 120

Lab Sample ID: LCSD 140-54252/19-B ^5
Matrix: Solid
Analysis Batch: 55087

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 1
Prep Batch: 54333

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	5.00	4.84		mg/Kg		97	80 - 120	4	30
Lithium	5.00	4.54	J	mg/Kg		91	80 - 120	10	30
Molybdenum	25.0	25.0		mg/Kg		100	80 - 120	1	30

Eurofins TestAmerica, Knoxville

QC Sample Results

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SIREMNA

Job ID: 140-24429-1

Method: 6010B SEP - SEP Metals (ICP)

Lab Sample ID: MB 140-54334/17-B ^3
Matrix: Solid
Analysis Batch: 55087

Client Sample ID: Method Blank
Prep Type: Step 2
Prep Batch: 54370

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.5	0.39	mg/Kg		10/01/21 08:00	10/22/21 13:24	3
Lithium	ND		7.5	0.45	mg/Kg		10/01/21 08:00	10/22/21 13:24	3
Molybdenum	ND		6.0	0.25	mg/Kg		10/01/21 08:00	10/22/21 13:24	3

Lab Sample ID: LCS 140-54334/18-B ^5
Matrix: Solid
Analysis Batch: 55087

Client Sample ID: Lab Control Sample
Prep Type: Step 2
Prep Batch: 54370

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	5.00	3.62		mg/Kg		72	60 - 120
Lithium	5.00	4.40	J	mg/Kg		88	80 - 120
Molybdenum	25.0	20.4		mg/Kg		82	70 - 120

Lab Sample ID: LCSD 140-54334/19-B ^5
Matrix: Solid
Analysis Batch: 55087

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 2
Prep Batch: 54370

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	5.00	3.80		mg/Kg		76	60 - 120	5	30
Lithium	5.00	4.50	J	mg/Kg		90	80 - 120	2	30
Molybdenum	25.0	20.3		mg/Kg		81	70 - 120	0	30

Lab Sample ID: MB 140-54371/17-B
Matrix: Solid
Analysis Batch: 55087

Client Sample ID: Method Blank
Prep Type: Step 3
Prep Batch: 54400

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.13	mg/Kg		10/04/21 08:00	10/22/21 15:23	1
Lithium	ND		2.5	0.15	mg/Kg		10/04/21 08:00	10/22/21 15:23	1
Molybdenum	ND		2.0	0.082	mg/Kg		10/04/21 08:00	10/22/21 15:23	1

Lab Sample ID: LCS 140-54371/18-B
Matrix: Solid
Analysis Batch: 55087

Client Sample ID: Lab Control Sample
Prep Type: Step 3
Prep Batch: 54400

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	5.00	4.81		mg/Kg		96	80 - 120
Lithium	5.00	4.75		mg/Kg		95	80 - 120
Molybdenum	25.0	24.5		mg/Kg		98	80 - 120

Lab Sample ID: LCSD 140-54371/19-B
Matrix: Solid
Analysis Batch: 55087

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 3
Prep Batch: 54400

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	5.00	4.76		mg/Kg		95	80 - 120	1	30
Lithium	5.00	4.95		mg/Kg		99	80 - 120	4	30
Molybdenum	25.0	24.2		mg/Kg		97	80 - 120	1	30

QC Sample Results

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: MB 140-54401/17-B
Matrix: Solid
Analysis Batch: 55146

Client Sample ID: Method Blank
Prep Type: Step 4
Prep Batch: 54485

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.22	mg/Kg		10/05/21 08:00	10/25/21 11:34	1
Lithium	ND		2.5	0.15	mg/Kg		10/05/21 08:00	10/25/21 11:34	1
Molybdenum	ND		2.0	0.082	mg/Kg		10/05/21 08:00	10/25/21 11:34	1

Lab Sample ID: LCS 140-54401/18-B
Matrix: Solid
Analysis Batch: 55146

Client Sample ID: Lab Control Sample
Prep Type: Step 4
Prep Batch: 54485

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	5.00	4.99		mg/Kg		100	80 - 130
Lithium	5.00	5.03		mg/Kg		101	80 - 120
Molybdenum	25.0	25.9		mg/Kg		104	80 - 120

Lab Sample ID: LCSD 140-54401/19-B
Matrix: Solid
Analysis Batch: 55146

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 4
Prep Batch: 54485

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	5.00	4.96		mg/Kg		99	80 - 130	1	30
Lithium	5.00	5.02		mg/Kg		100	80 - 120	0	30
Molybdenum	25.0	25.7		mg/Kg		103	80 - 120	1	30

Lab Sample ID: MB 140-54486/17-B ^5
Matrix: Solid
Analysis Batch: 55146

Client Sample ID: Method Blank
Prep Type: Step 5
Prep Batch: 54566

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		7.5	1.9	mg/Kg		10/07/21 08:00	10/25/21 13:37	5
Lithium	8.44	J	38	2.2	mg/Kg		10/07/21 08:00	10/25/21 13:37	5
Molybdenum	ND		30	1.3	mg/Kg		10/07/21 08:00	10/25/21 13:37	5

Lab Sample ID: LCS 140-54486/18-B ^5
Matrix: Solid
Analysis Batch: 55146

Client Sample ID: Lab Control Sample
Prep Type: Step 5
Prep Batch: 54566

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	15.0	9.89		mg/Kg		66	60 - 100
Lithium	15.0	23.8	J *+	mg/Kg		159	80 - 150
Molybdenum	75.0	53.6		mg/Kg		72	60 - 100

Lab Sample ID: LCSD 140-54486/19-B ^5
Matrix: Solid
Analysis Batch: 55146

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 5
Prep Batch: 54566

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	15.0	10.3		mg/Kg		68	60 - 100	4	30
Lithium	15.0	23.9	J *+	mg/Kg		159	80 - 150	0	30
Molybdenum	75.0	53.4		mg/Kg		71	60 - 100	0	30

QC Sample Results

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Method: 6010B SEP - SEP Metals (ICP) (Continued)

Lab Sample ID: MB 140-54567/17-A
Matrix: Solid
Analysis Batch: 55146

Client Sample ID: Method Blank
Prep Type: Step 6
Prep Batch: 54567

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.15	mg/Kg		10/07/21 08:00	10/25/21 15:37	1
Lithium	ND		2.5	0.15	mg/Kg		10/07/21 08:00	10/25/21 15:37	1
Molybdenum	ND		2.0	0.099	mg/Kg		10/07/21 08:00	10/25/21 15:37	1

Lab Sample ID: LCS 140-54567/18-A
Matrix: Solid
Analysis Batch: 55146

Client Sample ID: Lab Control Sample
Prep Type: Step 6
Prep Batch: 54567

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	5.00	5.01		mg/Kg		100	80 - 120
Lithium	5.00	4.95		mg/Kg		99	80 - 120
Molybdenum	25.0	25.1		mg/Kg		100	80 - 120

Lab Sample ID: LCSD 140-54567/19-A
Matrix: Solid
Analysis Batch: 55146

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 6
Prep Batch: 54567

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	5.00	5.07		mg/Kg		101	80 - 120	1	30
Lithium	5.00	5.04		mg/Kg		101	80 - 120	2	30
Molybdenum	25.0	25.8		mg/Kg		103	80 - 120	3	30

Lab Sample ID: MB 140-54607/17-A
Matrix: Solid
Analysis Batch: 55197

Client Sample ID: Method Blank
Prep Type: Step 7
Prep Batch: 54607

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.13	mg/Kg		10/08/21 08:00	10/26/21 11:23	1
Lithium	ND		2.5	0.15	mg/Kg		10/08/21 08:00	10/26/21 11:23	1
Molybdenum	ND		2.0	0.082	mg/Kg		10/08/21 08:00	10/26/21 11:23	1

Lab Sample ID: LCS 140-54607/18-A
Matrix: Solid
Analysis Batch: 55197

Client Sample ID: Lab Control Sample
Prep Type: Step 7
Prep Batch: 54607

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	5.00	4.99		mg/Kg		100	80 - 120
Lithium	5.00	4.99		mg/Kg		100	80 - 120
Molybdenum	25.0	25.7		mg/Kg		103	80 - 125

Lab Sample ID: LCSD 140-54607/19-A
Matrix: Solid
Analysis Batch: 55197

Client Sample ID: Lab Control Sample Dup
Prep Type: Step 7
Prep Batch: 54607

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	5.00	5.04		mg/Kg		101	80 - 120	1	30
Lithium	5.00	4.97		mg/Kg		99	80 - 120	0	30
Molybdenum	25.0	26.1		mg/Kg		104	80 - 125	2	30

QC Association Summary

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Metals

Prep Batch: 54251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Total/NA	Solid	Total	
140-24429-2	S-8083_DPT06AP1	Total/NA	Solid	Total	
140-24429-3	S-8083_DPT04XRFAP1	Total/NA	Solid	Total	
MB 140-54251/17-A	Method Blank	Total/NA	Solid	Total	
LCS 140-54251/18-A	Lab Control Sample	Total/NA	Solid	Total	
LCSD 140-54251/19-A	Lab Control Sample Dup	Total/NA	Solid	Total	

SEP Batch: 54252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Step 1	Solid	Exchangeable	
140-24429-2	S-8083_DPT06AP1	Step 1	Solid	Exchangeable	
140-24429-3	S-8083_DPT04XRFAP1	Step 1	Solid	Exchangeable	
MB 140-54252/17-B ^4	Method Blank	Step 1	Solid	Exchangeable	
LCS 140-54252/18-B ^5	Lab Control Sample	Step 1	Solid	Exchangeable	
LCSD 140-54252/19-B ^5	Lab Control Sample Dup	Step 1	Solid	Exchangeable	

Prep Batch: 54333

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Step 1	Solid	3010A	54252
140-24429-2	S-8083_DPT06AP1	Step 1	Solid	3010A	54252
140-24429-3	S-8083_DPT04XRFAP1	Step 1	Solid	3010A	54252
MB 140-54252/17-B ^4	Method Blank	Step 1	Solid	3010A	54252
LCS 140-54252/18-B ^5	Lab Control Sample	Step 1	Solid	3010A	54252
LCSD 140-54252/19-B ^5	Lab Control Sample Dup	Step 1	Solid	3010A	54252

SEP Batch: 54334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Step 2	Solid	Carbonate	
140-24429-2	S-8083_DPT06AP1	Step 2	Solid	Carbonate	
140-24429-3	S-8083_DPT04XRFAP1	Step 2	Solid	Carbonate	
MB 140-54334/17-B ^3	Method Blank	Step 2	Solid	Carbonate	
LCS 140-54334/18-B ^5	Lab Control Sample	Step 2	Solid	Carbonate	
LCSD 140-54334/19-B ^5	Lab Control Sample Dup	Step 2	Solid	Carbonate	

Prep Batch: 54370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Step 2	Solid	3010A	54334
140-24429-2	S-8083_DPT06AP1	Step 2	Solid	3010A	54334
140-24429-3	S-8083_DPT04XRFAP1	Step 2	Solid	3010A	54334
MB 140-54334/17-B ^3	Method Blank	Step 2	Solid	3010A	54334
LCS 140-54334/18-B ^5	Lab Control Sample	Step 2	Solid	3010A	54334
LCSD 140-54334/19-B ^5	Lab Control Sample Dup	Step 2	Solid	3010A	54334

SEP Batch: 54371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Step 3	Solid	Non-Crystalline	
140-24429-2	S-8083_DPT06AP1	Step 3	Solid	Non-Crystalline	
140-24429-3	S-8083_DPT04XRFAP1	Step 3	Solid	Non-Crystalline	
MB 140-54371/17-B	Method Blank	Step 3	Solid	Non-Crystalline	
LCS 140-54371/18-B	Lab Control Sample	Step 3	Solid	Non-Crystalline	
LCSD 140-54371/19-B	Lab Control Sample Dup	Step 3	Solid	Non-Crystalline	

Eurofins TestAmerica, Knoxville

QC Association Summary

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Metals

Prep Batch: 54400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Step 3	Solid	3010A	54371
140-24429-2	S-8083_DPT06AP1	Step 3	Solid	3010A	54371
140-24429-3	S-8083_DPT04XRFAP1	Step 3	Solid	3010A	54371
MB 140-54371/17-B	Method Blank	Step 3	Solid	3010A	54371
LCS 140-54371/18-B	Lab Control Sample	Step 3	Solid	3010A	54371
LCSD 140-54371/19-B	Lab Control Sample Dup	Step 3	Solid	3010A	54371

SEP Batch: 54401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Step 4	Solid	Metal Hydroxide	
140-24429-2	S-8083_DPT06AP1	Step 4	Solid	Metal Hydroxide	
140-24429-3	S-8083_DPT04XRFAP1	Step 4	Solid	Metal Hydroxide	
MB 140-54401/17-B	Method Blank	Step 4	Solid	Metal Hydroxide	
LCS 140-54401/18-B	Lab Control Sample	Step 4	Solid	Metal Hydroxide	
LCSD 140-54401/19-B	Lab Control Sample Dup	Step 4	Solid	Metal Hydroxide	

Prep Batch: 54485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Step 4	Solid	3010A	54401
140-24429-2	S-8083_DPT06AP1	Step 4	Solid	3010A	54401
140-24429-3	S-8083_DPT04XRFAP1	Step 4	Solid	3010A	54401
MB 140-54401/17-B	Method Blank	Step 4	Solid	3010A	54401
LCS 140-54401/18-B	Lab Control Sample	Step 4	Solid	3010A	54401
LCSD 140-54401/19-B	Lab Control Sample Dup	Step 4	Solid	3010A	54401

SEP Batch: 54486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Step 5	Solid	Organic-Bound	
140-24429-2	S-8083_DPT06AP1	Step 5	Solid	Organic-Bound	
140-24429-3	S-8083_DPT04XRFAP1	Step 5	Solid	Organic-Bound	
MB 140-54486/17-B ^5	Method Blank	Step 5	Solid	Organic-Bound	
LCS 140-54486/18-B ^5	Lab Control Sample	Step 5	Solid	Organic-Bound	
LCSD 140-54486/19-B ^5	Lab Control Sample Dup	Step 5	Solid	Organic-Bound	

Prep Batch: 54566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Step 5	Solid	3010A	54486
140-24429-2	S-8083_DPT06AP1	Step 5	Solid	3010A	54486
140-24429-3	S-8083_DPT04XRFAP1	Step 5	Solid	3010A	54486
MB 140-54486/17-B ^5	Method Blank	Step 5	Solid	3010A	54486
LCS 140-54486/18-B ^5	Lab Control Sample	Step 5	Solid	3010A	54486
LCSD 140-54486/19-B ^5	Lab Control Sample Dup	Step 5	Solid	3010A	54486

SEP Batch: 54567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Step 6	Solid	Acid/Sulfide	
140-24429-2	S-8083_DPT06AP1	Step 6	Solid	Acid/Sulfide	
140-24429-3	S-8083_DPT04XRFAP1	Step 6	Solid	Acid/Sulfide	
MB 140-54567/17-A	Method Blank	Step 6	Solid	Acid/Sulfide	
LCS 140-54567/18-A	Lab Control Sample	Step 6	Solid	Acid/Sulfide	
LCSD 140-54567/19-A	Lab Control Sample Dup	Step 6	Solid	Acid/Sulfide	

Eurofins TestAmerica, Knoxville

QC Association Summary

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Metals

Prep Batch: 54607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Step 7	Solid	Residual	
140-24429-2	S-8083_DPT06AP1	Step 7	Solid	Residual	
140-24429-3	S-8083_DPT04XRFAP1	Step 7	Solid	Residual	
MB 140-54607/17-A	Method Blank	Step 7	Solid	Residual	
LCS 140-54607/18-A	Lab Control Sample	Step 7	Solid	Residual	
LCSD 140-54607/19-A	Lab Control Sample Dup	Step 7	Solid	Residual	

Analysis Batch: 55087

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Step 1	Solid	6010B SEP	54333
140-24429-1	S-8083_DPT02AP1	Step 2	Solid	6010B SEP	54370
140-24429-1	S-8083_DPT02AP1	Step 3	Solid	6010B SEP	54400
140-24429-2	S-8083_DPT06AP1	Step 1	Solid	6010B SEP	54333
140-24429-2	S-8083_DPT06AP1	Step 2	Solid	6010B SEP	54370
140-24429-2	S-8083_DPT06AP1	Step 3	Solid	6010B SEP	54400
140-24429-3	S-8083_DPT04XRFAP1	Step 1	Solid	6010B SEP	54333
140-24429-3	S-8083_DPT04XRFAP1	Step 2	Solid	6010B SEP	54370
140-24429-3	S-8083_DPT04XRFAP1	Step 3	Solid	6010B SEP	54400
MB 140-54252/17-B ^4	Method Blank	Step 1	Solid	6010B SEP	54333
MB 140-54334/17-B ^3	Method Blank	Step 2	Solid	6010B SEP	54370
MB 140-54371/17-B	Method Blank	Step 3	Solid	6010B SEP	54400
LCS 140-54252/18-B ^5	Lab Control Sample	Step 1	Solid	6010B SEP	54333
LCS 140-54334/18-B ^5	Lab Control Sample	Step 2	Solid	6010B SEP	54370
LCS 140-54371/18-B	Lab Control Sample	Step 3	Solid	6010B SEP	54400
LCSD 140-54252/19-B ^5	Lab Control Sample Dup	Step 1	Solid	6010B SEP	54333
LCSD 140-54334/19-B ^5	Lab Control Sample Dup	Step 2	Solid	6010B SEP	54370
LCSD 140-54371/19-B	Lab Control Sample Dup	Step 3	Solid	6010B SEP	54400

Analysis Batch: 55146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Step 4	Solid	6010B SEP	54485
140-24429-1	S-8083_DPT02AP1	Step 5	Solid	6010B SEP	54566
140-24429-1	S-8083_DPT02AP1	Step 6	Solid	6010B SEP	54567
140-24429-2	S-8083_DPT06AP1	Step 4	Solid	6010B SEP	54485
140-24429-2	S-8083_DPT06AP1	Step 5	Solid	6010B SEP	54566
140-24429-2	S-8083_DPT06AP1	Step 6	Solid	6010B SEP	54567
140-24429-3	S-8083_DPT04XRFAP1	Step 4	Solid	6010B SEP	54485
140-24429-3	S-8083_DPT04XRFAP1	Step 5	Solid	6010B SEP	54566
140-24429-3	S-8083_DPT04XRFAP1	Step 6	Solid	6010B SEP	54567
MB 140-54401/17-B	Method Blank	Step 4	Solid	6010B SEP	54485
MB 140-54486/17-B ^5	Method Blank	Step 5	Solid	6010B SEP	54566
MB 140-54567/17-A	Method Blank	Step 6	Solid	6010B SEP	54567
LCS 140-54401/18-B	Lab Control Sample	Step 4	Solid	6010B SEP	54485
LCS 140-54486/18-B ^5	Lab Control Sample	Step 5	Solid	6010B SEP	54566
LCS 140-54567/18-A	Lab Control Sample	Step 6	Solid	6010B SEP	54567
LCSD 140-54401/19-B	Lab Control Sample Dup	Step 4	Solid	6010B SEP	54485
LCSD 140-54486/19-B ^5	Lab Control Sample Dup	Step 5	Solid	6010B SEP	54566
LCSD 140-54567/19-A	Lab Control Sample Dup	Step 6	Solid	6010B SEP	54567

QC Association Summary

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Metals

Analysis Batch: 55197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Step 7	Solid	6010B SEP	54607
140-24429-2	S-8083_DPT06AP1	Step 7	Solid	6010B SEP	54607
140-24429-2	S-8083_DPT06AP1	Step 7	Solid	6010B SEP	54607
140-24429-3	S-8083_DPT04XRFAP1	Step 7	Solid	6010B SEP	54607
140-24429-3	S-8083_DPT04XRFAP1	Step 7	Solid	6010B SEP	54607
MB 140-54607/17-A	Method Blank	Step 7	Solid	6010B SEP	54607
LCS 140-54607/18-A	Lab Control Sample	Step 7	Solid	6010B SEP	54607
LCSD 140-54607/19-A	Lab Control Sample Dup	Step 7	Solid	6010B SEP	54607

Analysis Batch: 55243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Total/NA	Solid	6010B	54251
140-24429-2	S-8083_DPT06AP1	Total/NA	Solid	6010B	54251
140-24429-3	S-8083_DPT04XRFAP1	Total/NA	Solid	6010B	54251
MB 140-54251/17-A	Method Blank	Total/NA	Solid	6010B	54251
LCS 140-54251/18-A	Lab Control Sample	Total/NA	Solid	6010B	54251
LCSD 140-54251/19-A	Lab Control Sample Dup	Total/NA	Solid	6010B	54251

Analysis Batch: 55440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Sum of Steps 1-7	Solid	6010B SEP	
140-24429-2	S-8083_DPT06AP1	Sum of Steps 1-7	Solid	6010B SEP	
140-24429-3	S-8083_DPT04XRFAP1	Sum of Steps 1-7	Solid	6010B SEP	

General Chemistry

Analysis Batch: 53487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24429-1	S-8083_DPT02AP1	Total/NA	Solid	Moisture	
140-24429-2	S-8083_DPT06AP1	Total/NA	Solid	Moisture	
140-24429-3	S-8083_DPT04XRFAP1	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Client Sample ID: S-8083_DPT02AP1
Date Collected: 08/30/21 00:00
Date Received: 08/31/21 10:10

Lab Sample ID: 140-24429-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			55440	11/02/21 16:06	DKW	TAL KNX
		Instrument ID: NOEQUIP								
Total/NA	Analysis	Moisture		1			53487	09/07/21 10:52	LDP	TAL KNX
		Instrument ID: NOEQUIP								

Client Sample ID: S-8083_DPT02AP1
Date Collected: 08/30/21 00:00
Date Received: 08/31/21 10:10

Lab Sample ID: 140-24429-1
Matrix: Solid
Percent Solids: 80.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	54251	09/29/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			55243	10/27/21 14:28	KNC	TAL KNX
		Instrument ID: DUO								
Step 1	SEP	Exchangeable			5.000 g	25 mL	54252	09/29/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	54333	09/30/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			55087	10/22/21 12:50	KNC	TAL KNX
		Instrument ID: DUO								
Step 2	SEP	Carbonate			5.000 g	25 mL	54334	09/30/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	54370	10/01/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			55087	10/22/21 14:48	KNC	TAL KNX
		Instrument ID: DUO								
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	54371	10/01/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	54400	10/04/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			55087	10/22/21 16:46	KNC	TAL KNX
		Instrument ID: DUO								
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	54401	10/04/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	54485	10/05/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			55146	10/25/21 13:03	KNC	TAL KNX
		Instrument ID: DUO								
Step 5	SEP	Organic-Bound			5.000 g	75 mL	54486	10/05/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	54566	10/07/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			55146	10/25/21 15:02	KNC	TAL KNX
		Instrument ID: DUO								
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	54567	10/07/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			55146	10/25/21 17:01	KNC	TAL KNX
		Instrument ID: DUO								
Step 7	Prep	Residual			1.000 g	50 mL	54607	10/08/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			55197	10/26/21 14:00	KNC	TAL KNX
		Instrument ID: DUO								

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Client Sample ID: S-8083_DPT06AP1

Lab Sample ID: 140-24429-2

Date Collected: 08/30/21 00:00

Matrix: Solid

Date Received: 08/31/21 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			55440	11/02/21 16:06	DKW	TAL KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			53487	09/07/21 10:52	LDP	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: S-8083_DPT06AP1

Lab Sample ID: 140-24429-2

Date Collected: 08/30/21 00:00

Matrix: Solid

Date Received: 08/31/21 10:10

Percent Solids: 75.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	54251	09/29/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		5			55243	10/27/21 17:44	KNC	TAL KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	54252	09/29/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	54333	09/30/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			55087	10/22/21 12:55	KNC	TAL KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	54334	09/30/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	54370	10/01/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			55087	10/22/21 14:53	KNC	TAL KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	54371	10/01/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	54400	10/04/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			55087	10/22/21 16:51	KNC	TAL KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	54401	10/04/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	54485	10/05/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			55146	10/25/21 13:08	KNC	TAL KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.000 g	75 mL	54486	10/05/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	54566	10/07/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			55146	10/25/21 15:07	KNC	TAL KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	54567	10/07/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			55146	10/25/21 17:06	KNC	TAL KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	54607	10/08/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			55197	10/26/21 14:05	KNC	TAL KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	54607	10/08/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		2			55197	10/26/21 15:29	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Client Sample ID: S-8083_DPT04XRFAP1

Lab Sample ID: 140-24429-3

Date Collected: 08/30/21 00:00

Matrix: Solid

Date Received: 08/31/21 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Sum of Steps 1-7	Analysis	6010B SEP		1			55440	11/02/21 16:06	DKW	TAL KNX
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			53487	09/07/21 10:52	LDP	TAL KNX
	Instrument ID: NOEQUIP									

Client Sample ID: S-8083_DPT04XRFAP1

Lab Sample ID: 140-24429-3

Date Collected: 08/30/21 00:00

Matrix: Solid

Date Received: 08/31/21 10:10

Percent Solids: 96.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	54251	09/29/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		2			55243	10/27/21 16:43	KNC	TAL KNX
	Instrument ID: DUO									
Step 1	SEP	Exchangeable			5.000 g	25 mL	54252	09/29/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	54333	09/30/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			55087	10/22/21 13:00	KNC	TAL KNX
	Instrument ID: DUO									
Step 2	SEP	Carbonate			5.000 g	25 mL	54334	09/30/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	54370	10/01/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			55087	10/22/21 14:58	KNC	TAL KNX
	Instrument ID: DUO									
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	54371	10/01/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	54400	10/04/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			55087	10/22/21 16:56	KNC	TAL KNX
	Instrument ID: DUO									
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	54401	10/04/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	54485	10/05/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			55146	10/25/21 13:13	KNC	TAL KNX
	Instrument ID: DUO									
Step 5	SEP	Organic-Bound			5.000 g	75 mL	54486	10/05/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	54566	10/07/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			55146	10/25/21 15:12	KNC	TAL KNX
	Instrument ID: DUO									
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	54567	10/07/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			55146	10/25/21 17:11	KNC	TAL KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	54607	10/08/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			55197	10/26/21 14:20	KNC	TAL KNX
	Instrument ID: DUO									
Step 7	Prep	Residual			1.000 g	50 mL	54607	10/08/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		2			55197	10/26/21 15:34	KNC	TAL KNX
	Instrument ID: DUO									

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54251/17-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	54251	09/29/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			55243	10/27/21 10:49	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54252/17-B ^4

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	54252	09/29/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	54333	09/30/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		4			55087	10/22/21 11:17	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54334/17-B ^3

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	54334	09/30/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	54370	10/01/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		3			55087	10/22/21 13:24	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54371/17-B

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	54371	10/01/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	54400	10/04/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			55087	10/22/21 15:23	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54401/17-B

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	54401	10/04/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	54485	10/05/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			55146	10/25/21 11:34	KNC	TAL KNX
Instrument ID: DUO										

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54486/17-B ^5

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.000 g	75 mL	54486	10/05/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	54566	10/07/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			55146	10/25/21 13:37	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54567/17-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	54567	10/07/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			55146	10/25/21 15:37	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54607/17-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	54607	10/08/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			55197	10/26/21 11:23	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-54251/18-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	54251	09/29/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			55243	10/27/21 10:54	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-54252/18-B ^5

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	54252	09/29/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	54333	09/30/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		5			55087	10/22/21 11:22	KNC	TAL KNX
Instrument ID: DUO										

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-54334/18-B ^5

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	54334	09/30/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	54370	10/01/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		5			55087	10/22/21 13:29	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-54371/18-B

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	54371	10/01/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	54400	10/04/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			55087	10/22/21 15:28	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-54401/18-B

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	54401	10/04/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	54485	10/05/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			55146	10/25/21 11:39	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-54486/18-B ^5

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.000 g	75 mL	54486	10/05/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	54566	10/07/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			55146	10/25/21 13:42	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-54567/18-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	54567	10/07/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			55146	10/25/21 15:42	KNC	TAL KNX
Instrument ID: DUO										

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-54607/18-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	54607	10/08/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			55197	10/26/21 11:28	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-54251/19-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Total			1.000 g	50 mL	54251	09/29/21 08:00	KNC	TAL KNX
Total/NA	Analysis	6010B		1			55243	10/27/21 10:59	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-54252/19-B ^5

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 1	SEP	Exchangeable			5.000 g	25 mL	54252	09/29/21 08:00	KNC	TAL KNX
Step 1	Prep	3010A			5 mL	50 mL	54333	09/30/21 08:00	KNC	TAL KNX
Step 1	Analysis	6010B SEP		5			55087	10/22/21 11:27	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-54334/19-B ^5

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 2	SEP	Carbonate			5.000 g	25 mL	54334	09/30/21 08:00	KNC	TAL KNX
Step 2	Prep	3010A			5 mL	50 mL	54370	10/01/21 08:00	KNC	TAL KNX
Step 2	Analysis	6010B SEP		5			55087	10/22/21 13:34	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-54371/19-B

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 3	SEP	Non-Crystalline			5.000 g	25 mL	54371	10/01/21 08:00	KNC	TAL KNX
Step 3	Prep	3010A			5 mL	50 mL	54400	10/04/21 08:00	KNC	TAL KNX
Step 3	Analysis	6010B SEP		1			55087	10/22/21 15:32	KNC	TAL KNX
Instrument ID: DUO										

Lab Chronicle

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-54401/19-B

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 4	SEP	Metal Hydroxide			5.000 g	25 mL	54401	10/04/21 08:00	KNC	TAL KNX
Step 4	Prep	3010A			5 mL	50 mL	54485	10/05/21 08:00	KNC	TAL KNX
Step 4	Analysis	6010B SEP		1			55146	10/25/21 11:44	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-54486/19-B ^5

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 5	SEP	Organic-Bound			5.000 g	75 mL	54486	10/05/21 08:00	KNC	TAL KNX
Step 5	Prep	3010A			5 mL	50 mL	54566	10/07/21 08:00	KNC	TAL KNX
Step 5	Analysis	6010B SEP		5			55146	10/25/21 13:47	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-54567/19-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 6	SEP	Acid/Sulfide			5.000 g	250 mL	54567	10/07/21 08:00	KNC	TAL KNX
Step 6	Analysis	6010B SEP		1			55146	10/25/21 15:47	KNC	TAL KNX
Instrument ID: DUO										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-54607/19-A

Date Collected: N/A

Matrix: Solid

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Step 7	Prep	Residual			1.000 g	50 mL	54607	10/08/21 08:00	KNC	TAL KNX
Step 7	Analysis	6010B SEP		1			55197	10/26/21 11:33	KNC	TAL KNX
Instrument ID: DUO										

Laboratory References:

TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: Sirem, div of Geosyntec Consultants
 Project/Site: S-7677 SiREMNA

Job ID: 140-24429-1

Laboratory: Eurofins TestAmerica, Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-22
ANAB	Dept. of Energy	L2311.01	02-13-22
ANAB	ISO/IEC 17025	L2311	02-13-22
Arkansas DEQ	State	88-0688	06-17-22
California	State	2423	06-30-22
Colorado	State	TN00009	02-28-22
Connecticut	State	PH-0223	02-28-22
Florida	NELAP	E87177	06-30-22
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-21
Kansas	NELAP	E-10349	10-31-22
Kentucky (DW)	State	90101	12-31-21
Louisiana	NELAP	83979	06-30-22
Louisiana (DW)	State	LA019	12-31-21
Maryland	State	277	03-31-22
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-31-22
New Hampshire	NELAP	299919	01-17-22
New Jersey	NELAP	TN001	06-30-22
New York	NELAP	10781	03-31-22
North Carolina (DW)	State	21705	07-31-22
North Carolina (WW/SW)	State	64	12-31-21
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	08-31-22
Oregon	NELAP	TNI0189	12-31-21
Pennsylvania	NELAP	68-00576	12-31-21
Tennessee	State	02014	12-11-22
Texas	NELAP	T104704380-18-12	08-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-19-00236	08-20-22
Utah	NELAP	TN00009	07-31-22
Virginia	NELAP	460176	09-14-22
Washington	State	C593	01-19-22
West Virginia (DW)	State	9955C	01-02-22
West Virginia DEP	State	345	04-30-22
Wisconsin	State	998044300	08-31-22

Method Summary

Client: Sirem, div of Geosyntec Consultants
Project/Site: S-7677 SIREMNA

Job ID: 140-24429-1

Method	Method Description	Protocol	Laboratory
6010B	SEP Metals (ICP) - Total	SW846	TAL KNX
6010B SEP	SEP Metals (ICP)	SW846	TAL KNX
Moisture	Percent Moisture	EPA	TAL KNX
3010A	Preparation, Total Metals	SW846	TAL KNX
Acid/Sulfide	Sequential Extraction Procedure, Acid/Sulfide Fraction	TAL-KNOX	TAL KNX
Carbonate	Sequential Extraction Procedure, Carbonate Fraction	TAL-KNOX	TAL KNX
Exchangeable	Sequential Extraction Procedure, Exchangeable Fraction	TAL-KNOX	TAL KNX
Metal Hydroxide	Sequential Extraction Procedure, Metal Hydroxide Fraction	TAL-KNOX	TAL KNX
Non-Crystalline	Sequential Extraction Procedure, Non-crystalline Materials	TAL-KNOX	TAL KNX
Organic-Bound	Sequential Extraction Procedure, Organic Bound Fraction	TAL-KNOX	TAL KNX
Residual	Sequential Extraction Procedure, Residual Fraction	TAL-KNOX	TAL KNX
Total	Preparation, Total Material	TAL-KNOX	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-KNOX = TestAmerica Laboratories, Knoxville, Facility Standard Operating Procedure.

Laboratory References:

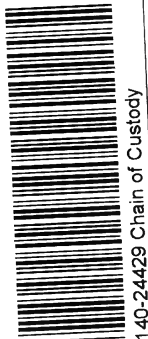
TAL KNX = Eurofins TestAmerica, Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Regulatory Program: DW NPDES RCRA Other:

Client Contact		Project Manager: Kela Ashworth	
SIREM		Email: kashworth@siremlab.com	
130 Stone Road West		Tel/Fax:	
Guelph, Ontario, N1G 2Z3		Analysis Turnaround Time	
519-822-2265		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS	
(xxx) xxx-xxxx FAX		TAT if different from Below _____	
Project Name: S-7677 SIREMNA		<input type="checkbox"/> 2 weeks	
Site:		<input type="checkbox"/> 1 week	
P O # 800003206		<input type="checkbox"/> 2 days	
		<input type="checkbox"/> 1 day	

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Sequential Extraction Procedure	Sample Specific Notes
S-8083_DPT02AP1	30 Aug 21		S	S	1		X		SEP for As, Li & Mo
S-8083_DPT06AP1	30 Aug 21		S	S	1		X		SEP for As, Li & Mo
S-8083_DPT04XRFAP1	30 Aug 21		S	S	1		X		SEP for As, Li & Mo
S-8072_DPT02BAP1	30 Aug 21		S	S	1		X		SEP for As, Co & Mo
S-8072_DPT05BAP1	30 Aug 21		S	S	1		X		SEP for As, Co & Mo

NO CUSTOMY SEALS
RECEIVED AT RTJSS/CT.S.Y.C
BMS 83121
CODISE FAX# 7746 7126 4636 JAWRO



Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Non-Hazard Flammable Skin Irritant Poison B Unknown

Special Instructions/QC Requirements & Comments:

Cooler Temp. (°C):	Obs'd:	Corr'd:	Therm ID No.:
Received by:	Date/Time:	Company:	Date/Time:
Received by:	Date/Time:	Company:	Date/Time:
Received in Laboratory by:	Date/Time:	Company:	Date/Time:



EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/		NA	<input type="checkbox"/> Containers, Broken	16
2. Were ambient air containers received intact?	/			<input type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID: <u>5071</u> Correction factor: <u>-0.1°C</u>	/			<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	/			<input checked="" type="checkbox"/> Sampler Not Listed on COC	pH test strip lot number: _____
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?	/			<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Lot Number: _____ Exp Date: _____ Analyst: _____
17. Were VOA samples received without headspace?	/			<input type="checkbox"/> Headspace (VOA only)	Date: _____ Time: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____	/			<input type="checkbox"/> Residual Chlorine	
19. For 1613B water samples is pH<9?	/			<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?	/			<input type="checkbox"/> Project missing info	
Project #: _____ PM Instructions: _____					

Sample Receiving Associate: Randy Davis Date: 8-31-21

QA026R32.doc, 062719





SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

SiREM Laboratory
Attn : Michael Healey

130 Stone Road W
Guelph, ON
N1G 3Z2, Canada

Phone: 519-822-2265
Fax: 519-822-3151

15-July-2021

Date Rec. : 06 July 2021
LR Report: CA12138-JUL21
Reference: P.O# 8000003210A

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed Date	3: Analysis Completed Date	4: Analysis Completed Time	5: HAP1DPT06_1a	6: HAP1DPT06_2a	7: HAP1DPT06_3a	8: HAP1DPT06_4a	9: HAP1DPT06_5a	10: HAP1DPT06_6a
Sample Date & Time					29-Jun-21	29-Jun-21	29-Jun-21	29-Jun-21	30-Jun-21	30-Jun-21
Temperature Upon Receipt [°C]	---	---	---	---	5.0	5.0	5.0	5.0	5.0	5.0
Silver (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	0.008	0.008	0.009	0.009	< 0.001	< 0.001
Arsenic (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	0.0068	0.0071	0.0260	0.0097	0.0673	0.0805
Barium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	0.0496	0.0501	0.0516	0.0511	0.0447	0.0447
Beryllium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Boron (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	0.020	0.020	0.022	0.021	0.016	0.017
Bismuth (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	0.00039	0.00039	0.00042	0.00042	0.00004	0.00003
Calcium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	133	134	131	133	134	129
Cadmium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	0.000005	0.000005	0.000021	0.000013	0.000035	0.000041
Cobalt (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	0.000050	0.000049	0.000044	0.000044	0.000045	0.000046
Chromium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	0.00021	0.00019	0.00020	0.00022	0.00022	0.00020
Copper (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	0.0003	0.0003	0.0003	0.0003	< 0.0002	< 0.0002
Iron (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
Potassium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	0.190	0.196	0.225	0.206	0.191	0.197
Lithium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	0.0048	0.0049	0.0098	0.0066	0.0135	0.0163
Magnesium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	3.70	3.62	3.74	3.46	3.74	3.65
Manganese (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	0.00084	0.00088	0.00127	0.00041	0.00078	0.00090
Molybdenum (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	0.00763	0.00713	0.0380	0.0292	0.0709	0.0759
Sodium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	42.8	40.5	43.9	38.6	40.4	42.2

OnLine LIMS

0002565927



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LR Report :

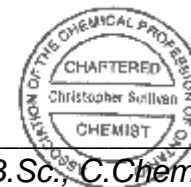
CA12138-JUL21

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: HAP1DPT06_1a	6: HAP1DPT06_2a	7: HAP1DPT06_3a	8: HAP1DPT06_4a	9: HAP1DPT06_5a	10: HAP1DPT06_6a
Nickel (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	< 0.0001	< 0.0001	0.0001	< 0.0001	< 0.0001	< 0.0001
Lead (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	0.00017	0.00018	0.00018	0.00018	< 0.00009	< 0.00009
Antimony (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:23	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	0.00010	0.00010	0.00009	0.00012	0.00010	0.00008
Tin (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	0.408	0.409	0.415	0.406	0.404	0.401
Titanium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	0.00007	0.00011	0.00011	0.00009	0.00012	0.00006
Thallium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Uranium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	0.00142	0.00136	0.00130	0.00153	0.00144	0.00133
Vanadium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	0.00016	0.00017	0.00021	0.00019	0.00023	0.00017
Tungsten (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	0.00006	0.00006	0.00007	0.00005	0.00006	0.00007
Yttrium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	0.00026	0.00022	0.00024	0.00024	0.00023	0.00020
Zinc (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	11: HAP1DPT06_7a	12: HAP1DPT06_8a	13: HAP1DPT06_9a	14: HAP1DPT06_10a	15: HAP1DPT06_11a	16: HAP1DPT06_12a
Sample Date & Time	30-Jun-21	30-Jun-21	30-Jun-21	30-Jun-21	30-Jun-21	30-Jun-21
Temperature Upon Receipt [°C]	5.0	5.0	5.0	5.0	5.0	5.0
Silver (dissolved) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	0.001	0.001	0.001	< 0.001	< 0.001	< 0.001
Arsenic (dissolved) [mg/L]	0.245	0.199	0.442	0.456	0.805	0.791
Barium (dissolved) [mg/L]	0.0455	0.0455	0.0462	0.0461	0.0473	0.0437
Beryllium (dissolved) [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Boron (dissolved) [mg/L]	0.017	0.016	0.016	0.016	0.017	0.016
Bismuth (dissolved) [mg/L]	0.00002	0.00003	0.00002	0.00002	0.00002	0.00002
Calcium (dissolved) [mg/L]	131	130	128	133	128	129
Cadmium (dissolved) [mg/L]	0.000079	0.000087	0.000198	0.000198	0.000408	0.000401
Cobalt (dissolved) [mg/L]	0.000044	0.000044	0.000044	0.000047	0.000048	0.000050
Chromium (dissolved) [mg/L]	0.00019	0.00020	0.00026	0.00023	0.00024	0.00024
Copper (dissolved) [mg/L]	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0002	< 0.0002
Iron (dissolved) [mg/L]	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
Potassium (dissolved) [mg/L]	0.214	0.190	0.201	0.207	0.193	0.228
Lithium (dissolved) [mg/L]	0.0288	0.0254	0.0327	0.0332	0.0506	0.0480
Magnesium (dissolved) [mg/L]	3.67	3.59	3.65	3.66	3.48	3.46
Manganese (dissolved) [mg/L]	0.00154	0.00095	0.00066	0.00051	0.00051	0.00040

Analysis	11: HAP1DPT06_7a	12: HAP1DPT06_8a	13: HAP1DPT06_9a	14: HAP1DPT06_10a	15: HAP1DPT06_11a	16: HAP1DPT06_12a
Molybdenum (dissolved) [mg/L]	0.208	0.196	0.421	0.435	0.879	0.880
Sodium (dissolved) [mg/L]	43.3	41.1	42.1	42.3	44.0	44.0
Nickel (dissolved) [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Lead (dissolved) [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony (dissolved) [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium (dissolved) [mg/L]	0.00011	0.00009	0.00010	0.00010	0.00011	0.00010
Tin (dissolved) [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium (dissolved) [mg/L]	0.413	0.394	0.395	0.404	0.404	0.396
Titanium (dissolved) [mg/L]	0.00011	0.00014	0.00025	0.00033	0.00035	0.00038
Thallium (dissolved) [mg/L]	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Uranium (dissolved) [mg/L]	0.00123	0.00134	0.00145	0.00148	0.00136	0.00134
Vanadium (dissolved) [mg/L]	0.00026	0.00020	0.00023	0.00024	0.00026	0.00026
Tungsten (dissolved) [mg/L]	0.00010	0.00009	0.00011	0.00012	0.00016	0.00016
Yttrium (dissolved) [mg/L]	0.00018	0.00016	0.00019	0.00019	0.00021	0.00016
Zinc (dissolved) [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Chris Sullivan



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Project : Hammond MNA

15-July-2021

Date Rec. : 08 July 2021
LR Report: CA12295-JUL21
Reference: P.O# 800003210A

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed Date	3: Analysis Completed Date	4: Analysis Completed Time	5: HAP1DPT06_1b	6: HAP1DPT06_2b	7: HAP1DPT06_3b	8: HAP1DPT06_4b	9: HAP1DPT06_5b	10: HAP1DPT06_6b
Sample Date & Time					06-Jul-21	06-Jul-21	06-Jul-21	06-Jul-21	06-Jul-21	06-Jul-21
Temperature Upon Receipt [°C]	---	---	---	---	7.0	7.0	7.0	7.0	7.0	7.0
Silver (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	0.007	0.008	0.008	0.009	0.003	0.006
Arsenic (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Barium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	0.0399	0.0448	0.0405	0.0418	0.0377	0.0383
Beryllium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	0.000008	< 0.000007	< 0.000007	< 0.000007	0.000007	0.000008
Boron (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	0.012	0.014	0.012	0.012	0.012	0.010
Bismuth (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	0.00026	0.00028	0.00026	0.00027	0.00004	0.00002
Calcium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	108	105	107	108	104	105
Cadmium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	0.000003	0.000006	< 0.000003	0.000006	0.000003	< 0.000003
Cobalt (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	0.000052	0.000044	0.000048	0.000049	0.000048	0.000044
Chromium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:26	0.00114	0.00092	0.00155	0.00133	0.00139	0.00151
Copper (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	0.0003	0.0002	0.0002	0.0002	< 0.0002	< 0.0002
Iron (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
Potassium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	0.212	0.192	0.178	0.176	0.246	0.191
Lithium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	0.0012	0.0015	0.0013	0.0014	0.0016	0.0016
Magnesium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	2.77	2.87	2.65	2.76	2.74	2.63
Manganese (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	0.00011	0.00009	0.00006	0.00010	0.00003	0.00006
Molybdenum (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	0.00024	0.00019	0.00035	0.00034	0.00064	0.00055
Sodium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	25.4	27.2	24.4	25.4	25.6	25.0

OnLine LIMS

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Project : Hammond MNA
LR Report : CA12295-JUL21

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: HAP1DPT06_1b	6: HAP1DPT06_2b	7: HAP1DPT06_3b	8: HAP1DPT06_4b	9: HAP1DPT06_5b	10: HAP1DPT06_6b
Nickel (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001
Lead (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	0.00015	0.00013	0.00012	0.00012	< 0.00009	< 0.00009
Antimony (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	0.00028	0.00022	0.00023	0.00019	0.00020	0.00019
Tin (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	0.00009	0.00008	0.00009	0.00009	0.00011	0.00008
Strontium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	0.336	0.326	0.316	0.316	0.327	0.314
Titanium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	0.00018	0.00020	0.00027	0.00011	0.00018	0.00020
Thallium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Uranium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	0.000989	0.00115	0.000977	0.00115	0.000903	0.000933
Vanadium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	0.00016	0.00013	0.00014	0.00014	0.00017	0.00014
Tungsten (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	0.00009	0.00005	0.00004	0.00003	< 0.00002	< 0.00002
Yttrium (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	0.00008	0.00012	0.00015	0.00014	0.00011	0.00015
Zinc (dissolved) [mg/L]	13-Jul-21	12:01	14-Jul-21	12:27	< 0.002	< 0.002	< 0.002	0.002	0.003	0.002

Analysis	11: HAP1DPT06_7b	12: HAP1DPT06_8b	13: HAP1DPT06_9b	14: HAP1DPT06_10b	15: HAP1DPT06_11b	16: HAP1DPT06_12b
Sample Date & Time	06-Jul-21	06-Jul-21	06-Jul-21	06-Jul-21	06-Jul-21	06-Jul-21
Temperature Upon Receipt [°C]	7.0	7.0	7.0	7.0	7.0	7.0
Silver (dissolved) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	0.003	0.003	0.003	0.003	0.003	0.003
Arsenic (dissolved) [mg/L]	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Barium (dissolved) [mg/L]	0.0377	0.0360	0.0371	0.0368	0.0388	0.0384
Beryllium (dissolved) [mg/L]	< 0.000007	< 0.000007	< 0.000007	0.000008	< 0.000007	< 0.000007
Boron (dissolved) [mg/L]	0.008	0.008	0.009	0.009	0.009	0.010
Bismuth (dissolved) [mg/L]	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
Calcium (dissolved) [mg/L]	101	103	103	105	107	106
Cadmium (dissolved) [mg/L]	< 0.000003	< 0.000003	0.000003	0.000007	0.000006	0.000009
Cobalt (dissolved) [mg/L]	0.000043	0.000044	0.000046	0.000046	0.000047	0.000049
Chromium (dissolved) [mg/L]	0.00133	0.00170	0.00156	0.00144	0.00176	0.00109
Copper (dissolved) [mg/L]	< 0.0002	0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Iron (dissolved) [mg/L]	< 0.007	< 0.007	< 0.007	0.011	< 0.007	< 0.007
Potassium (dissolved) [mg/L]	0.157	0.159	0.159	0.171	0.179	0.200
Lithium (dissolved) [mg/L]	0.0015	0.0015	0.0019	0.0018	0.0022	0.0025
Magnesium (dissolved) [mg/L]	2.58	2.60	2.58	2.58	2.64	2.68
Manganese (dissolved) [mg/L]	0.00001	0.00003	< 0.00001	0.00009	0.00003	0.00003
Molybdenum (dissolved) [mg/L]	0.00157	0.00145	0.00379	0.00431	0.00845	0.0125

Analysis	11: HAP1DPT06_7b	12: HAP1DPT06_8b	13: HAP1DPT06_9b	14: HAP1DPT06_10b	15: HAP1DPT06_11b	16: HAP1DPT06_12b
Sodium (dissolved) [mg/L]	23.6	23.4	23.9	24.6	25.5	27.2
Nickel (dissolved) [mg/L]	< 0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Lead (dissolved) [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony (dissolved) [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium (dissolved) [mg/L]	0.00020	0.00018	0.00016	0.00021	0.00018	0.00018
Tin (dissolved) [mg/L]	0.00010	0.00007	0.00007	0.00007	0.00009	0.00007
Strontium (dissolved) [mg/L]	0.302	0.299	0.308	0.304	0.313	0.318
Titanium (dissolved) [mg/L]	0.00009	0.00013	0.00008	0.00011	0.00019	0.00014
Thallium (dissolved) [mg/L]	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Uranium (dissolved) [mg/L]	0.00112	0.00101	0.00106	0.000970	0.00104	0.00101
Vanadium (dissolved) [mg/L]	0.00015	0.00014	0.00014	0.00014	0.00016	0.00016
Tungsten (dissolved) [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Yttrium (dissolved) [mg/L]	0.00017	0.00016	0.00016	0.00016	0.00016	0.00013
Zinc (dissolved) [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Chris Sullivan



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Project : Hammond MNA

24-August-2021

Date Rec. : 12 August 2021
LR Report: CA15238-AUG21
Reference: P.O# 800003210A

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis Completed Date	4: Analysis Completed Time	5: HAP1DPT06_[1]	6: HAP1DPT06_[2]	7: HAP1DPT06_[3]	8: HAP1DPT06_[4]	9: HAP1DPT06_[5]	10: HAP1DPT06_[6]
Sample Date & Time					29-Jun-21	29-Jun-21	30-Jun-21	30-Jun-21	30-Jun-21	30-Jun-21
Temp Upon Receipt [°C]	---	---	---	---	13.0	13.0	13.0	13.0	13.0	13.0
Ag (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	0.004	0.004	< 0.001	< 0.001	< 0.001	< 0.001
As (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	0.0631	0.112	0.280	0.560	1.12	1.70
Ba (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	0.0435	0.0430	0.0411	0.0419	0.0427	0.0419
Be (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
B (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	0.018	0.018	0.017	0.016	0.017	0.017
Bi (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	0.00060	0.00050	0.00032	0.00031	0.00025	0.00020
Ca (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	129	125	129	128	127	125
Cd (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	0.000013	0.000015	0.000032	0.000088	0.000157	0.000357
Co (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	0.000051	0.000059	0.000052	0.000078	0.000058	0.000046
Cr (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:51	< 0.00008	0.00012	< 0.00008	< 0.00008	< 0.00008	< 0.00008
Cu (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	0.0003	0.0003	0.0002	< 0.0002	< 0.0002	< 0.0002
Fe (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
K (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	0.305	0.292	0.298	0.291	0.293	0.294
Li (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	0.0074	0.0131	0.0283	0.0412	0.0569	0.0709

OnLine LIMS

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Project : Hammond MNA
LR Report : CA15238-AUG21

Analysis	1:	2:	3:	4:	5:	6:	7:	8:	9:	10:
	Analysis Start Date	Analysis Start Time	Analysis Completed Date	Analysis Completed Time	HAP1DPT06_[1]	HAP1DPT06_[2]	HAP1DPT06_[3]	HAP1DPT06_[4]	HAP1DPT06_[5]	HAP1DPT06_[6]
Mg (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	4.31	4.12	4.24	4.16	4.12	3.97
Mn (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	0.0242	0.0235	0.0235	0.0230	0.0205	0.0106
Mo (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	0.0142	0.0522	0.105	0.261	0.587	1.20
Na (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	56.6	55.4	56.2	56.5	56.0	60.9
Ni (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	0.0002	0.0003	0.0003	0.0002	0.0002	0.0002
Pb (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:52	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Sb (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	0.00010	0.00010	0.00008	0.00011	0.00011	0.00012
Sn (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Sr (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	0.390	0.389	0.389	0.425	0.402	0.387
Ti (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	< 0.00005	0.00010	< 0.00005	0.00011	0.00020	0.00026
Tl (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
U (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	0.000743	0.000734	0.000705	0.000677	0.000740	0.000730
V (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	0.00021	0.00018	0.00019	0.00018	0.00021	0.00018
W (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	0.00007	0.00007	0.00008	0.00010	0.00014	0.00018
Y (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	0.00007	0.00007	0.00006	0.00007	0.00007	0.00006
Zn (diss) [mg/L]	17-Aug-21	12:55	18-Aug-21	16:58	0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	11:	12:	13:	14:	15:	16:	17:	18:	19:	20:
	HAP2DPT07&8_[1]	HAP2DPT07&8_[2]	HAP2DPT07&8_[3]	HAP2DPT07&8_[4]	HAP2DPT07&8_[5]	HAP3DPT01_[1]	HAP3DPT01_[2]	HAP3DPT01_[3]	HAP3DPT01_[4]	HAP3DPT01_[5]
Sample Date & Time	05-Jul-12	05-Jul-12	06-Jul-12	07-Jul-12	08-Jul-12	13-Jul-12	13-Jul-12	14-Jul-12	14-Jul-12	14-Jul-12
Temp Upon Receipt [°C]	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
Ag (diss) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	0.003	0.003	0.002	0.007	0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
As (diss) [mg/L]	0.0008	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0002	< 0.0002	< 0.0002
Ba (diss) [mg/L]	0.0397	0.0412	0.0410	0.0413	0.0403	0.0424	0.0414	0.0415	0.0413	0.0407
Be (diss) [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
B (diss) [mg/L]	0.006	0.006	0.006	0.006	0.006	0.005	0.005	0.005	0.004	0.005
Bi (diss) [mg/L]	0.00001	< 0.00001	< 0.00001	0.00007	0.00001	0.00002	0.00001	0.00002	< 0.00001	< 0.00001

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Project : Hammond MNA
LR Report : CA15238-AUG21

Analysis	11:	12:	13:	14:	15:	16:	17:	18:	19:	20:
	HAP2DPT07&8 _ [1]	HAP2DPT07&8 _ [2]	HAP2DPT07&8 _ [3]	HAP2DPT07&8 _ [4]	HAP2DPT07&8 _ [5]	HAP3DPT01 _ [1]	HAP3DPT01 _ [2]	HAP3DPT01 _ [3]	HAP3DPT01 _ [4]	HAP3DPT01 _ [5]
Ca (diss) [mg/L]	31.6	32.7	31.9	31.0	31.6	30.6	30.8	31.0	30.8	30.9
Cd (diss) [mg/L]	0.000010	0.000003	0.000003	0.000005	0.000007	0.000015	0.000013	0.000039	0.000031	0.000057
Co (diss) [mg/L]	0.0970	0.227	0.332	0.441	0.552	0.000643	0.000626	0.000627	0.000656	0.000659
Cr (diss) [mg/L]	< 0.00008	< 0.00008	< 0.00008	0.00011	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008
Cu (diss) [mg/L]	0.0027	0.0013	0.0010	0.0011	0.0005	< 0.0002	0.0040	< 0.0002	< 0.0002	< 0.0002
Fe (diss) [mg/L]	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
K (diss) [mg/L]	0.693	0.702	0.713	0.710	0.729	0.752	0.753	0.770	0.757	0.747
Li (diss) [mg/L]	0.0021	0.0021	0.0019	0.0019	0.0019	0.0149	0.0306	0.0430	0.0558	0.0705
Mg (diss) [mg/L]	6.29	6.24	6.16	6.04	6.14	6.06	5.91	6.26	6.04	5.97
Mn (diss) [mg/L]	0.0844	0.0863	0.0851	0.0858	0.0868	0.0852	0.0851	0.0865	0.0854	0.0856
Mo (diss) [mg/L]	0.0109	0.00017	0.00010	0.00011	0.00010	0.0330	0.0501	0.0886	0.103	0.165
Na (diss) [mg/L]	8.02	7.86	7.87	7.72	8.05	7.84	7.86	8.01	7.95	7.89
Ni (diss) [mg/L]	0.0004	0.0004	0.0004	0.0004	0.0003	0.0003	0.0013	0.0004	0.0003	0.0004
Pb (diss) [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Sb (diss) [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (diss) [mg/L]	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004
Sn (diss) [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Sr (diss) [mg/L]	0.0764	0.0773	0.0753	0.0734	0.0746	0.0738	0.0739	0.0747	0.0734	0.0740
Ti (diss) [mg/L]	< 0.00005	0.00008	0.00008	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.00007	< 0.00005	0.00008
Tl (diss) [mg/L]	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
U (diss) [mg/L]	0.000043	0.000024	0.000012	0.000012	0.000011	0.000035	0.000010	0.000032	0.000010	0.000030
V (diss) [mg/L]	0.00002	< 0.00001	0.00001	0.00002	0.00001	0.00002	0.00001	0.00002	< 0.00001	0.00001
W (diss) [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Y (diss) [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Zn (diss) [mg/L]	0.012	0.006	0.005	0.005	0.004	0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	21:	22:	23:	24:	25:	26:
	BAP1DPT0543& 44 [1]	BAP1DPT0545& 46 [2]	BAP1DPT0547& 43 [3]	BAP1DPT0549& 50 [4]	BAP1DPT0551& 52 [5]	BAP1DT05 [6]
Sample Date & Time	22-Jul-12	29-Jul-12	29-Jul-12	30-Jul-12	30-Jul-12	03-Aug-21

OnLine LIMS

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Project : Hammond MNA


LR Report : CA15238-AUG21

Analysis	21: BAP1DPT0543& 44_[1]	22: BAP1DPT0545& 46_[2]	23: BAP1DPT0547& 43_[3]	24: BAP1DPT0549& 50_[4]	25: BAP1DPT0551& 52_[5]	26: BAP1DT05_[6]
Temp Upon Receipt [°C]	13.0	13.0	13.0	13.0	13.0	13.0
Ag (diss) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	0.001	< 0.001	< 0.001	0.001	0.001	0.002
As (diss) [mg/L]	0.0111	0.0218	0.0433	0.0659	0.0861	0.106
Ba (diss) [mg/L]	0.140	0.140	0.143	0.139	0.142	0.143
Be (diss) [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
B (diss) [mg/L]	0.008	0.008	0.008	0.007	0.007	0.007
Bi (diss) [mg/L]	0.00015	0.00011	0.00015	0.00008	0.00010	0.00011
Ca (diss) [mg/L]	47.3	48.0	46.6	48.0	46.4	45.9
Cd (diss) [mg/L]	0.000050	0.000080	0.000175	0.000248	0.000446	0.000679
Co (diss) [mg/L]	0.0102	0.0194	0.0384	0.0586	0.0761	0.0950
Cr (diss) [mg/L]	0.00032	0.00024	0.00029	0.00027	0.00026	0.00022
Cu (diss) [mg/L]	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0006
Fe (diss) [mg/L]	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
K (diss) [mg/L]	1.79	1.77	1.80	1.77	1.77	1.78
Li (diss) [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Mg (diss) [mg/L]	21.7	21.5	22.0	21.6	21.3	21.5
Mn (diss) [mg/L]	0.00035	0.00020	0.00019	0.00023	0.00026	0.00018
Mo (diss) [mg/L]	0.113	0.276	0.566	0.860	1.39	2.18
Na (diss) [mg/L]	3.50	3.50	3.71	3.86	4.03	4.59
Ni (diss) [mg/L]	< 0.0001	< 0.0001	0.0001	0.0001	< 0.0001	0.0002
Pb (diss) [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Sb (diss) [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (diss) [mg/L]	0.00040	0.00043	0.00043	0.00037	0.00044	0.00039
Sn (diss) [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Sr (diss) [mg/L]	0.0546	0.0545	0.0528	0.0546	0.0534	0.0534
Ti (diss) [mg/L]	0.00006	0.00010	0.00021	0.00023	0.00036	0.00055
Tl (diss) [mg/L]	0.000157	0.000166	0.000154	0.000161	0.000164	0.000167
U (diss) [mg/L]	0.000670	0.000678	0.000662	0.000614	0.000643	0.000640
V (diss) [mg/L]	0.00060	0.00058	0.00059	0.00060	0.00058	0.00056
W (diss) [mg/L]	0.00005	0.00008	0.00010	0.00013	0.00020	0.00030

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Analysis	21: BAP1DPT0543& 44_[1]	22: BAP1DPT0545& 46_[2]	23: BAP1DPT0547& 43_[3]	24: BAP1DPT0549& 50_[4]	25: BAP1DPT0551& 52_[5]	26: BAP1DT05_[6]
Y (diss) [mg/L]	0.00008	0.00008	0.00009	0.00009	0.00009	0.00009
Zn (diss) [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

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Project : Hammond MNA

14-September-2021

SiREM Laboratory
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Date Rec. : 03 September 2021
LR Report: CA12171-SEP21
Reference: P.O# 800003210A

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CERTIFICATE OF ANALYSIS

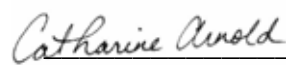

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: HAP1DPT02_1a	6: HAP1DPT02_2a	7: HAP1DPT04XR F_3/5a	8: HAP1DPT04XR F_4/6a	9: HAP2DPT08_7a
Sample Date & Time					31-Aug-21	31-Aug-21	31-Aug-21	31-Aug-21	31-Aug-21
Temp Upon Receipt [°C]	---	---	---	---	11.0	11.0	11.0	11.0	11.0
Ag (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	0.003	0.002	0.003	0.003	0.002
As (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	< 0.0002	< 0.0002	0.0007	0.0007	< 0.0002
Ba (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	0.0421	0.0420	0.0403	0.0405	0.00396
Be (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	< 0.000007	< 0.000007	0.000008	0.000016	0.000007
B (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	0.165	0.148	0.106	0.113	0.293
Bi (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Ca (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	124	122	110	112	40.0
Cd (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	0.000003	0.000003	< 0.000003	< 0.000003	0.00176
Co (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	0.000053	0.000053	0.000084	0.000095	0.0571
Cr (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:43	0.00055	0.00049	0.00059	0.00045	0.00048
Cu (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0002
Fe (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	< 0.007	< 0.007	0.008	0.008	< 0.007
K (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	1.91	1.88	2.38	2.36	2.16
Li (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.0012	0.0013	0.0043	0.0046	0.0078
Mg (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	6.74	6.69	5.94	5.77	8.23
Mn (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.00316	0.00232	0.0182	0.0196	0.997
Mo (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.00725	0.00752	0.00658	0.00656	0.00011
Na (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	46.4	47.1	54.7	54.6	7.41
Ni (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.0003	0.0003	0.0009	0.0010	0.0667
Pb (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Sb (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.00010	0.00010	0.00097	0.00084	0.00709
Sn (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	< 0.00006	< 0.00006	0.00081	0.00080	0.00006
Sr (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.771	0.755	0.573	0.568	0.0992
Ti (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.00013	0.00007	0.00015	0.00015	0.00011
Tl (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	< 0.000005	< 0.000005	0.000012	0.000013	0.000008
U (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.000540	0.000567	0.000739	0.000738	0.000015
V (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.00007	0.00007	0.00030	0.00029	0.00004
W (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Y (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	0.00029	0.00026	0.00080	0.00079	0.00062
Zn (diss) [mg/L]	10-Sep-21	15:00	14-Sep-21	11:48	< 0.002	0.003	< 0.002	< 0.002	0.049

Online LIMS

0002640169

Analysis	10: HAP2DPT08_8a	11: HAP3DPT02_9a	12: HAP3DPT02_10 a	13: BAP1DPT02_11 a	14: BAP1DPT02_12 a
Sample Date & Time	31-Aug-21	31-Aug-21	31-Aug-21	31-Aug-21	31-Aug-21
Temp Upon Receipt [°C]	11.0	11.0	11.0	11.0	11.0
Ag (diss) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	0.001	0.001	0.002	0.005	0.005
As (diss) [mg/L]	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Ba (diss) [mg/L]	0.00396	0.0270	0.0276	0.0373	0.0382
Be (diss) [mg/L]	0.000009	< 0.000007	< 0.000007	0.000009	0.000009
B (diss) [mg/L]	0.324	0.227	0.230	0.108	0.110
Bi (diss) [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Ca (diss) [mg/L]	40.0	66.7	69.0	42.3	42.2
Cd (diss) [mg/L]	0.00200	< 0.000003	< 0.000003	0.000011	0.000014
Co (diss) [mg/L]	0.0605	0.000027	0.000032	0.000142	0.000164
Cr (diss) [mg/L]	0.00039	0.00098	0.00088	0.00125	0.00108
Cu (diss) [mg/L]	0.0003	0.0004	< 0.0002	< 0.0002	< 0.0002
Fe (diss) [mg/L]	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
K (diss) [mg/L]	2.22	1.86	2.03	1.58	1.59
Li (diss) [mg/L]	0.0083	0.0057	0.0065	0.0005	0.0005
Mg (diss) [mg/L]	8.59	5.48	5.91	13.6	13.7
Mn (diss) [mg/L]	1.02	0.00050	0.00042	0.0137	0.0131
Mo (diss) [mg/L]	0.00022	0.0112	0.0139	0.00026	0.00029
Na (diss) [mg/L]	7.57	5.22	5.13	3.97	4.07
Ni (diss) [mg/L]	0.0714	0.0002	0.0002	0.0014	0.0013
Pb (diss) [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Sb (diss) [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (diss) [mg/L]	0.00767	0.00074	0.00073	0.00041	0.00048
Sn (diss) [mg/L]	0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Sr (diss) [mg/L]	0.103	0.427	0.454	0.0861	0.0866
Ti (diss) [mg/L]	0.00006	0.00012	0.00013	0.00018	0.00019
Tl (diss) [mg/L]	0.000006	0.000007	< 0.000005	0.000021	0.000030
U (diss) [mg/L]	0.000016	0.000472	0.000485	0.000081	0.000089
V (diss) [mg/L]	0.00002	0.00028	0.00029	0.00006	0.00007
W (diss) [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Y (diss) [mg/L]	0.00071	0.00007	0.00008	0.00143	0.00142
Zn (diss) [mg/L]	0.056	< 0.002	< 0.002	< 0.002	< 0.002



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Project Specialist,
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SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Project : Hammond MNA

22-September-2021

SiREM Laboratory

Attn : Kela Ashworth

130 Stone Rd. W
Guelph, ON
N1G 3Z2, Canada

Phone: 519-822-2265
Fax:519-822-3151

Date Rec. : 16 September 2021
LR Report: CA15375-SEP21
Reference: P.O# 800003210A

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report


Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: HAP1DPT02_1 b	6: HAP1DPT02_2 b	7: HAP1DPT04XR F_3b	8: HAP1DPT04XR F_4b	9: HAP1DPT04XR F_5b
Sample Date & Time					15-Sep-21	15-Sep-21	15-Sep-21	15-Sep-21	15-Sep-21
Temp Upon Receipt [°C]	---	---	---	---	9.0	9.0	9.0	9.0	9.0
Ag (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.002	0.002	0.006	0.004	0.003
As (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.0002	< 0.0002	0.0031	0.0030	0.0012
Ba (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.0382	0.0399	0.0462	0.0433	0.0496
Be (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.000007	0.000009	0.000034	0.000025	0.000022
B (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.651	0.602	0.281	0.312	0.281
Bi (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.00002	0.00001	0.00001	0.00001	0.00002
Ca (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	89.2	89.4	74.2	80.1	83.1
Cd (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.000013	< 0.000003	0.000004	0.000006	0.000009
Co (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.000077	0.000074	0.000122	0.000165	0.000617
Cr (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.00174	0.00214	0.00108	0.00095	0.00053
Cu (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.0002	< 0.0002	0.0005	0.0005	0.0005
Fe (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.007	< 0.007	0.016	0.016	0.010
K (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	3.44	3.42	4.56	4.46	2.89
Li (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.0005	0.0007	0.0048	0.0040	0.0015
Mg (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	9.55	8.93	5.41	5.76	6.11
Mn (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.00296	0.00213	0.0339	0.0324	0.231
Mo (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.00956	0.00967	0.0124	0.0113	0.00896
Na (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	38.6	36.9	58.6	63.7	61.3
Ni (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.0005	0.0005	0.0016	0.0015	0.0011
Pb (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Sb (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.00020	0.00022	0.00134	0.00115	0.00070
Sn (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.00013	0.00012	0.00121	0.00118	0.00135
Sr (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.727	0.720	0.392	0.413	0.441
Ti (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.00005	0.00022	0.00021	0.00023	0.00017
Tl (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.000005	< 0.000005	0.000016	0.000015	0.000013
U (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.000173	0.000190	0.00285	0.00240	0.00104
V (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.00013	0.00010	0.00065	0.00075	0.00066
W (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.00002	< 0.00002	0.00004	0.00004	< 0.00002
Y (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	0.00013	0.00009	0.00046	0.00047	0.00043
Zn (diss) [mg/L]	21-Sep-21	15:10	22-Sep-21	14:19	< 0.002	0.003	0.002	0.003	0.002

Online LIMS

0002450084

Analysis	10: HAP1DPT04XR F_6b	11: HAP2DPT08_7 b	12: HAP2DPT08_8 b	13: HAP2DPT02_9 b	14: HAP2DPT02_1 0b	15: BAP1DPT02_1 1b	16: BAP1DPT02_1 2b
Sample Date & Time	15-Sep-21	15-Sep-21	15-Sep-21	15-Sep-21	15-Sep-21	15-Sep-21	15-Sep-21
Temp Upon Receipt [°C]	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Ag (diss) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Al (diss) [mg/L]	0.002	0.007	0.014	0.007	0.003	0.005	0.003
As (diss) [mg/L]	0.0012	0.0016	0.0028	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Ba (diss) [mg/L]	0.0430	0.0280	0.0306	0.0291	0.0302	0.0112	0.0113
Be (diss) [mg/L]	0.000018	0.000039	0.000068	< 0.000007	< 0.000007	0.000099	0.000086
B (diss) [mg/L]	0.309	0.872	0.836	0.285	0.290	0.498	0.547
Bi (diss) [mg/L]	0.00001	0.00001	< 0.00001	0.00001	0.00001	0.00002	< 0.00001
Ca (diss) [mg/L]	69.6	48.4	51.6	63.9	67.5	11.8	12.5
Cd (diss) [mg/L]	0.000016	0.00420	0.0120	0.000007	0.000005	0.000041	0.000035
Co (diss) [mg/L]	0.000911	0.114	0.167	0.000085	0.000076	0.000005	0.000012
Cr (diss) [mg/L]	0.00051	0.00045	0.00049	0.00215	0.00246	0.00136	0.00150
Cu (diss) [mg/L]	0.0006	0.0009	0.0028	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Fe (diss) [mg/L]	0.009	< 0.007	< 0.007	0.010	< 0.007	< 0.007	< 0.007
K (diss) [mg/L]	2.53	5.54	5.93	3.90	3.98	1.24	1.37
Li (diss) [mg/L]	0.0008	0.0172	0.0243	0.0077	0.0077	0.0005	0.0005
Mg (diss) [mg/L]	5.64	12.5	13.7	7.25	7.80	3.28	3.49
Mn (diss) [mg/L]	0.381	3.60	5.05	0.00059	0.00051	0.0120	0.0126
Mo (diss) [mg/L]	0.00414	0.00017	0.00047	0.0534	0.0542	0.00005	0.00010
Na (diss) [mg/L]	60.3	10.4	10.1	5.57	5.65	4.85	4.90
Ni (diss) [mg/L]	0.0015	0.117	0.151	0.0003	0.0003	0.0014	0.0016
Pb (diss) [mg/L]	< 0.00009	0.00011	0.00058	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Sb (diss) [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Se (diss) [mg/L]	0.00050	0.0148	0.0159	0.00047	0.00066	0.00050	0.00043
Sn (diss) [mg/L]	0.00125	0.00014	0.00014	0.00011	0.00012	< 0.00006	< 0.00006
Sr (diss) [mg/L]	0.366	0.147	0.152	0.539	0.572	0.0297	0.0306
Ti (diss) [mg/L]	0.00017	0.00011	0.00007	0.00030	0.00010	0.00011	0.00010
Tl (diss) [mg/L]	0.000009	0.000014	0.000020	0.000006	0.000008	0.000020	0.000016
U (diss) [mg/L]	0.000268	0.000018	0.000027	0.00143	0.00171	0.000011	0.000025
V (diss) [mg/L]	0.00045	0.00007	0.00005	0.00041	0.00044	0.00008	0.00008
W (diss) [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Y (diss) [mg/L]	0.00047	0.00100	0.00157	0.00016	0.00012	0.00048	0.00034
Zn (diss) [mg/L]	0.004	0.087	0.127	< 0.002	< 0.002	0.008	0.004

Catharine Arnold
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Project Specialist,
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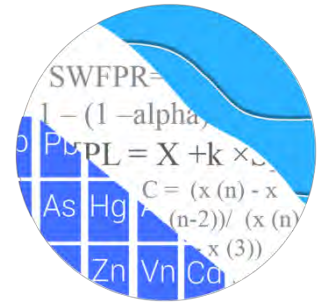
APPENDIX D

Statistical Analysis Reports

APPENDIX D1

March 2021 Statistical Analysis Report

GROUNDWATER STATS CONSULTING



August 24, 2021

Southern Company Services
Attn: Ms. Kristen Jurinko
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308

Re: Plant Hammond Ash Pond 1 (AP-1)
Statistical Analysis – March 2021 Sample Event

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-1. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015), the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began for the CCR program in 2016, and at least 8 background samples have been collected at each of the upgradient and downgradient groundwater monitoring wells. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** HGWA-1, HGWA-2, HGWA-3, HGWA-43D, and HGWA-44D
- **Downgradient wells:** HGWC-7, HGWC-8, HGWC-9, HGWC-10, HGWC-11, HGWC-12, and HGWC-13
- **Delineation wells:** MW-5, MW-6, MW-7, MW-19, MW-20, MW24D, MW-25D, MW-26D, MW-27D, MW-28D, and MW-29

Wells HGWA-43D and HGWA-44D are new upgradient wells that currently have a maximum of six sampling events. These wells were sampled in September, November, and December 2020, and January, February, and March 2021. The February 2021 sampling event was a Scan event during which only Appendix IV constituents were sampled.

Delineation wells are included on time series and box plots for all parameters. When a minimum of 4 samples is available, these wells are evaluated using confidence intervals for the Appendix IV constituents. For the delineation wells previously identified, sampling began in March 2019. Wells MW-30D and MW-40D were included as delineation wells during previous reporting periods, but each were reclassified as a "piezometer" based on the findings presented in the alternate source demonstration included as an appendix of the 2020 Annual Groundwater Monitoring & Corrective Action Report, submitted to Georgia EPD in January 2021. Because of this reclassification, data for wells MW-30D and MW-40D are not presented in this report.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Kristina Rayner, Groundwater Statistician and Founder of Groundwater Stats Consulting. The statistical analysis was performed according to the groundwater screening that was performed in April 2018 by GSC and approved by Dr. Cameron, PhD Statistician with MacStat Consulting and primary author of the USEPA Unified Guidance (2009).

The CCR program consists of the constituents listed below. The terms "parameters" and "constituents" are used interchangeably.

- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Appendix IV** (Assessment Monitoring) – 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, annual Scan events are conducted to determine which Appendix IV constituents are detected in downgradient wells and, therefore, require statistical analysis. Any constituents that are not detected do not require statistical analysis. During the annual Scan event conducted in February 2021, mercury was not detected and was not required to be sampled during the subsequent event.

For all constituents, a substitution of the most recent reporting limit is used for non-detect data. In the case of lithium, a reporting limit of 0.03 mg/L was substituted across all wells which is the most recent reporting limit by the laboratory.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. No values were flagged as outliers (Figure C).

In earlier analyses, data at all wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves were provided with the previous 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:

The following Appendix III parameters are evaluated using interwell prediction limits combined with a 1-of-2 resample plan: boron, calcium, chloride, fluoride, pH, sulfate, and TDS.

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits.

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Note that values shown on data pages reflect raw data and any non-detects that have been substituted with one-half of the reporting limit 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.

Statistical Analysis of Appendix III Parameters – March 2021

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed for Appendix III parameters 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 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 (SSI) is identified and further research would be required to identify the cause of the exceedance (i.e. impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result and, therefore, no exceedance is noted and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance.

When the March 2021 compliance data from downgradient wells were compared to interwell prediction limits, several exceedances were identified. A summary table of these findings is provided along with the prediction limits (Figure D).

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure E). Upgradient well data are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. Upgradient trends are an indication of natural variability in groundwater unrelated to practices at the site. A summary of the trend test results follows this letter. Statistically significant trends were noted for the following well/constituent pairs:

Increasing trends:

- Boron: HGWA-2 (upgradient), HGWC-7, and HGWC-9
- Sulfate: HGWA-2 (upgradient) and HGWA-3 (upgradient)

Decreasing trends:

- Boron: HGWC-13
- Calcium: HGWC-12
- Chloride: HGWC-9 and HGWC-12
- Sulfate: HGWC-12
- TDS: HGWC-12

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

Site specific background limits were calculated as upper one-sided tolerance limits (UTLs) on pooled upgradient well data all historical upgradient well data through March 2021 (Figure F). When varying detection limits were present in upgradient wells, all non-detects were substituted with the most recent reporting limit. As mentioned above, an alternate reporting limit of 0.03 mg/L was substituted across all wells for lithium. Parametric tolerance limits were used when data follow a normal or transformed-normal distribution. When data contained greater than 50% non-detects or did not follow a normal or transformed-normal distribution, non-parametric tolerance limits were used. The background limits were then used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia EPD Rule 391-3-4-.10(6)(a).

As described in 40 CFR §257.95(h) (1-3), the GWPS is:

- The maximum contaminant level (MCL) established under §141.62 and §141.66 of this title
- Where an MCL has not been established for a constituent, CCR-rule specified levels have been specified for cobalt (0.006 mg/L), lead (0.015 mg/L), lithium (0.040 mg/L), and molybdenum (0.100 mg/L)
- The respective background level for a constituent when the background level is higher than the MCL or Federal CCR Rule identified GWPS

On July 30, 2018, USEPA revised the Federal CCR Rule updating GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR §257.95(h)(2). Georgia EPD has not incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a); therefore, for sites regulated under Georgia EPD Rules, the GWPS is:

- The MCL or
- The background concentration when an MCL is not established or when the background concentration is higher than the MCL.

Following the above Georgia EPD Rule requirements and the CCR Rule, State and Federal GWPS were established for statistical comparison of Appendix IV constituents for the March 2021 sample event (Figure G). Delineation wells were included when a minimum of 4 samples were available. Note that a GWPS is established for mercury; however, since it was not sampled during the March 2021 sampling event, no statistical comparison with confidence intervals is required.

To complete the statistical comparison to GWPS, confidence intervals were constructed for each of the Appendix IV constituents in each downgradient well and delineation wells with 4 or more samples. The Sanitas software was used to calculate the tolerance limits and the confidence intervals, either parametric or nonparametric, as appropriate. For the State requirements, confidence intervals were compared to the GWPS established using the Georgia EPD Rules 391-3-4-.10(6)(a). For Federal requirements, confidence intervals were compared to the GWPS prepared according to the CCR Rule. Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. Note that reporting limits decreased for the following constituents during this analysis:

- Beryllium from <0.003 mg/L to <0.0005 mg/L
- Cadmium from <0.0025 mg/L to <0.0005 mg/L
- Chromium from <0.01 mg/L to <0.005 mg/L
- Lead from <0.005 mg/L to <0.001 mg/L
- Selenium from <0.01 mg/L to <0.005 mg/L

As a result, background limits were lower for these constituents. However, in all cases, except for lead which uses the background limit as the GWPS, the established MCL was higher than the background limits. Therefore, the GWPS were not affected. Additionally, some of the confidence intervals constructed on downgradient wells resulted in decreased upper and lower confidence limits since all historical non-detects within a given well are replaced with the most recent reporting limit.

Summaries of the confidence interval results, along with graphical comparison against GWPS for both State and Federal requirements follow this letter (Figures H and I, respectively). Exceedances were noted for the following well/constituent pairs:

State:

- Arsenic: HGWC-13
- Lithium: MW-25D
- Molybdenum: HGWC-7, HGWC-8, HGWC-9, HGWC-11, HGWC-12, HGWC-13, and MW-19

Federal:

- Arsenic: HGWC-13
- Lithium: MW-25D
- Molybdenum: HGWC-8

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Hammond AP-1. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Andrew T. Collins
Project Manager



Kristina L. Rayner
Groundwater Statistician

100% Non-Detects: Appendix IV Downgradient & Delineation

Analysis Run 5/4/2021 7:29 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Antimony (mg/L)

HGWC-12, MW-19, MW-20, MW-25D, MW-5

Arsenic (mg/L)

HGWC-10, HGWC-8, MW-24D, MW-5, MW-6, MW-7

Beryllium (mg/L)

HGWC-10, HGWC-12, HGWC-9, MW-19, MW-20, MW-24D, MW-25D, MW-26D, MW-27D, MW-29, MW-5, MW-6

Cadmium (mg/L)

HGWC-13, MW-20, MW-24D, MW-25D, MW-26D, MW-27D, MW-28D, MW-29, MW-5, MW-6, MW-7

Cobalt (mg/L)

MW-25D, MW-5, MW-7

Lead (mg/L)

MW-25D

Lithium (mg/L)

HGWC-10, HGWC-11, MW-5, MW-6, MW-7

Molybdenum (mg/L)

MW-20, MW-5

Selenium (mg/L)

HGWC-7, MW-20, MW-24D, MW-25D, MW-26D, MW-28D, MW-29, MW-6

Thallium (mg/L)

HGWC-10, HGWC-7, HGWC-9, MW-20, MW-24D, MW-25D, MW-26D, MW-27D, MW-5, MW-7

Appendix III Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-10	0.4	n/a	3/12/2021	0.64	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-11	0.4	n/a	3/16/2021	0.53	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-12	0.4	n/a	3/16/2021	1.9	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-13	0.4	n/a	3/17/2021	0.89	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-7	0.4	n/a	3/15/2021	1.1	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-8	0.4	n/a	3/15/2021	1.7	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-9	0.4	n/a	3/16/2021	2.2	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-10	137.2	n/a	3/12/2021	146	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-12	137.2	n/a	3/16/2021	166	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-13	137.2	n/a	3/17/2021	184	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-8	137.2	n/a	3/15/2021	156	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-9	137.2	n/a	3/16/2021	182	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Chloride (mg/L)	HGWC-12	41.1	n/a	3/16/2021	56.8	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-7	41.1	n/a	3/15/2021	44.5	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-8	41.1	n/a	3/15/2021	72.4	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-9	41.1	n/a	3/16/2021	94.7	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-10	88.2	n/a	3/12/2021	120	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-11	88.2	n/a	3/16/2021	291	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-12	88.2	n/a	3/16/2021	248	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-13	88.2	n/a	3/17/2021	384	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-7	88.2	n/a	3/15/2021	107	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-8	88.2	n/a	3/15/2021	272	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-9	88.2	n/a	3/16/2021	211	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-13	632	n/a	3/17/2021	716	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-9	632	n/a	3/16/2021	672	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2

Appendix III Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-10	0.4	n/a	3/12/2021	0.64	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-11	0.4	n/a	3/16/2021	0.53	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-12	0.4	n/a	3/16/2021	1.9	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-13	0.4	n/a	3/17/2021	0.89	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-7	0.4	n/a	3/15/2021	1.1	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-8	0.4	n/a	3/15/2021	1.7	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-9	0.4	n/a	3/16/2021	2.2	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-10	137.2	n/a	3/12/2021	146	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-11	137.2	n/a	3/16/2021	132	No	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-12	137.2	n/a	3/16/2021	166	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-13	137.2	n/a	3/17/2021	184	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-7	137.2	n/a	3/15/2021	113	No	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-8	137.2	n/a	3/15/2021	156	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-9	137.2	n/a	3/16/2021	182	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Chloride (mg/L)	HGWC-10	41.1	n/a	3/12/2021	35	No	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-11	41.1	n/a	3/16/2021	11.5	No	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-12	41.1	n/a	3/16/2021	56.8	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-13	41.1	n/a	3/17/2021	31.4	No	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-7	41.1	n/a	3/15/2021	44.5	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-8	41.1	n/a	3/15/2021	72.4	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-9	41.1	n/a	3/16/2021	94.7	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-10	0.74	n/a	3/12/2021	0.054J	No	74	n/a	n/a	31.08	n/a	n/a	0.0003513	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-11	0.74	n/a	3/16/2021	0.21	No	74	n/a	n/a	31.08	n/a	n/a	0.0003513	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-12	0.74	n/a	3/16/2021	0.2	No	74	n/a	n/a	31.08	n/a	n/a	0.0003513	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-13	0.74	n/a	3/17/2021	0.65	No	74	n/a	n/a	31.08	n/a	n/a	0.0003513	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-7	0.74	n/a	3/15/2021	0.086J	No	74	n/a	n/a	31.08	n/a	n/a	0.0003513	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-8	0.74	n/a	3/15/2021	0.51	No	74	n/a	n/a	31.08	n/a	n/a	0.0003513	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-9	0.74	n/a	3/16/2021	0.098J	No	74	n/a	n/a	31.08	n/a	n/a	0.0003513	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-10	7.92	4.9	3/12/2021	6.76	No	74	n/a	n/a	0	n/a	n/a	0.0007026	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-11	7.92	4.9	3/16/2021	5.95	No	74	n/a	n/a	0	n/a	n/a	0.0007026	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-12	7.92	4.9	3/16/2021	7.15	No	74	n/a	n/a	0	n/a	n/a	0.0007026	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-13	7.92	4.9	3/17/2021	7.33	No	74	n/a	n/a	0	n/a	n/a	0.0007026	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-7	7.92	4.9	3/15/2021	7.19	No	74	n/a	n/a	0	n/a	n/a	0.0007026	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-8	7.92	4.9	3/15/2021	7.09	No	74	n/a	n/a	0	n/a	n/a	0.0007026	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-9	7.92	4.9	3/16/2021	7.1	No	74	n/a	n/a	0	n/a	n/a	0.0007026	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-10	88.2	n/a	3/12/2021	120	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-11	88.2	n/a	3/16/2021	291	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-12	88.2	n/a	3/16/2021	248	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-13	88.2	n/a	3/17/2021	384	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-7	88.2	n/a	3/15/2021	107	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-8	88.2	n/a	3/15/2021	272	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-9	88.2	n/a	3/16/2021	211	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-10	632	n/a	3/12/2021	490	No	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-11	632	n/a	3/16/2021	558	No	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-12	632	n/a	3/16/2021	614	No	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-13	632	n/a	3/17/2021	716	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-7	632	n/a	3/15/2021	370	No	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-8	632	n/a	3/15/2021	614	No	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-9	632	n/a	3/16/2021	672	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2

Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/5/2021, 11:47 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-2 (bg)	0.00257	72	58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-13	-0.2856	-63	-58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-7	0.04974	80	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-9	0.1581	61	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-12	-13.85	-59	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-12	-27.06	-82	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-9	-11.82	-70	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.382	64	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-3 (bg)	1.515	77	63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-12	-29.88	-62	-58	Yes	16	0	n/a	n/a	0.01	NP

Trend Tests - Prediction Limit Exceedances - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/5/2021, 11:47 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-1 (bg)	-0.00003204	-3	-63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-2 (bg)	0.00257	72	58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-3 (bg)	-0.0002616	-15	-63	No	17	11.76	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-10	0.03846	10	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-11	-0.2774	-48	-58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-12	-0.2012	-47	-58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-13	-0.2856	-63	-58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-7	0.04974	80	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-8	0.1969	43	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-9	0.1581	61	58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-43D (bg)	-0.02892	-4	-12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-44D (bg)	0.3386	8	12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-1 (bg)	4.579	52	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-2 (bg)	0.3424	16	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	2.895	58	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-10	-4.329	-28	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-12	-13.85	-59	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-13	9.634	7	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-8	-3.956	-40	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-9	0.3307	12	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-43D (bg)	-5.439	-2	-12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-44D (bg)	-27.77	-4	-12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-1 (bg)	1.507	45	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-2 (bg)	-0.2299	-53	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-3 (bg)	-0.1011	-40	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-12	-27.06	-82	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-7	-0.8457	-32	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-8	-8.438	-55	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-9	-11.82	-70	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-43D (bg)	0.5656	3	12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-44D (bg)	9.78	10	12	No	5	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-1 (bg)	4.851	51	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.382	64	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-3 (bg)	1.515	77	63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-10	-5.5	-31	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-11	-14.95	-18	-58	No	16	6.25	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-12	-29.88	-62	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-13	10.64	6	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-7	0.9989	19	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-8	-13.34	-29	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-9	-5.2	-42	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-43D (bg)	-8.995	-8	-12	No	5	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-44D (bg)	-2.396	-2	-12	No	5	20	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	10.91	22	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-2 (bg)	-1.42	-11	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-3 (bg)	0.6748	7	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-13	-7.676	0	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-9	-50.47	-36	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-43D (bg)	-24.14	-2	-12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-44D (bg)	31.49	4	12	No	5	0	n/a	n/a	0.01	NP

Upper Tolerance Limits Summary Table

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:25 PM

Constituent	Upper Lim.	Lower Lim.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	0.003	n/a	n/a	63	n/a	n/a	76.19	n/a	n/a	0.0395	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	n/a	69	n/a	n/a	66.67	n/a	n/a	0.02904	NP Inter(NDs)
Barium (mg/L)	0.46	n/a	n/a	69	n/a	n/a	0	n/a	n/a	0.02904	NP Inter(normality)
Beryllium (mg/L)	0.0005	n/a	n/a	63	n/a	n/a	77.78	n/a	n/a	0.0395	NP Inter(NDs)
Cadmium (mg/L)	0.0005	n/a	n/a	63	n/a	n/a	87.3	n/a	n/a	0.0395	NP Inter(NDs)
Chromium (mg/L)	0.0079	n/a	n/a	63	n/a	n/a	80.95	n/a	n/a	0.0395	NP Inter(NDs)
Cobalt (mg/L)	0.038	n/a	n/a	63	n/a	n/a	71.43	n/a	n/a	0.0395	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	4.36	n/a	n/a	69	n/a	n/a	0	n/a	n/a	0.02904	NP Inter(normality)
Fluoride (mg/L)	0.74	n/a	n/a	74	n/a	n/a	31.08	n/a	n/a	0.02247	NP Inter(normality)
Lead (mg/L)	0.001	n/a	n/a	60	n/a	n/a	58.33	n/a	n/a	0.04607	NP Inter(NDs)
Lithium (mg/L)	0.034	n/a	n/a	69	n/a	n/a	23.19	n/a	n/a	0.02904	NP Inter(normality)
Mercury (mg/L)	0.0005	n/a	n/a	46	n/a	n/a	95.65	n/a	n/a	0.09447	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	71	n/a	n/a	83.1	n/a	n/a	0.0262	NP Inter(NDs)
Selenium (mg/L)	0.005	n/a	n/a	69	n/a	n/a	98.55	n/a	n/a	0.02904	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	69	n/a	n/a	98.55	n/a	n/a	0.02904	NP Inter(NDs)

PLANT HAMMOND AP-1 GWPS (State)				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	State GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.46	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0079	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.74	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.001
Lithium, Total (mg/L)	n/a	0.04	0.034	0.034
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.01
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**Grey cell indicates background is higher than MCL or CCR-Rule*

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

PLANT HAMMOND AP-1 GWPS (Federal)				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	Federal GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.46	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0079	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.74	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.015
Lithium, Total (mg/L)	n/a	0.04	0.034	0.04
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**Grey cell indicates background is higher than MCL or CCR-Rule*

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

State Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:37 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	HGWC-13	0.4313	0.3592	0.01	Yes	19	0.3953	0.06154	0	None	No	0.01	Param.
Lithium (mg/L)	MW-25D	0.05155	0.04545	0.034	Yes	8	0.0485	0.002878	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-11	0.02514	0.01508	0.01	Yes	19	0.02011	0.00859	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-12	0.04978	0.0457	0.01	Yes	19	0.04774	0.003483	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-13	0.03593	0.0301	0.01	Yes	19	0.03302	0.004974	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-7	0.04274	0.03437	0.01	Yes	20	0.03856	0.007368	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-8	0.4928	0.4503	0.01	Yes	20	0.4716	0.03743	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-9	0.033	0.0234	0.01	Yes	19	0.05098	0.1033	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	MW-19	0.06073	0.03377	0.01	Yes	8	0.04725	0.01271	0	None	No	0.01	Param.

State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:37 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-10	0.003	0.00065	0.006	No	17	0.002862	0.00057	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-11	0.003	0.00038	0.006	No	17	0.002846	0.0006354	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-13	0.003	0.00036	0.006	No	17	0.001925	0.001327	58.82	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-7	0.003	0.00034	0.006	No	17	0.002844	0.0006451	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-8	0.003	0.00064	0.006	No	17	0.002861	0.0005724	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-9	0.003	0.00043	0.006	No	17	0.002539	0.001026	82.35	None	No	0.01	NP (NDs)
Antimony (mg/L)	MW-24D	0.003	0.0017	0.006	No	8	0.002838	0.0004596	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-26D	0.003	0.0013	0.006	No	8	0.002663	0.0006523	75	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-27D	0.003	0.00016	0.006	No	8	0.0009775	0.00125	25	None	No	0.004	NP (normality)
Antimony (mg/L)	MW-28D	0.003	0.0019	0.006	No	8	0.002863	0.0003889	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-29	0.003	0.00094	0.006	No	8	0.002743	0.0007283	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-6	0.003	0.0014	0.006	No	8	0.0028	0.0005657	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-7	0.003	0.00051	0.006	No	8	0.002096	0.001065	50	None	No	0.004	NP (normality)
Arsenic (mg/L)	HGWC-11	0.005	0.0015	0.01	No	19	0.003266	0.001768	42.11	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-12	0.004589	0.003137	0.01	No	19	0.003863	0.00124	10.53	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-13	0.4313	0.3592	0.01	Yes	19	0.3953	0.06154	0	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-7	0.005	0.0019	0.01	No	19	0.004837	0.0007112	94.74	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-9	0.005	0.0008	0.01	No	19	0.004312	0.001635	84.21	None	No	0.01	NP (NDs)
Arsenic (mg/L)	MW-19	0.005	0.00045	0.01	No	8	0.004431	0.001609	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-20	0.005	0.00038	0.01	No	8	0.003577	0.002033	62.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-25D	0.005	0.00075	0.01	No	8	0.003094	0.002064	50	None	No	0.004	NP (normality)
Arsenic (mg/L)	MW-26D	0.005	0.0006	0.01	No	8	0.003925	0.001991	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-27D	0.005	0.0002	0.01	No	8	0.003361	0.002272	62.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-28D	0.005	0.0011	0.01	No	8	0.004512	0.001379	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-29	0.005	0.00037	0.01	No	8	0.004421	0.001637	87.5	None	No	0.004	NP (NDs)
Barium (mg/L)	HGWC-10	0.08901	0.06608	2	No	19	0.07754	0.01958	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-11	0.05343	0.03154	2	No	19	0.04375	0.02072	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	HGWC-12	0.13	0.084	2	No	19	0.1029	0.02097	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-13	0.09256	0.06961	2	No	19	0.08108	0.0196	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-7	0.07536	0.06864	2	No	19	0.072	0.005743	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-8	0.0829	0.06	2	No	19	0.06984	0.01122	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-9	0.1226	0.1065	2	No	19	0.1146	0.01374	0	None	No	0.01	Param.
Barium (mg/L)	MW-19	0.0677	0.0498	2	No	8	0.05875	0.008447	0	None	No	0.01	Param.
Barium (mg/L)	MW-20	0.098	0.08425	2	No	8	0.09113	0.00649	0	None	No	0.01	Param.
Barium (mg/L)	MW-24D	0.08729	0.04433	2	No	8	0.06538	0.02462	0	None	ln(x)	0.01	Param.
Barium (mg/L)	MW-25D	0.4797	0.3928	2	No	8	0.4363	0.04104	0	None	No	0.01	Param.
Barium (mg/L)	MW-26D	0.17	0.093	2	No	8	0.1131	0.02538	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-27D	1.5	0.95	2	No	8	1.088	0.1866	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-28D	0.7327	0.1773	2	No	8	0.455	0.262	0	None	No	0.01	Param.
Barium (mg/L)	MW-29	0.08638	0.07637	2	No	8	0.08138	0.004719	0	None	No	0.01	Param.
Barium (mg/L)	MW-5	0.05227	0.04398	2	No	8	0.04813	0.003907	0	None	No	0.01	Param.
Barium (mg/L)	MW-6	0.09421	0.08179	2	No	8	0.088	0.005855	0	None	No	0.01	Param.
Barium (mg/L)	MW-7	0.06481	0.04669	2	No	8	0.05575	0.008548	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-11	0.0005	0.0001	0.004	No	17	0.000341	0.000197	58.82	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-13	0.0005	0.000097	0.004	No	17	0.000333	0.000206	58.82	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-7	0.0005	0.00019	0.004	No	17	0.0004322	0.0001526	82.35	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-8	0.0005	0.0001	0.004	No	17	0.0004014	0.0001834	76.47	None	No	0.01	NP (NDs)
Beryllium (mg/L)	MW-28D	0.0005	0.000048	0.004	No	8	0.0003428	0.0002188	62.5	None	No	0.004	NP (NDs)
Beryllium (mg/L)	MW-7	0.0005	0.000051	0.004	No	8	0.0004439	0.0001587	87.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	HGWC-10	0.0005	0.0001	0.005	No	17	0.0003421	0.0001959	58.82	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-11	0.0005	0.0001	0.005	No	17	0.0004292	0.0001577	82.35	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-12	0.0005	0.0003	0.005	No	17	0.0004259	0.000143	76.47	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-7	0.0005	0.0002	0.005	No	17	0.0004235	0.0001437	76.47	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-8	0.00032	0.00014	0.005	No	17	0.0003141	0.0003708	5.882	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-9	0.0005	0.0002	0.005	No	17	0.0004335	0.00015	82.35	None	No	0.01	NP (NDs)

State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:37 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cadmium (mg/L)	MW-19	0.0002284	0.0001459	0.005	No	8	0.000265	0.0001497	25	Kaplan-Meier	ln(x)	0.01	Param.
Chromium (mg/L)	HGWC-10	0.02	0.005	0.1	No	17	0.005882	0.003638	94.12	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-11	0.005	0.00061	0.1	No	17	0.004465	0.00151	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-12	0.005	0.0025	0.1	No	17	0.004342	0.001516	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-13	0.005	0.00059	0.1	No	17	0.004209	0.001762	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-7	0.071	0.0016	0.1	No	17	0.007779	0.01639	64.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-8	0.005	0.0015	0.1	No	17	0.004031	0.001811	76.47	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-9	0.005	0.00067	0.1	No	17	0.004482	0.001463	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-19	0.005	0.00047	0.1	No	8	0.00254	0.002111	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	MW-20	0.005	0.00051	0.1	No	8	0.003362	0.002261	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-24D	0.005	0.00042	0.1	No	8	0.004015	0.001856	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-25D	0.005	0.00061	0.1	No	8	0.004451	0.001552	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-26D	0.005	0.00076	0.1	No	8	0.002757	0.001958	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	MW-27D	0.005	0.0007	0.1	No	8	0.00394	0.001963	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-28D	0.005	0.00078	0.1	No	8	0.002692	0.002009	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	MW-29	0.005	0.001	0.1	No	8	0.0045	0.001414	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-5	0.004565	0.00231	0.1	No	8	0.003438	0.001064	0	None	No	0.01	Param.
Chromium (mg/L)	MW-6	0.005	0.00044	0.1	No	8	0.003879	0.002077	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-7	0.005	0.0013	0.1	No	8	0.00215	0.001198	12.5	None	No	0.004	NP (normality)
Cobalt (mg/L)	HGWC-10	0.005	0.0007	0.038	No	17	0.003506	0.00209	64.71	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-11	0.00192	0.0009744	0.038	No	17	0.002656	0.001712	29.41	Kaplan-Meier	ln(x)	0.01	Param.
Cobalt (mg/L)	HGWC-12	0.0021	0.0012	0.038	No	17	0.001871	0.001212	11.76	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-13	0.004247	0.002671	0.038	No	17	0.003459	0.001258	5.882	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-7	0.0026	0.0005	0.038	No	17	0.001598	0.001703	17.65	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-8	0.0023	0.0019	0.038	No	17	0.002204	0.0007606	5.882	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-9	0.0011	0.00057	0.038	No	17	0.001238	0.001459	11.76	None	No	0.01	NP (normality)
Cobalt (mg/L)	MW-19	0.04433	0.02892	0.038	No	8	0.03663	0.007269	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-20	0.005	0.0011	0.038	No	8	0.004512	0.001379	87.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-24D	0.005	0.00025	0.038	No	8	0.003364	0.00227	62.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-26D	0.005	0.0003	0.038	No	8	0.002715	0.002444	50	None	No	0.004	NP (normality)
Cobalt (mg/L)	MW-27D	0.005	0.000091	0.038	No	8	0.003243	0.002428	62.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-28D	0.005	0.00093	0.038	No	8	0.004491	0.001439	87.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-29	0.001302	0.0005925	0.038	No	8	0.0009475	0.0003349	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-6	0.005	0.00036	0.038	No	8	0.00109	0.00159	12.5	None	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	HGWC-10	1.137	0.597	5	No	19	0.8671	0.4612	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-11	1.226	0.6603	5	No	19	0.9432	0.4832	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-12	1.1	0.548	5	No	19	0.8239	0.4713	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-13	1.052	0.5958	5	No	19	0.824	0.3897	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-7	0.9855	0.4718	5	No	19	0.7699	0.4916	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-8	0.9892	0.6793	5	No	19	0.8343	0.2646	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-9	0.959	0.541	5	No	19	0.75	0.3569	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-19	1.183	0.4412	5	No	8	0.8119	0.3497	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-20	1.185	0.2405	5	No	8	0.713	0.4458	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-24D	0.8936	0.0469	5	No	8	0.4703	0.3994	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-25D	1.296	0.7346	5	No	8	1.015	0.2647	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-26D	1.275	0.1638	5	No	8	0.7193	0.524	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-27D	1.938	0.7381	5	No	8	1.338	0.5659	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-28D	1.449	0.4152	5	No	8	0.9321	0.4877	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-29	1.144	0.2969	5	No	8	0.7203	0.3994	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-5	1.116	0.5638	5	No	8	0.8399	0.2604	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-6	2.07	0.198	5	No	8	0.8654	0.5289	0	None	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-7	1.363	0.6459	5	No	8	1.004	0.3382	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-10	0.2311	0.08652	4	No	20	0.1758	0.1484	15	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-11	0.4538	0.2685	4	No	20	0.3612	0.1632	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-12	0.4227	0.1819	4	No	20	0.3266	0.2544	5	None	sqrt(x)	0.01	Param.

State Confidence Intervals - All Results

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Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	HGWC-13	0.7221	0.5018	4	No	20	0.6119	0.194	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-7	0.1671	0.08288	4	No	21	0.1468	0.1188	9.524	None	ln(x)	0.01	Param.
Fluoride (mg/L)	HGWC-8	0.6486	0.4876	4	No	21	0.5823	0.1742	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	HGWC-9	0.2594	0.08768	4	No	20	0.1957	0.1662	10	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-19	0.3621	0.09633	4	No	8	0.2245	0.1448	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-20	0.072	0.05	4	No	8	0.05275	0.007778	87.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-24D	0.18	0.048	4	No	8	0.07088	0.04503	37.5	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-25D	2.2	1.4	4	No	8	1.65	0.239	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-26D	0.19	0.044	4	No	8	0.075	0.0477	12.5	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-27D	0.42	0.22	4	No	8	0.27	0.06302	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-28D	0.2674	0.1476	4	No	8	0.2075	0.05651	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-29	0.18	0.045	4	No	8	0.06813	0.04582	62.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-5	0.09236	0.04939	4	No	8	0.07088	0.02027	12.5	None	No	0.01	Param.
Fluoride (mg/L)	MW-6	0.19	0.05	4	No	8	0.1014	0.06371	25	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-7	0.17	0.05	4	No	8	0.06738	0.042	75	None	No	0.004	NP (NDs)
Lead (mg/L)	HGWC-10	0.001	0.00005	0.001	No	15	0.0009367	0.0002453	93.33	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-11	0.001	0.000099	0.001	No	15	0.0006706	0.0004226	60	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-12	0.001	0.000089	0.001	No	15	0.0007159	0.0004245	66.67	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-13	0.001	0.00014	0.001	No	15	0.0006527	0.000441	60	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-7	0.001	0.00009	0.001	No	15	0.0005996	0.0004589	40	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-8	0.001	0.00013	0.001	No	15	0.0007684	0.0003982	73.33	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-9	0.001	0.0001	0.001	No	15	0.0005543	0.0004342	46.67	None	No	0.01	NP (normality)
Lead (mg/L)	MW-19	0.0001214	0.00004136	0.001	No	6	0.000384	0.0004777	33.33	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	MW-20	0.0001907	0.00004523	0.001	No	6	0.0004065	0.0004617	33.33	Kaplan-Meier	x^(1/3)	0.01	Param.
Lead (mg/L)	MW-24D	0.0001737	0.0000328	0.001	No	6	0.0002427	0.0003754	16.67	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	MW-26D	0.001	0.00008	0.001	No	6	0.0006967	0.00047	66.67	Kaplan-Meier	No	0.0155	NP (NDs)
Lead (mg/L)	MW-27D	0.001	0.00013	0.001	No	6	0.00076	0.0003837	66.67	Kaplan-Meier	No	0.0155	NP (NDs)
Lead (mg/L)	MW-28D	0.0008507	-0.0000419	0.001	No	6	0.0005037	0.0004058	16.67	Kaplan-Meier	No	0.01	Param.
Lead (mg/L)	MW-29	0.001	0.000052	0.001	No	6	0.000542	0.0005021	50	None	No	0.0155	NP (normality)
Lead (mg/L)	MW-5	0.001	0.000047	0.001	No	6	0.0008412	0.0003891	83.33	None	No	0.0155	NP (NDs)
Lead (mg/L)	MW-6	0.0002477	0.00003146	0.001	No	6	0.0004183	0.0004567	33.33	Kaplan-Meier	sqrt(x)	0.01	Param.
Lead (mg/L)	MW-7	0.001	0.000062	0.001	No	6	0.0008437	0.0003829	83.33	Kaplan-Meier	No	0.0155	NP (NDs)
Lithium (mg/L)	HGWC-12	0.01088	0.008093	0.034	No	19	0.009484	0.002375	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-13	0.03828	0.0309	0.034	No	19	0.03459	0.006309	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-7	0.0032	0.0021	0.034	No	19	0.003195	0.002903	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-8	0.0029	0.0025	0.034	No	19	0.003342	0.002837	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-9	0.0046	0.004	0.034	No	19	0.004779	0.002518	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	MW-19	0.01336	0.008619	0.034	No	8	0.011	0.002491	0	None	x^2	0.01	Param.
Lithium (mg/L)	MW-20	0.015	0.00082	0.034	No	8	0.004652	0.006392	25	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-24D	0.002919	0.002531	0.034	No	8	0.002725	0.0001832	0	None	No	0.01	Param.
Lithium (mg/L)	MW-25D	0.05155	0.04545	0.034	Yes	8	0.0485	0.002878	0	None	No	0.01	Param.
Lithium (mg/L)	MW-26D	0.03	0.0032	0.034	No	8	0.006925	0.009329	0	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-27D	0.009164	0.005536	0.034	No	8	0.00735	0.001711	0	None	No	0.01	Param.
Lithium (mg/L)	MW-28D	0.0141	0.005449	0.034	No	8	0.009775	0.004082	0	None	No	0.01	Param.
Lithium (mg/L)	MW-29	0.002433	0.002117	0.034	No	8	0.002275	0.0001488	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-10	0.005	0.0014	0.01	No	19	0.003663	0.001814	63.16	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	HGWC-11	0.02514	0.01508	0.01	Yes	19	0.02011	0.00859	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-12	0.04978	0.0457	0.01	Yes	19	0.04774	0.003483	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-13	0.03593	0.0301	0.01	Yes	19	0.03302	0.004974	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-7	0.04274	0.03437	0.01	Yes	20	0.03856	0.007368	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-8	0.4928	0.4503	0.01	Yes	20	0.4716	0.03743	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-9	0.033	0.0234	0.01	Yes	19	0.05098	0.1033	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	MW-19	0.06073	0.03377	0.01	Yes	8	0.04725	0.01271	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-24D	0.005	0.00027	0.01	No	8	0.002902	0.002254	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	MW-25D	0.005	0.00094	0.01	No	8	0.004142	0.001623	75	None	No	0.004	NP (NDs)

State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:37 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	MW-26D	0.02056	0.007442	0.01	No	9	0.014	0.006793	11.11	None	No	0.01	Param.
Molybdenum (mg/L)	MW-27D	0.004925	0.00115	0.01	No	8	0.003037	0.001781	12.5	None	No	0.01	Param.
Molybdenum (mg/L)	MW-28D	0.02271	0.008486	0.01	No	8	0.0156	0.006712	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-29	0.003366	0.002184	0.01	No	8	0.002775	0.0005574	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-6	0.002589	0.002136	0.01	No	8	0.002363	0.0002134	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-7	0.005	0.0015	0.01	No	8	0.003475	0.001733	50	None	No	0.004	NP (normality)
Selenium (mg/L)	HGWC-10	0.005	0.0028	0.05	No	19	0.004353	0.001207	73.68	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-11	0.01552	0.006815	0.05	No	19	0.01117	0.007435	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-12	0.005	0.0011	0.05	No	19	0.004795	0.0008947	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-13	0.005	0.0016	0.05	No	19	0.004567	0.001317	89.47	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-8	0.005	0.0024	0.05	No	19	0.004863	0.0005965	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-9	0.005	0.0037	0.05	No	19	0.004932	0.0002982	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	MW-19	0.005561	0.001677	0.05	No	8	0.004175	0.001851	25	Kaplan-Meier	No	0.01	Param.
Selenium (mg/L)	MW-27D	0.005	0.00012	0.05	No	8	0.00439	0.001725	87.5	Kaplan-Meier	No	0.004	NP (NDs)
Selenium (mg/L)	MW-5	0.003857	0.002393	0.05	No	8	0.003125	0.0006902	0	None	No	0.01	Param.
Selenium (mg/L)	MW-7	0.005	0.0014	0.05	No	8	0.003012	0.001692	37.5	None	No	0.004	NP (normality)
Thallium (mg/L)	HGWC-11	0.001	0.00008	0.002	No	19	0.0009032	0.0002901	89.47	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-12	0.001	0.00009	0.002	No	19	0.0007171	0.0004287	68.42	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-13	0.0004261	0.000341	0.002	No	19	0.0003836	0.00007267	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-8	0.001	0.00008	0.002	No	19	0.0007099	0.0004388	68.42	None	No	0.01	NP (NDs)
Thallium (mg/L)	MW-19	0.001	0.00019	0.002	No	8	0.0004425	0.0003455	25	None	No	0.004	NP (normality)
Thallium (mg/L)	MW-28D	0.001	0.000092	0.002	No	8	0.0008865	0.000321	87.5	None	No	0.004	NP (NDs)
Thallium (mg/L)	MW-29	0.001	0.000064	0.002	No	8	0.000883	0.0003309	87.5	None	No	0.004	NP (NDs)
Thallium (mg/L)	MW-6	0.001	0.000082	0.002	No	8	0.0008853	0.0003246	87.5	None	No	0.004	NP (NDs)

Federal Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:34 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	HGWC-13	0.4313	0.3592	0.01	Yes	19	0.3953	0.06154	0	None	No	0.01	Param.
Lithium (mg/L)	MW-25D	0.05155	0.04545	0.04	Yes	8	0.0485	0.002878	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-8	0.4928	0.4503	0.1	Yes	20	0.4716	0.03743	0	None	No	0.01	Param.

Federal Confidence Intervals - All Results

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Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-10	0.003	0.00065	0.006	No	17	0.002862	0.00057	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-11	0.003	0.00038	0.006	No	17	0.002846	0.0006354	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-13	0.003	0.00036	0.006	No	17	0.001925	0.001327	58.82	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-7	0.003	0.00034	0.006	No	17	0.002844	0.0006451	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-8	0.003	0.00064	0.006	No	17	0.002861	0.0005724	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-9	0.003	0.00043	0.006	No	17	0.002539	0.001026	82.35	None	No	0.01	NP (NDs)
Antimony (mg/L)	MW-24D	0.003	0.0017	0.006	No	8	0.002838	0.0004596	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-26D	0.003	0.0013	0.006	No	8	0.002663	0.0006523	75	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-27D	0.003	0.00016	0.006	No	8	0.0009775	0.00125	25	None	No	0.004	NP (normality)
Antimony (mg/L)	MW-28D	0.003	0.0019	0.006	No	8	0.002863	0.0003889	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-29	0.003	0.00094	0.006	No	8	0.002743	0.0007283	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-6	0.003	0.0014	0.006	No	8	0.0028	0.0005657	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-7	0.003	0.00051	0.006	No	8	0.002096	0.001065	50	None	No	0.004	NP (normality)
Arsenic (mg/L)	HGWC-11	0.005	0.0015	0.01	No	19	0.003266	0.001768	42.11	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-12	0.004589	0.003137	0.01	No	19	0.003863	0.00124	10.53	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-13	0.4313	0.3592	0.01	Yes	19	0.3953	0.06154	0	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-7	0.005	0.0019	0.01	No	19	0.004837	0.0007112	94.74	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-9	0.005	0.0008	0.01	No	19	0.004312	0.001635	84.21	None	No	0.01	NP (NDs)
Arsenic (mg/L)	MW-19	0.005	0.00045	0.01	No	8	0.004431	0.001609	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-20	0.005	0.00038	0.01	No	8	0.003577	0.002033	62.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-25D	0.005	0.00075	0.01	No	8	0.003094	0.002064	50	None	No	0.004	NP (normality)
Arsenic (mg/L)	MW-26D	0.005	0.0006	0.01	No	8	0.003925	0.001991	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-27D	0.005	0.0002	0.01	No	8	0.003361	0.002272	62.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-28D	0.005	0.0011	0.01	No	8	0.004512	0.001379	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-29	0.005	0.00037	0.01	No	8	0.004421	0.001637	87.5	None	No	0.004	NP (NDs)
Barium (mg/L)	HGWC-10	0.08901	0.06608	2	No	19	0.07754	0.01958	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-11	0.05343	0.03154	2	No	19	0.04375	0.02072	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	HGWC-12	0.13	0.084	2	No	19	0.1029	0.02097	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-13	0.09256	0.06961	2	No	19	0.08108	0.0196	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-7	0.07536	0.06864	2	No	19	0.072	0.005743	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-8	0.0829	0.06	2	No	19	0.06984	0.01122	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-9	0.1226	0.1065	2	No	19	0.1146	0.01374	0	None	No	0.01	Param.
Barium (mg/L)	MW-19	0.0677	0.0498	2	No	8	0.05875	0.008447	0	None	No	0.01	Param.
Barium (mg/L)	MW-20	0.098	0.08425	2	No	8	0.09113	0.00649	0	None	No	0.01	Param.
Barium (mg/L)	MW-24D	0.08729	0.04433	2	No	8	0.06538	0.02462	0	None	ln(x)	0.01	Param.
Barium (mg/L)	MW-25D	0.4797	0.3928	2	No	8	0.4363	0.04104	0	None	No	0.01	Param.
Barium (mg/L)	MW-26D	0.17	0.093	2	No	8	0.1131	0.02538	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-27D	1.5	0.95	2	No	8	1.088	0.1866	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-28D	0.7327	0.1773	2	No	8	0.455	0.262	0	None	No	0.01	Param.
Barium (mg/L)	MW-29	0.08638	0.07637	2	No	8	0.08138	0.004719	0	None	No	0.01	Param.
Barium (mg/L)	MW-5	0.05227	0.04398	2	No	8	0.04813	0.003907	0	None	No	0.01	Param.
Barium (mg/L)	MW-6	0.09421	0.08179	2	No	8	0.088	0.005855	0	None	No	0.01	Param.
Barium (mg/L)	MW-7	0.06481	0.04669	2	No	8	0.05575	0.008548	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-11	0.0005	0.0001	0.004	No	17	0.000341	0.000197	58.82	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-13	0.0005	0.000097	0.004	No	17	0.000333	0.000206	58.82	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-7	0.0005	0.00019	0.004	No	17	0.0004322	0.0001526	82.35	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-8	0.0005	0.0001	0.004	No	17	0.0004014	0.0001834	76.47	None	No	0.01	NP (NDs)
Beryllium (mg/L)	MW-28D	0.0005	0.000048	0.004	No	8	0.0003428	0.0002188	62.5	None	No	0.004	NP (NDs)
Beryllium (mg/L)	MW-7	0.0005	0.000051	0.004	No	8	0.0004439	0.0001587	87.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	HGWC-10	0.0005	0.0001	0.005	No	17	0.0003421	0.0001959	58.82	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-11	0.0005	0.0001	0.005	No	17	0.0004292	0.0001577	82.35	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-12	0.0005	0.0003	0.005	No	17	0.0004259	0.000143	76.47	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-7	0.0005	0.0002	0.005	No	17	0.0004235	0.0001437	76.47	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-8	0.00032	0.00014	0.005	No	17	0.0003141	0.0003708	5.882	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-9	0.0005	0.0002	0.005	No	17	0.0004335	0.00015	82.35	None	No	0.01	NP (NDs)

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Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cadmium (mg/L)	MW-19	0.0002284	0.0001459	0.005	No	8	0.000265	0.0001497	25	Kaplan-Meier	ln(x)	0.01	Param.
Chromium (mg/L)	HGWC-10	0.02	0.005	0.1	No	17	0.005882	0.003638	94.12	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-11	0.005	0.00061	0.1	No	17	0.004465	0.00151	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-12	0.005	0.0025	0.1	No	17	0.004342	0.001516	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-13	0.005	0.00059	0.1	No	17	0.004209	0.001762	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-7	0.071	0.0016	0.1	No	17	0.007779	0.01639	64.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-8	0.005	0.0015	0.1	No	17	0.004031	0.001811	76.47	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-9	0.005	0.00067	0.1	No	17	0.004482	0.001463	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-19	0.005	0.00047	0.1	No	8	0.00254	0.002111	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	MW-20	0.005	0.00051	0.1	No	8	0.003362	0.002261	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-24D	0.005	0.00042	0.1	No	8	0.004015	0.001856	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-25D	0.005	0.00061	0.1	No	8	0.004451	0.001552	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-26D	0.005	0.00076	0.1	No	8	0.002757	0.001958	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	MW-27D	0.005	0.0007	0.1	No	8	0.00394	0.001963	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-28D	0.005	0.00078	0.1	No	8	0.002692	0.002009	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	MW-29	0.005	0.001	0.1	No	8	0.0045	0.001414	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-5	0.004565	0.00231	0.1	No	8	0.003438	0.001064	0	None	No	0.01	Param.
Chromium (mg/L)	MW-6	0.005	0.00044	0.1	No	8	0.003879	0.002077	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-7	0.005	0.0013	0.1	No	8	0.00215	0.001198	12.5	None	No	0.004	NP (normality)
Cobalt (mg/L)	HGWC-10	0.005	0.0007	0.038	No	17	0.003506	0.00209	64.71	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-11	0.00192	0.0009744	0.038	No	17	0.002656	0.001712	29.41	Kaplan-Meier	ln(x)	0.01	Param.
Cobalt (mg/L)	HGWC-12	0.0021	0.0012	0.038	No	17	0.001871	0.001212	11.76	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-13	0.004247	0.002671	0.038	No	17	0.003459	0.001258	5.882	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-7	0.0026	0.0005	0.038	No	17	0.001598	0.001703	17.65	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-8	0.0023	0.0019	0.038	No	17	0.002204	0.0007606	5.882	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-9	0.0011	0.00057	0.038	No	17	0.001238	0.001459	11.76	None	No	0.01	NP (normality)
Cobalt (mg/L)	MW-19	0.04433	0.02892	0.038	No	8	0.03663	0.007269	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-20	0.005	0.0011	0.038	No	8	0.004512	0.001379	87.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-24D	0.005	0.00025	0.038	No	8	0.003364	0.00227	62.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-26D	0.005	0.0003	0.038	No	8	0.002715	0.002444	50	None	No	0.004	NP (normality)
Cobalt (mg/L)	MW-27D	0.005	0.000091	0.038	No	8	0.003243	0.002428	62.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-28D	0.005	0.00093	0.038	No	8	0.004491	0.001439	87.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-29	0.001302	0.0005925	0.038	No	8	0.0009475	0.0003349	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-6	0.005	0.00036	0.038	No	8	0.00109	0.00159	12.5	None	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	HGWC-10	1.137	0.597	5	No	19	0.8671	0.4612	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-11	1.226	0.6603	5	No	19	0.9432	0.4832	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-12	1.1	0.548	5	No	19	0.8239	0.4713	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-13	1.052	0.5958	5	No	19	0.824	0.3897	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-7	0.9855	0.4718	5	No	19	0.7699	0.4916	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-8	0.9892	0.6793	5	No	19	0.8343	0.2646	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-9	0.959	0.541	5	No	19	0.75	0.3569	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-19	1.183	0.4412	5	No	8	0.8119	0.3497	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-20	1.185	0.2405	5	No	8	0.713	0.4458	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-24D	0.8936	0.0469	5	No	8	0.4703	0.3994	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-25D	1.296	0.7346	5	No	8	1.015	0.2647	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-26D	1.275	0.1638	5	No	8	0.7193	0.524	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-27D	1.938	0.7381	5	No	8	1.338	0.5659	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-28D	1.449	0.4152	5	No	8	0.9321	0.4877	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-29	1.144	0.2969	5	No	8	0.7203	0.3994	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-5	1.116	0.5638	5	No	8	0.8399	0.2604	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-6	2.07	0.198	5	No	8	0.8654	0.5289	0	None	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-7	1.363	0.6459	5	No	8	1.004	0.3382	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-10	0.2311	0.08652	4	No	20	0.1758	0.1484	15	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-11	0.4538	0.2685	4	No	20	0.3612	0.1632	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-12	0.4227	0.1819	4	No	20	0.3266	0.2544	5	None	sqrt(x)	0.01	Param.

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Fluoride (mg/L)	HGWC-13	0.7221	0.5018	4	No	20	0.6119	0.194	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-7	0.1671	0.08288	4	No	21	0.1468	0.1188	9.524	None	ln(x)	0.01	Param.
Fluoride (mg/L)	HGWC-8	0.6486	0.4876	4	No	21	0.5823	0.1742	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	HGWC-9	0.2594	0.08768	4	No	20	0.1957	0.1662	10	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-19	0.3621	0.09633	4	No	8	0.2245	0.1448	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-20	0.072	0.05	4	No	8	0.05275	0.007778	87.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-24D	0.18	0.048	4	No	8	0.07088	0.04503	37.5	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-25D	2.2	1.4	4	No	8	1.65	0.239	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-26D	0.19	0.044	4	No	8	0.075	0.0477	12.5	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-27D	0.42	0.22	4	No	8	0.27	0.06302	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-28D	0.2674	0.1476	4	No	8	0.2075	0.05651	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-29	0.18	0.045	4	No	8	0.06813	0.04582	62.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-5	0.09236	0.04939	4	No	8	0.07088	0.02027	12.5	None	No	0.01	Param.
Fluoride (mg/L)	MW-6	0.19	0.05	4	No	8	0.1014	0.06371	25	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-7	0.17	0.05	4	No	8	0.06738	0.042	75	None	No	0.004	NP (NDs)
Lead (mg/L)	HGWC-10	0.001	0.00005	0.015	No	15	0.0009367	0.0002453	93.33	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-11	0.001	0.000099	0.015	No	15	0.0006706	0.0004226	60	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-12	0.001	0.000089	0.015	No	15	0.0007159	0.0004245	66.67	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-13	0.001	0.00014	0.015	No	15	0.0006527	0.000441	60	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-7	0.001	0.00009	0.015	No	15	0.0005996	0.0004589	40	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-8	0.001	0.00013	0.015	No	15	0.0007684	0.0003982	73.33	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-9	0.001	0.0001	0.015	No	15	0.0005543	0.0004342	46.67	None	No	0.01	NP (normality)
Lead (mg/L)	MW-19	0.0001214	0.00004136	0.015	No	6	0.000384	0.0004777	33.33	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	MW-20	0.0001907	0.00004523	0.015	No	6	0.0004065	0.0004617	33.33	Kaplan-Meier	x^(1/3)	0.01	Param.
Lead (mg/L)	MW-24D	0.0001737	0.0000328	0.015	No	6	0.0002427	0.0003754	16.67	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	MW-26D	0.001	0.00008	0.015	No	6	0.0006967	0.00047	66.67	Kaplan-Meier	No	0.0155	NP (NDs)
Lead (mg/L)	MW-27D	0.001	0.00013	0.015	No	6	0.00076	0.0003837	66.67	Kaplan-Meier	No	0.0155	NP (NDs)
Lead (mg/L)	MW-28D	0.0008507	-0.0000419	0.015	No	6	0.0005037	0.0004058	16.67	Kaplan-Meier	No	0.01	Param.
Lead (mg/L)	MW-29	0.001	0.000052	0.015	No	6	0.000542	0.0005021	50	None	No	0.0155	NP (normality)
Lead (mg/L)	MW-5	0.001	0.000047	0.015	No	6	0.0008412	0.0003891	83.33	None	No	0.0155	NP (NDs)
Lead (mg/L)	MW-6	0.0002477	0.00003146	0.015	No	6	0.0004183	0.0004567	33.33	Kaplan-Meier	sqrt(x)	0.01	Param.
Lead (mg/L)	MW-7	0.001	0.000062	0.015	No	6	0.0008437	0.0003829	83.33	Kaplan-Meier	No	0.0155	NP (NDs)
Lithium (mg/L)	HGWC-12	0.01088	0.008093	0.04	No	19	0.009484	0.002375	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-13	0.03828	0.0309	0.04	No	19	0.03459	0.006309	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-7	0.0032	0.0021	0.04	No	19	0.003195	0.002903	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-8	0.0029	0.0025	0.04	No	19	0.003342	0.002837	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-9	0.0046	0.004	0.04	No	19	0.004779	0.002518	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	MW-19	0.01336	0.008619	0.04	No	8	0.011	0.002491	0	None	x^2	0.01	Param.
Lithium (mg/L)	MW-20	0.015	0.00082	0.04	No	8	0.004652	0.006392	25	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-24D	0.002919	0.002531	0.04	No	8	0.002725	0.0001832	0	None	No	0.01	Param.
Lithium (mg/L)	MW-25D	0.05155	0.04545	0.04	Yes	8	0.0485	0.002878	0	None	No	0.01	Param.
Lithium (mg/L)	MW-26D	0.03	0.0032	0.04	No	8	0.006925	0.009329	0	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-27D	0.009164	0.005536	0.04	No	8	0.00735	0.001711	0	None	No	0.01	Param.
Lithium (mg/L)	MW-28D	0.0141	0.005449	0.04	No	8	0.009775	0.004082	0	None	No	0.01	Param.
Lithium (mg/L)	MW-29	0.002433	0.002117	0.04	No	8	0.002275	0.0001488	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-10	0.005	0.0014	0.1	No	19	0.003663	0.001814	63.16	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	HGWC-11	0.02514	0.01508	0.1	No	19	0.02011	0.00859	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-12	0.04978	0.0457	0.1	No	19	0.04774	0.003483	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-13	0.03593	0.0301	0.1	No	19	0.03302	0.004974	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-7	0.04274	0.03437	0.1	No	20	0.03856	0.007368	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-8	0.4928	0.4503	0.1	Yes	20	0.4716	0.03743	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-9	0.033	0.0234	0.1	No	19	0.05098	0.1033	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	MW-19	0.06073	0.03377	0.1	No	8	0.04725	0.01271	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-24D	0.005	0.00027	0.1	No	8	0.002902	0.002254	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	MW-25D	0.005	0.00094	0.1	No	8	0.004142	0.001623	75	None	No	0.004	NP (NDs)

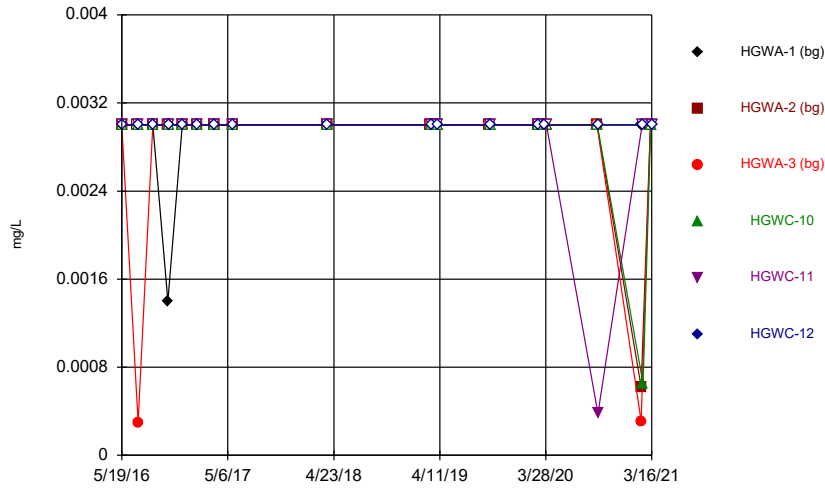
Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:34 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	MW-26D	0.02056	0.007442	0.1	No	9	0.014	0.006793	11.11	None	No	0.01	Param.
Molybdenum (mg/L)	MW-27D	0.004925	0.00115	0.1	No	8	0.003037	0.001781	12.5	None	No	0.01	Param.
Molybdenum (mg/L)	MW-28D	0.02271	0.008486	0.1	No	8	0.0156	0.006712	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-29	0.003366	0.002184	0.1	No	8	0.002775	0.0005574	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-6	0.002589	0.002136	0.1	No	8	0.002363	0.0002134	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-7	0.005	0.0015	0.1	No	8	0.003475	0.001733	50	None	No	0.004	NP (normality)
Selenium (mg/L)	HGWC-10	0.005	0.0028	0.05	No	19	0.004353	0.001207	73.68	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-11	0.01552	0.006815	0.05	No	19	0.01117	0.007435	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-12	0.005	0.0011	0.05	No	19	0.004795	0.0008947	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-13	0.005	0.0016	0.05	No	19	0.004567	0.001317	89.47	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-8	0.005	0.0024	0.05	No	19	0.004863	0.0005965	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-9	0.005	0.0037	0.05	No	19	0.004932	0.0002982	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	MW-19	0.005561	0.001677	0.05	No	8	0.004175	0.001851	25	Kaplan-Meier	No	0.01	Param.
Selenium (mg/L)	MW-27D	0.005	0.00012	0.05	No	8	0.00439	0.001725	87.5	Kaplan-Meier	No	0.004	NP (NDs)
Selenium (mg/L)	MW-5	0.003857	0.002393	0.05	No	8	0.003125	0.0006902	0	None	No	0.01	Param.
Selenium (mg/L)	MW-7	0.005	0.0014	0.05	No	8	0.003012	0.001692	37.5	None	No	0.004	NP (normality)
Thallium (mg/L)	HGWC-11	0.001	0.00008	0.002	No	19	0.0009032	0.0002901	89.47	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-12	0.001	0.00009	0.002	No	19	0.0007171	0.0004287	68.42	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-13	0.0004261	0.000341	0.002	No	19	0.0003836	0.00007267	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-8	0.001	0.00008	0.002	No	19	0.0007099	0.0004388	68.42	None	No	0.01	NP (NDs)
Thallium (mg/L)	MW-19	0.001	0.00019	0.002	No	8	0.0004425	0.0003455	25	None	No	0.004	NP (normality)
Thallium (mg/L)	MW-28D	0.001	0.000092	0.002	No	8	0.0008865	0.000321	87.5	None	No	0.004	NP (NDs)
Thallium (mg/L)	MW-29	0.001	0.000064	0.002	No	8	0.000883	0.0003309	87.5	None	No	0.004	NP (NDs)
Thallium (mg/L)	MW-6	0.001	0.000082	0.002	No	8	0.0008853	0.0003246	87.5	None	No	0.004	NP (NDs)

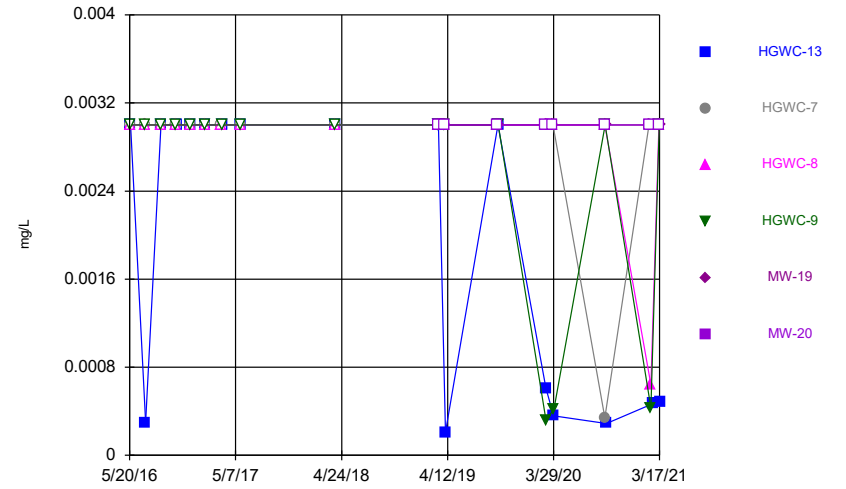
FIGURE A.

Time Series



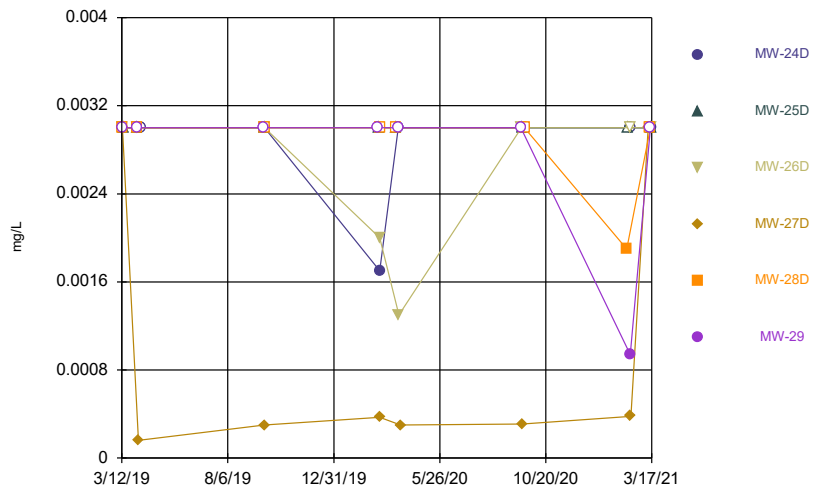
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



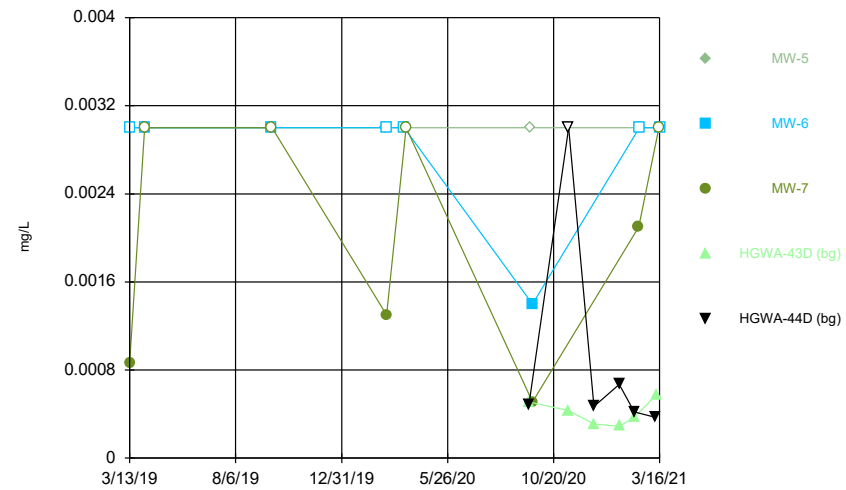
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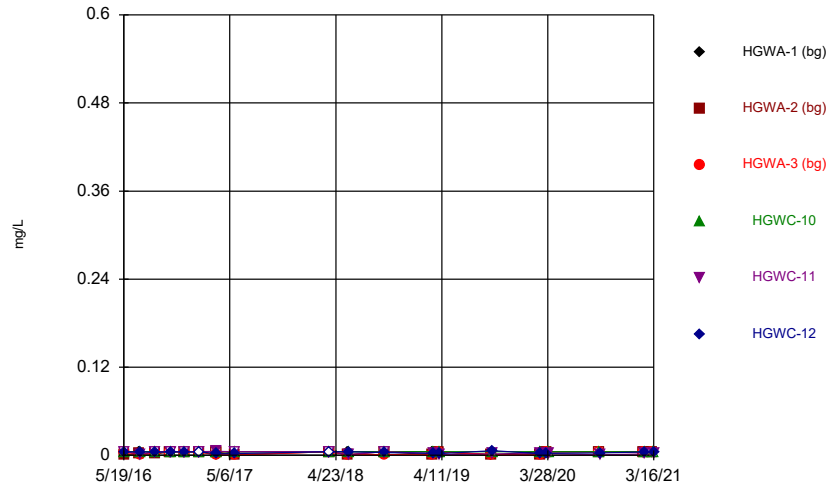
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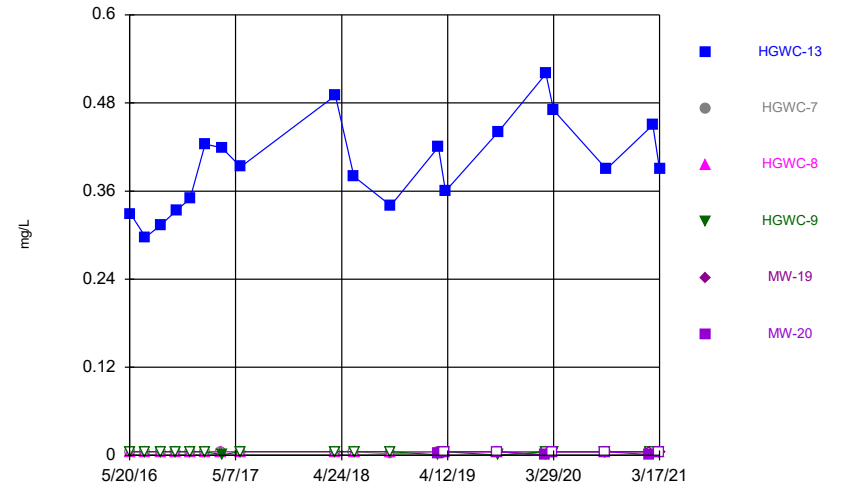
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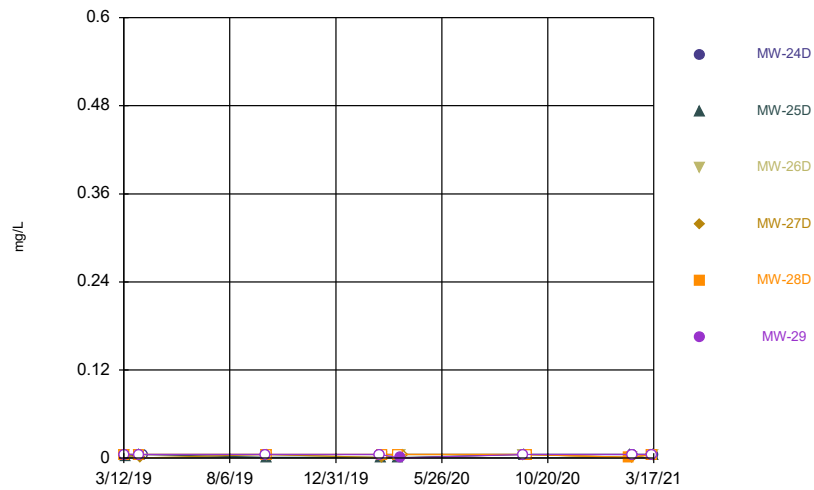
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Time Series



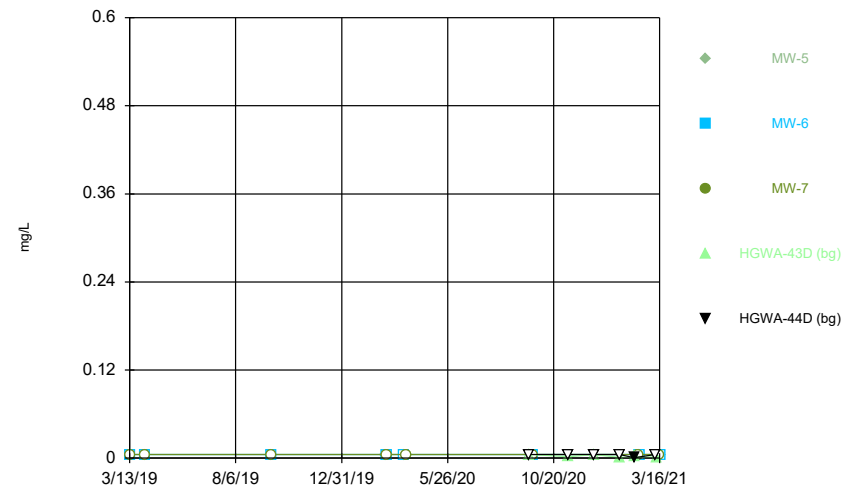
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Time Series



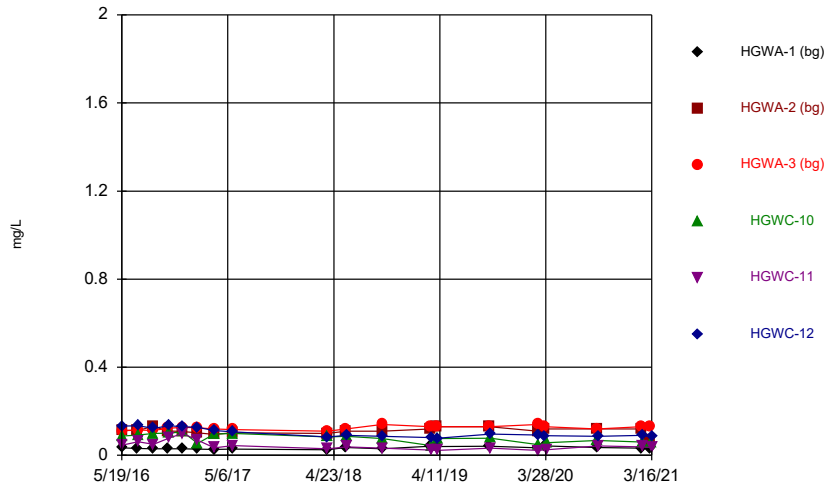
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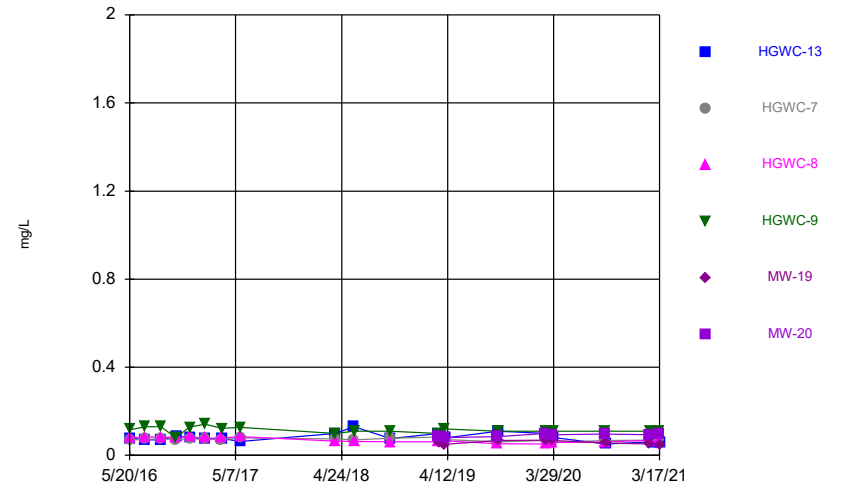
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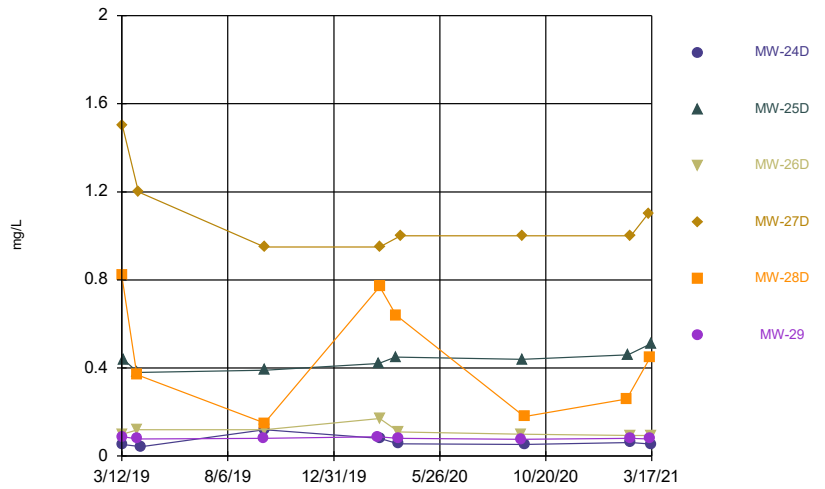
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Time Series



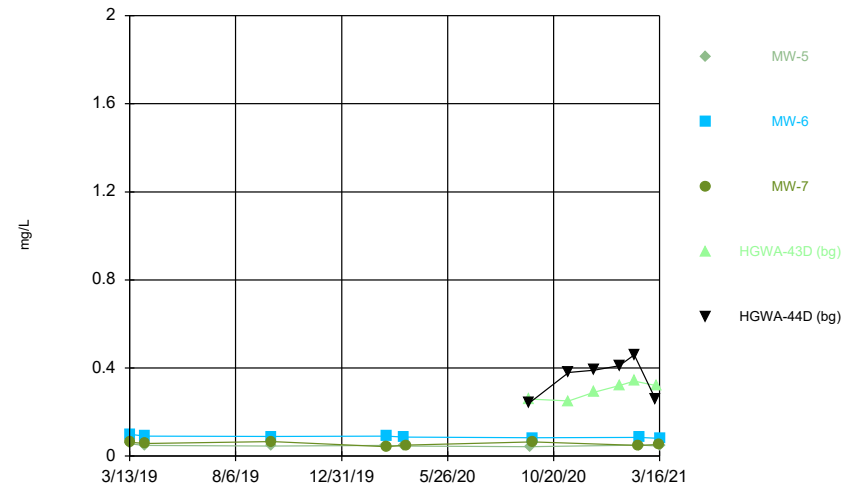
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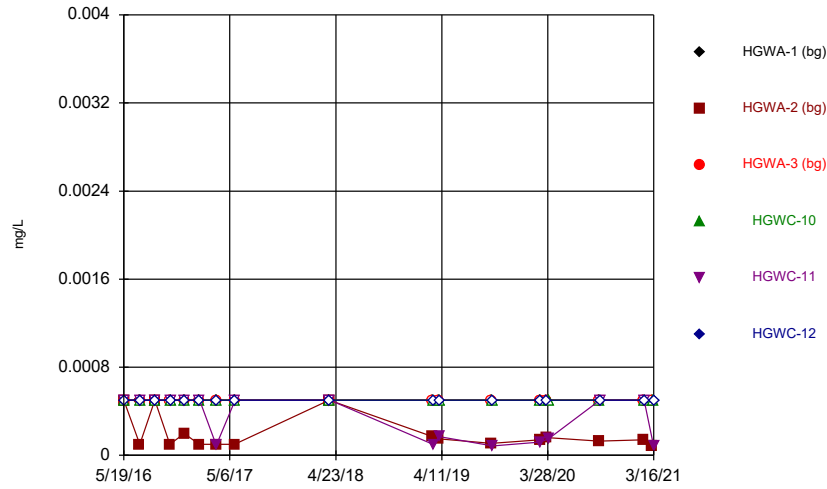
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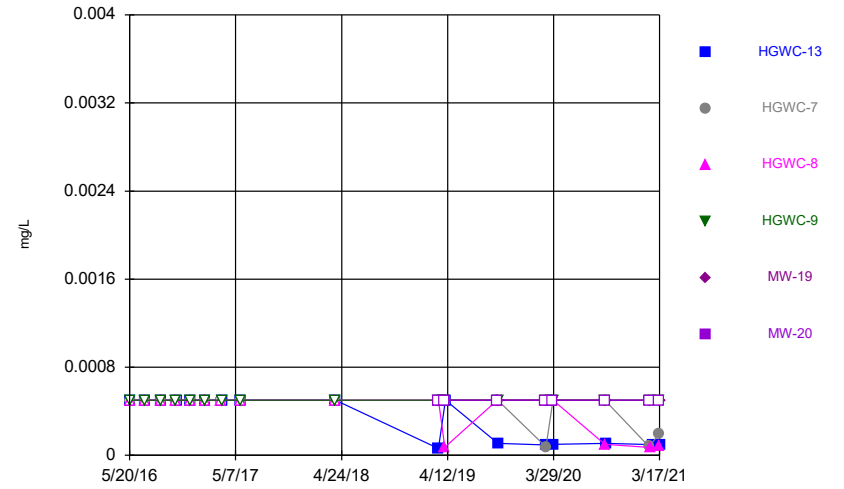
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Time Series



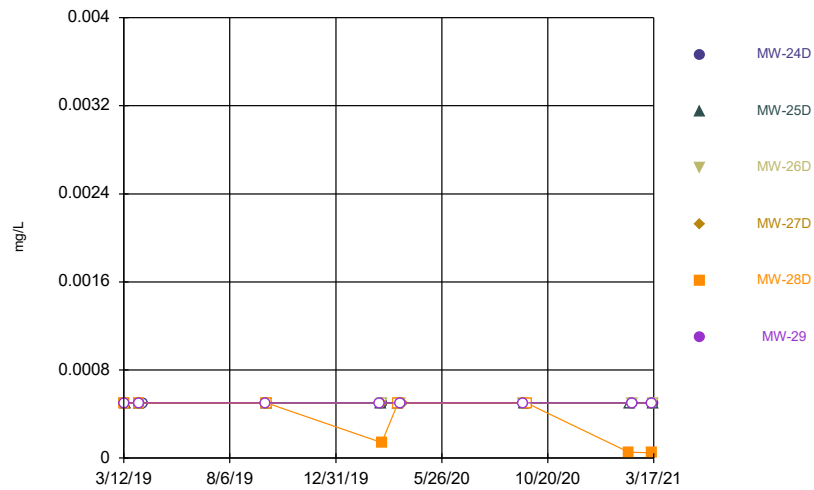
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Time Series



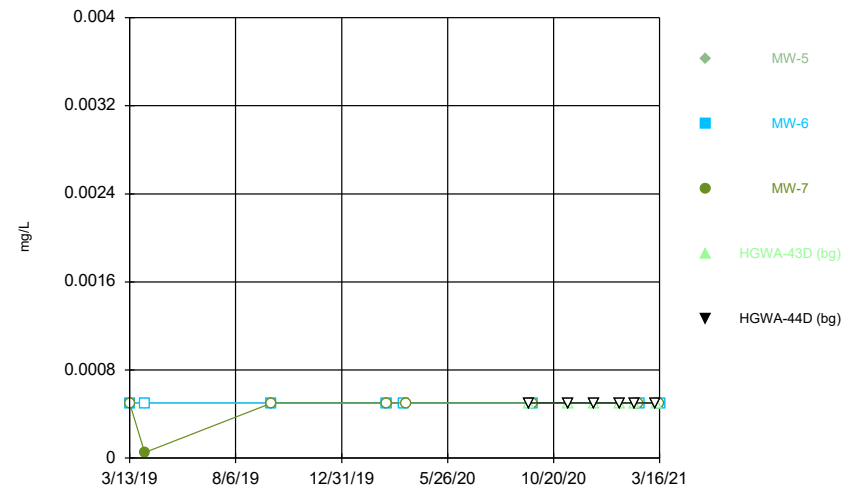
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Time Series



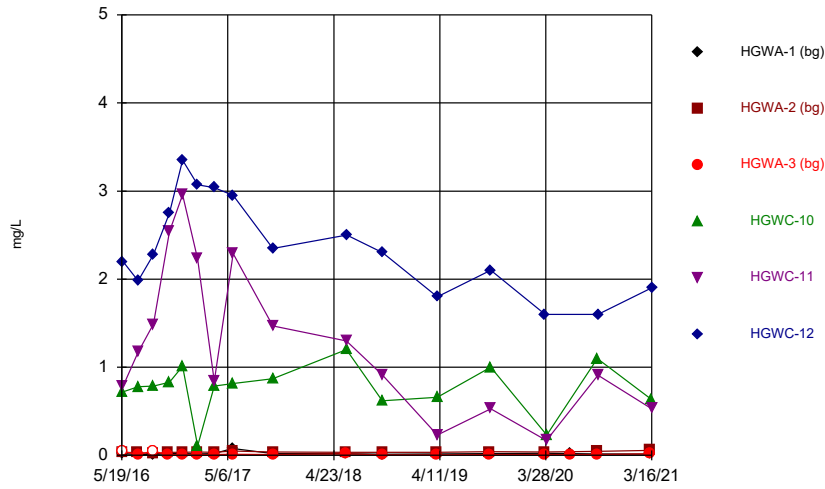
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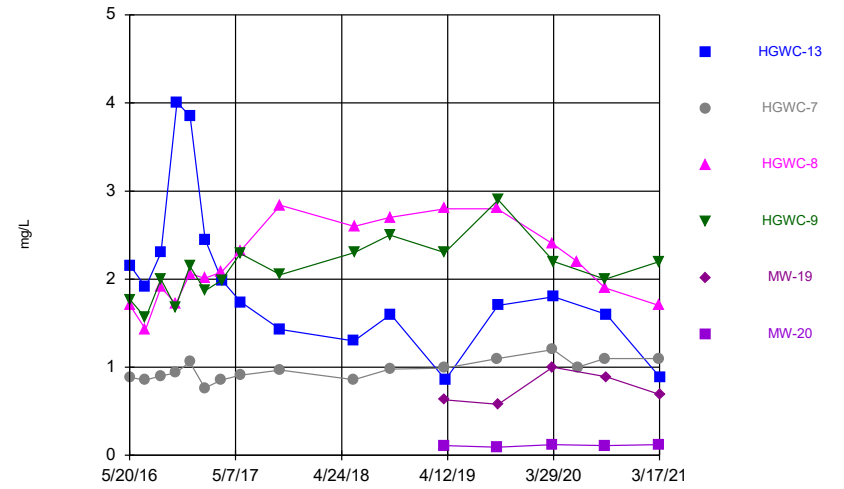
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Time Series



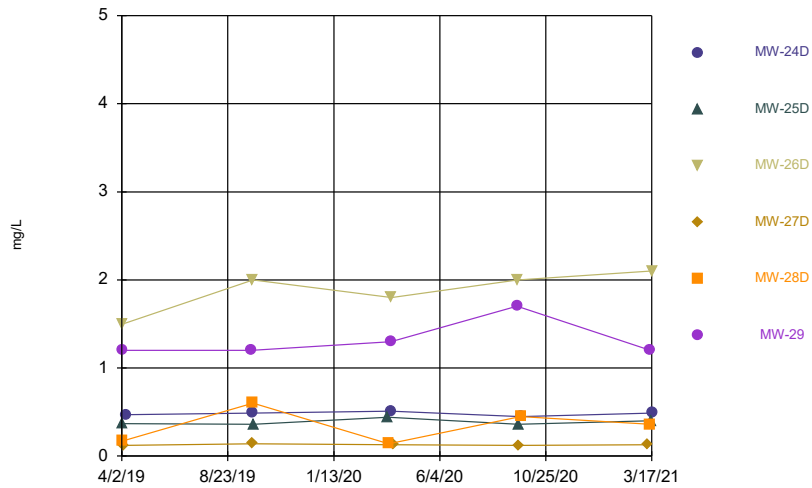
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Time Series



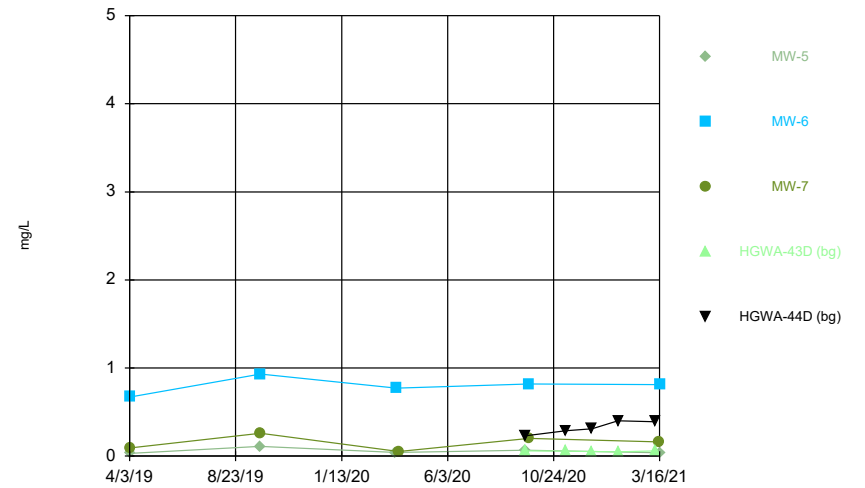
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Time Series



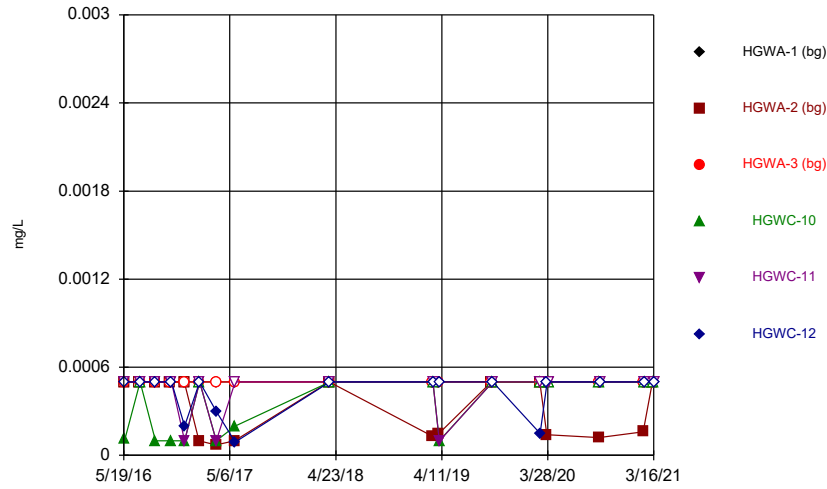
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Time Series



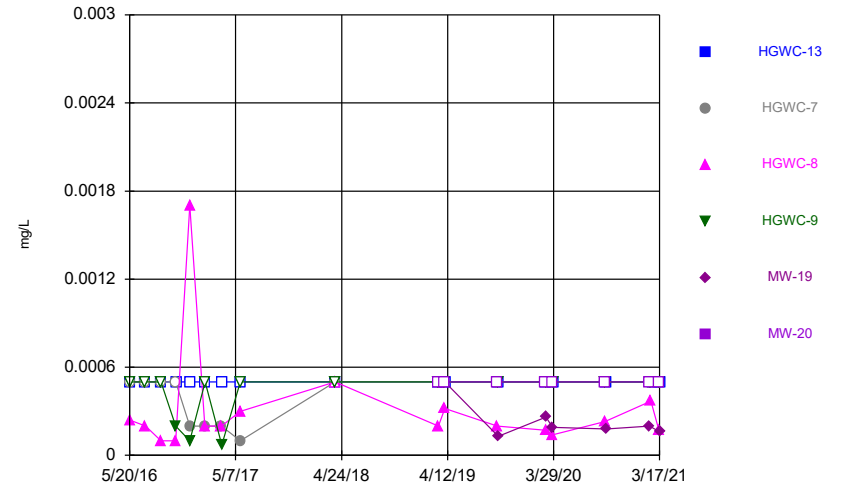
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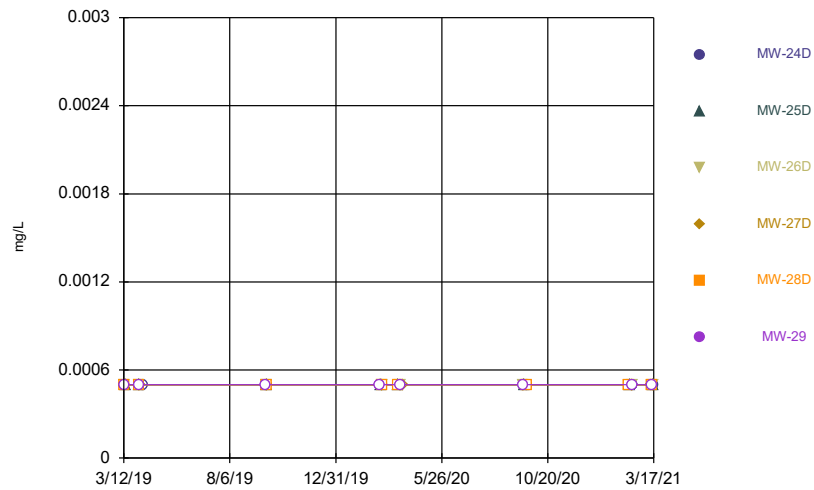
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Time Series



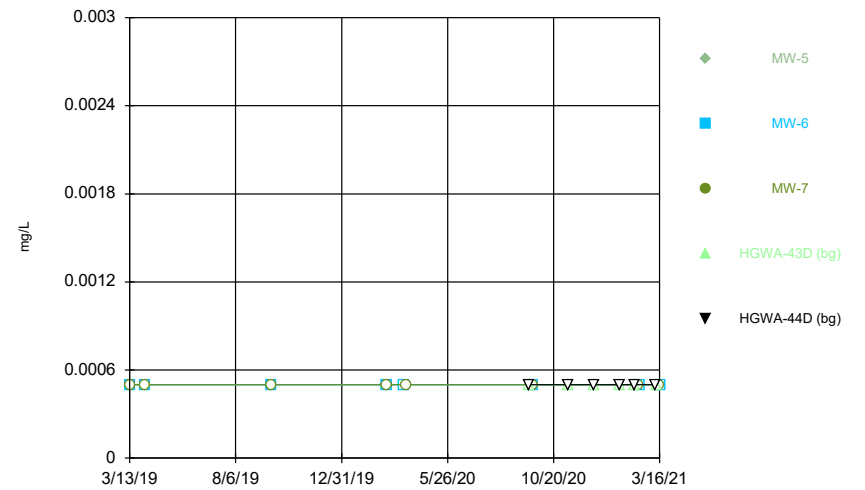
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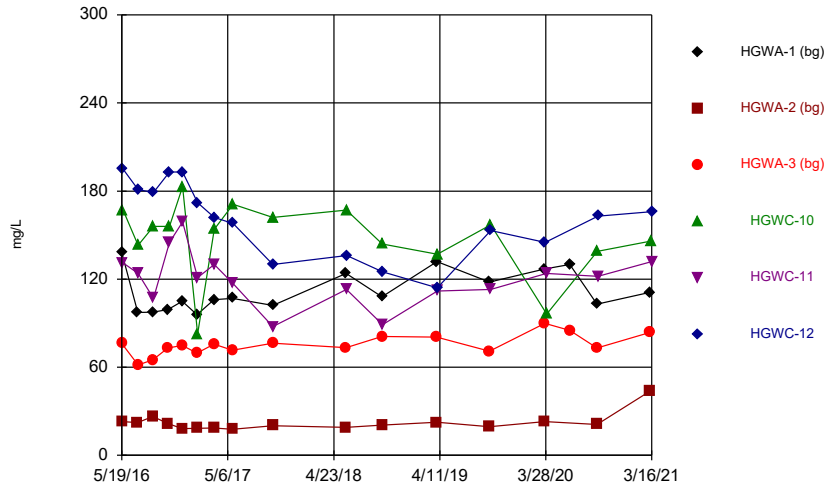
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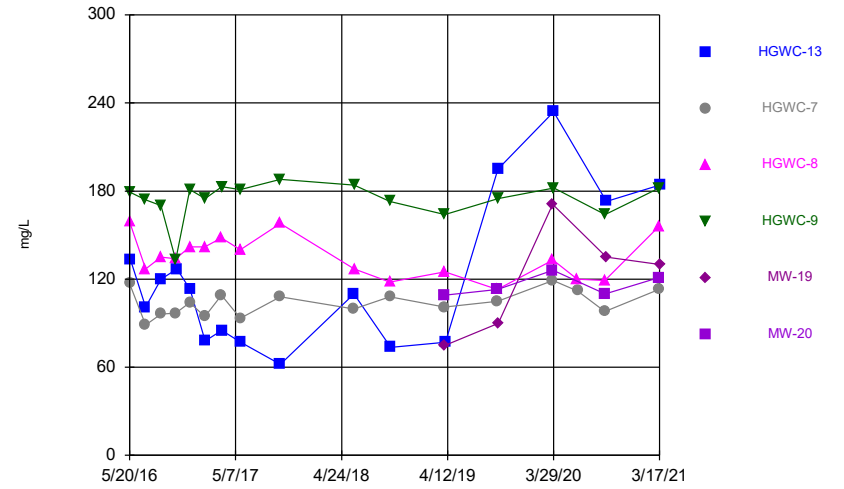
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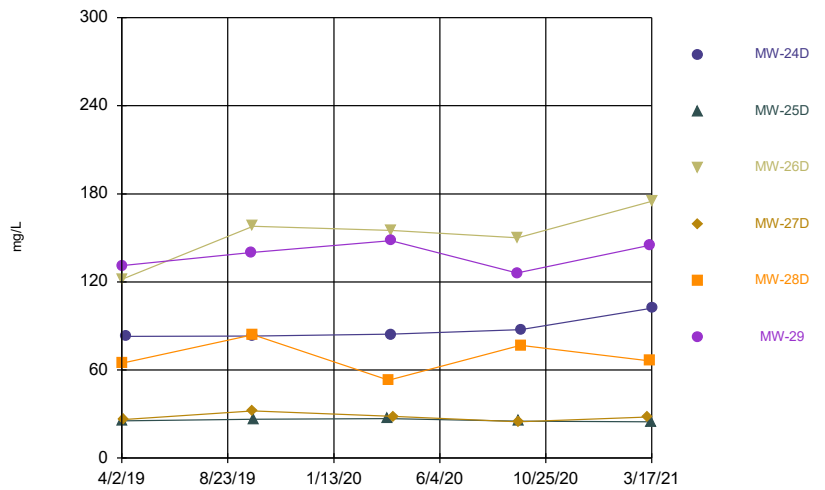
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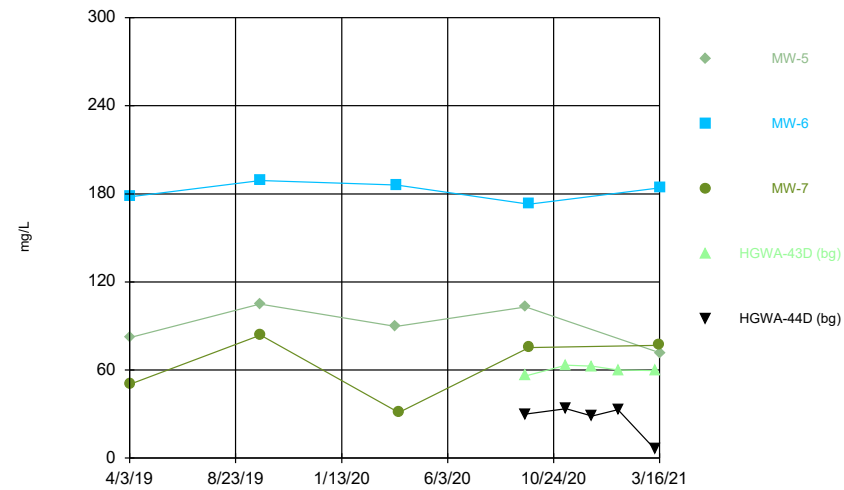
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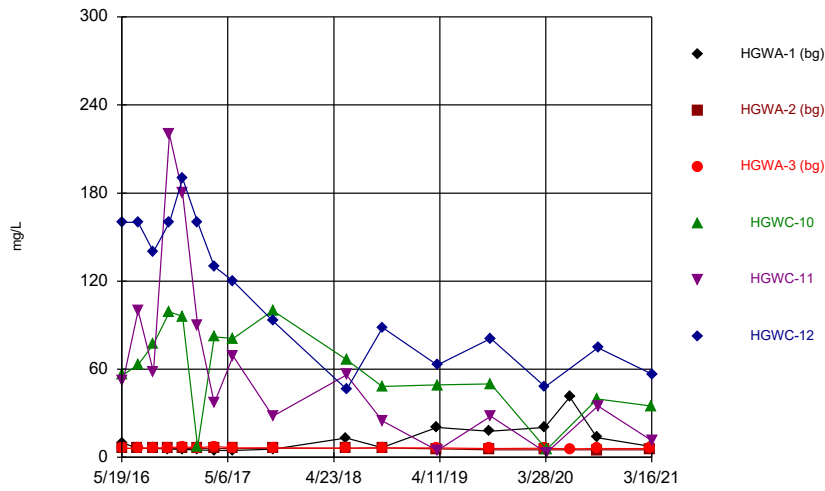
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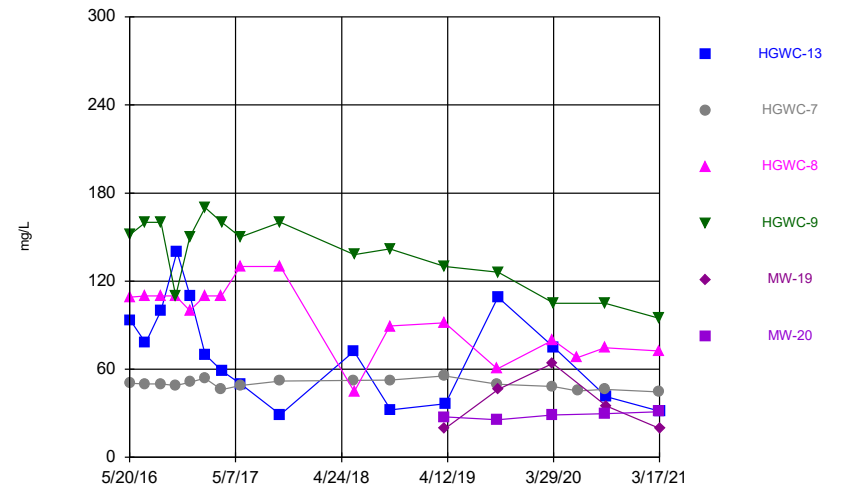
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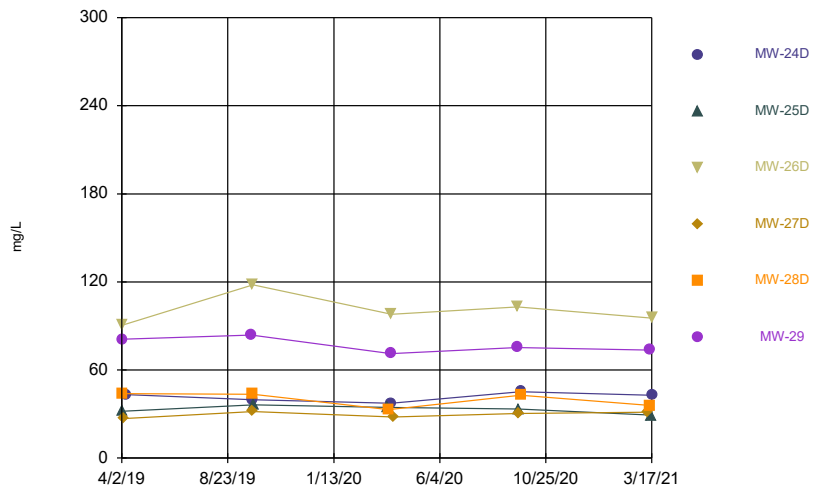
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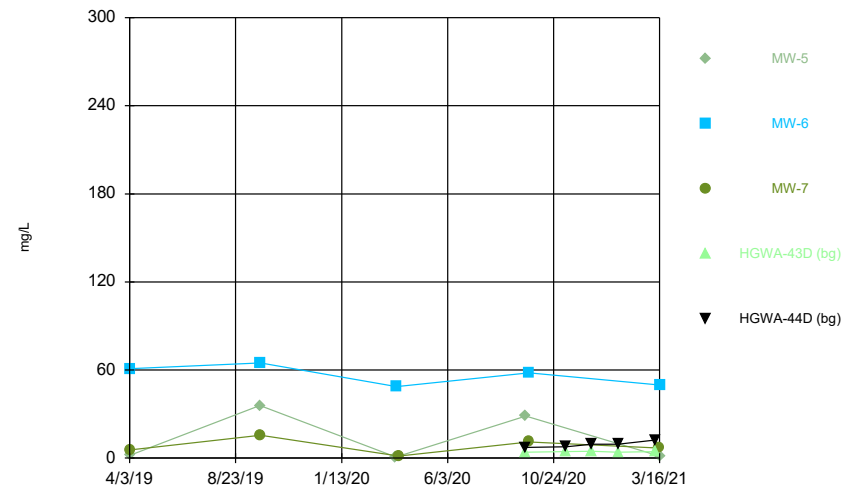
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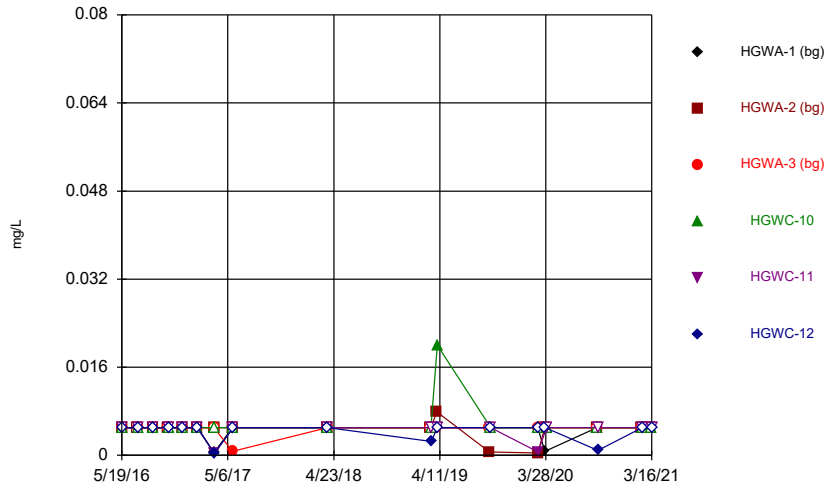
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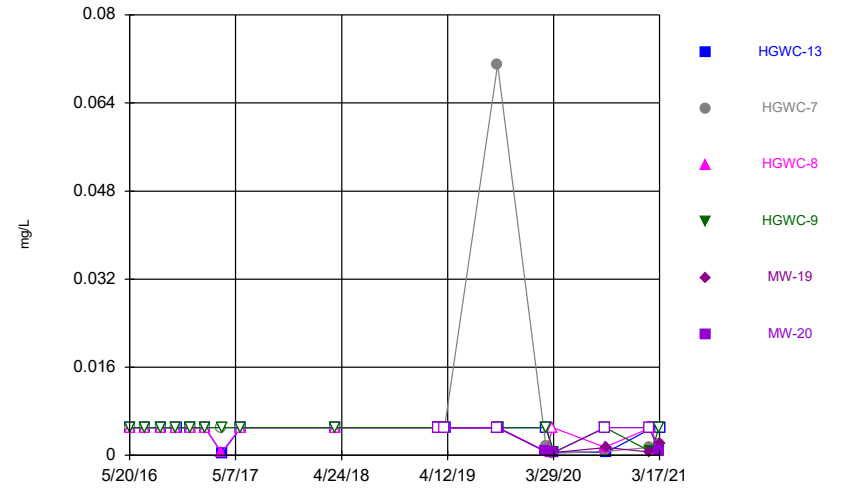
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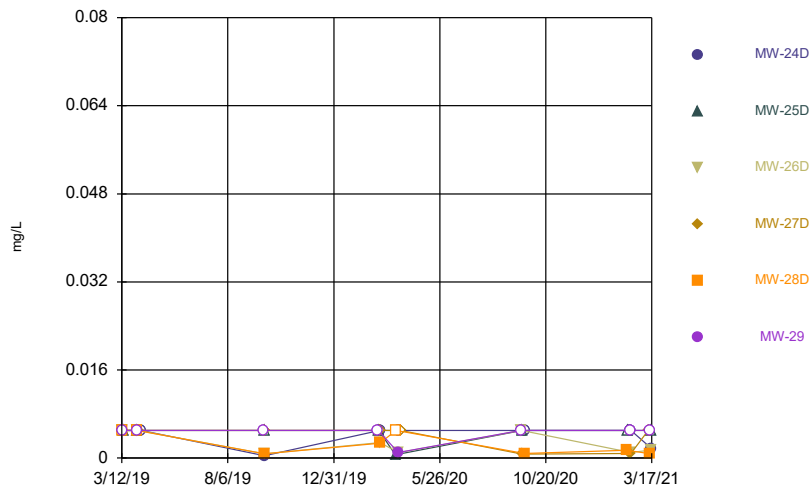
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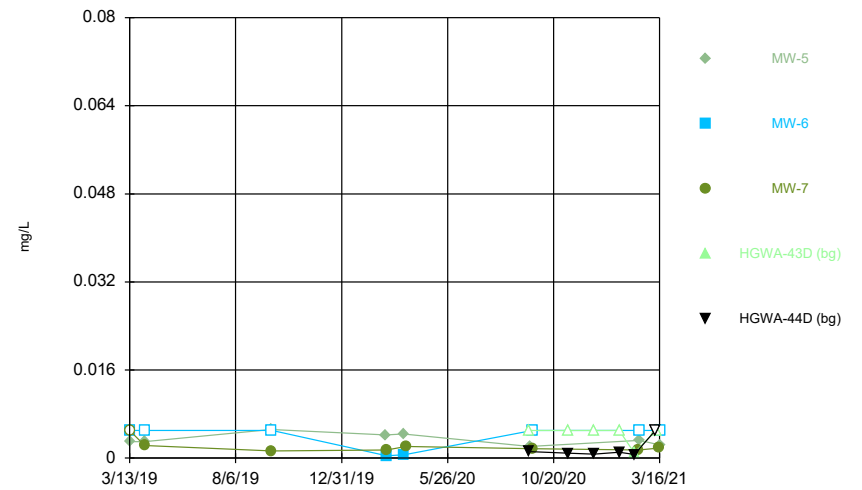
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Time Series



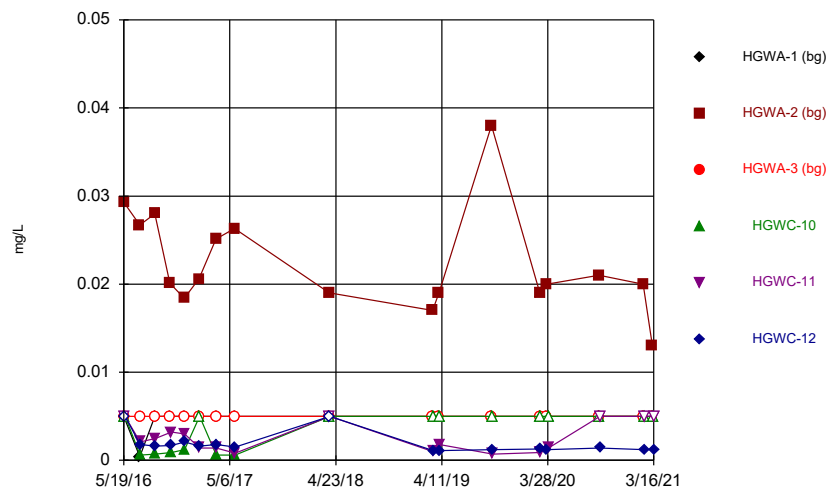
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



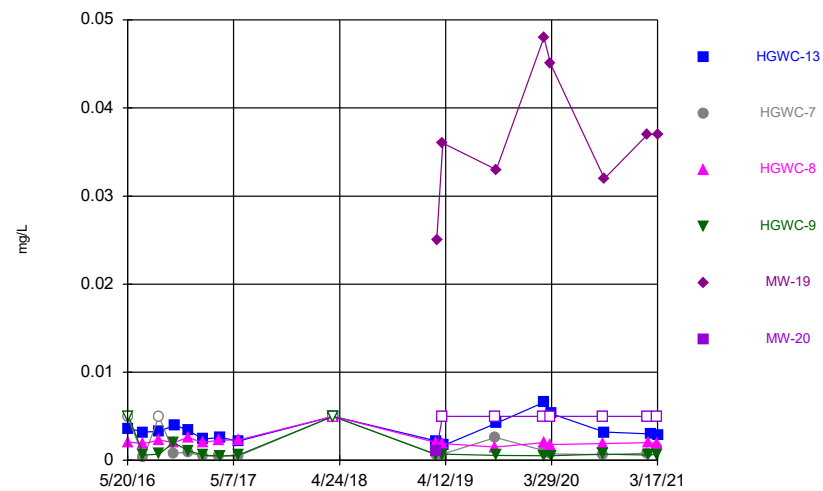
Constituent: Chromium Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



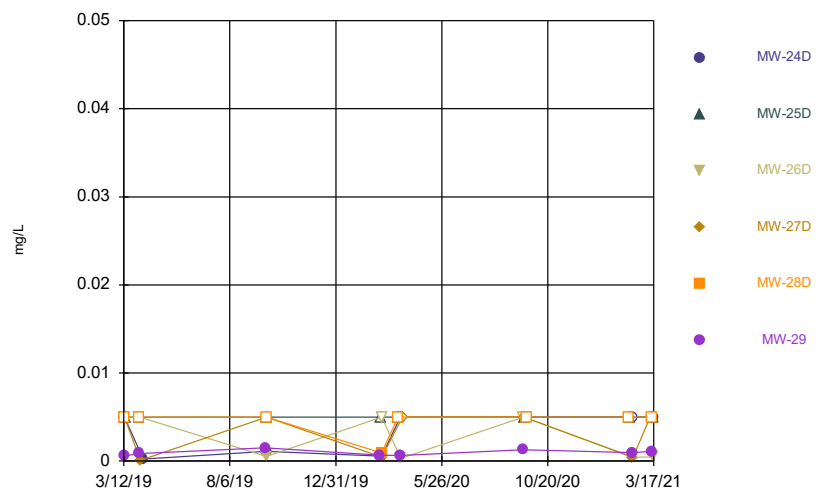
Constituent: Cobalt Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



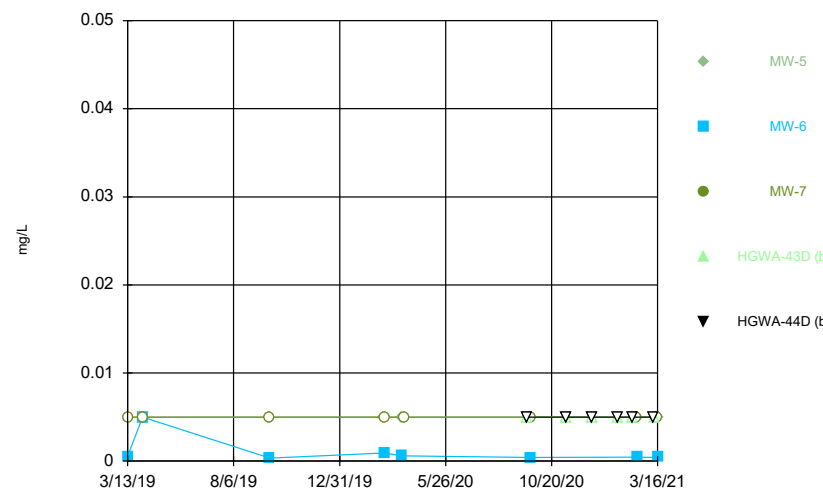
Constituent: Cobalt Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



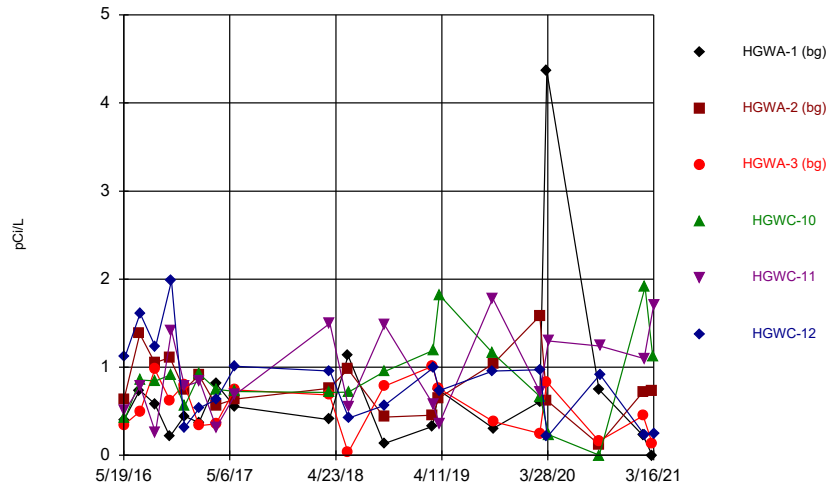
Constituent: Cobalt Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



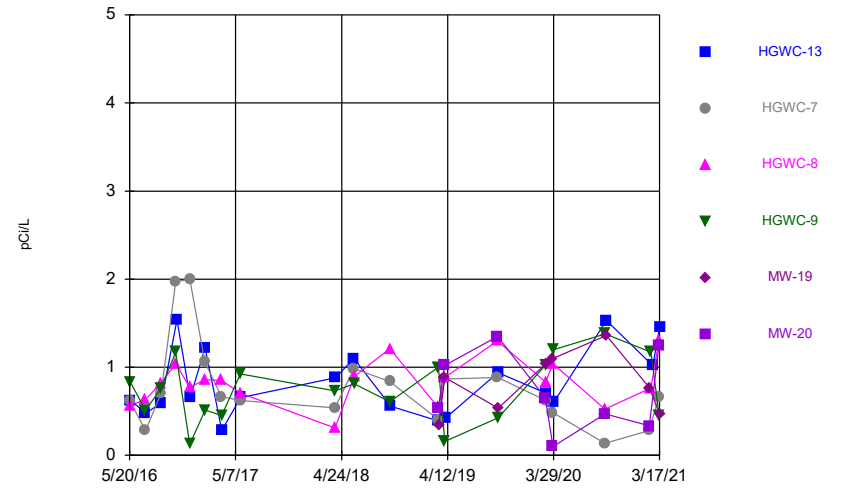
Constituent: Cobalt Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



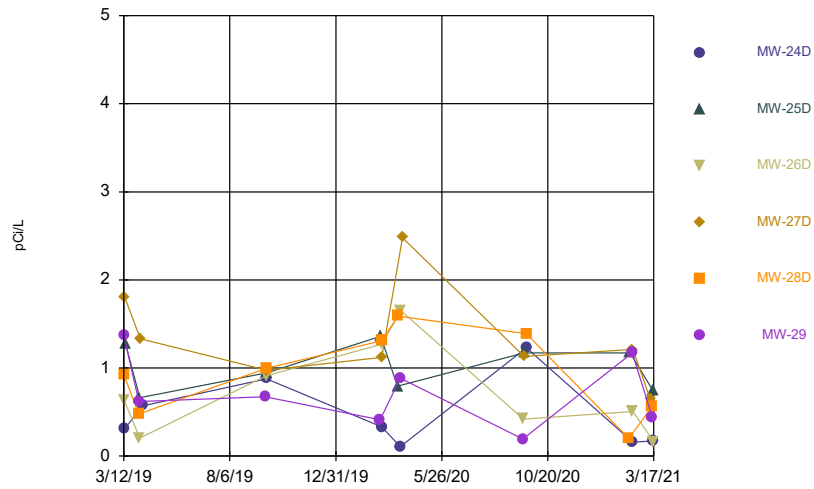
Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 6:54 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



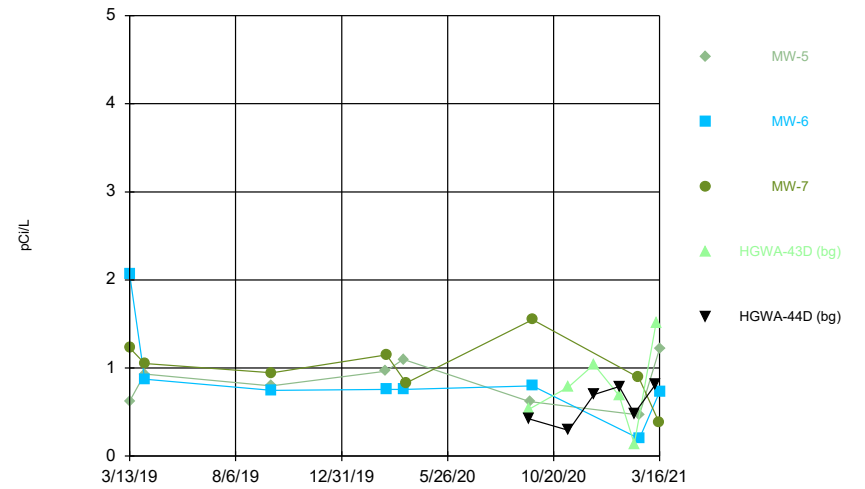
Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 6:54 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



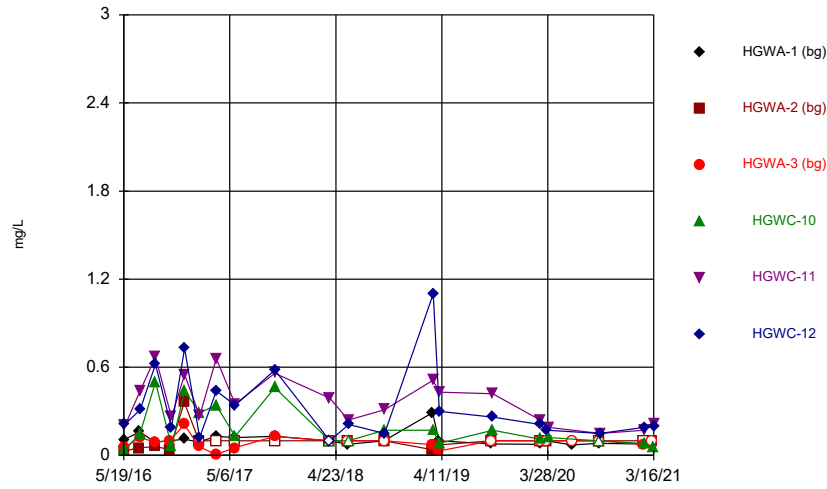
Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 6:54 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



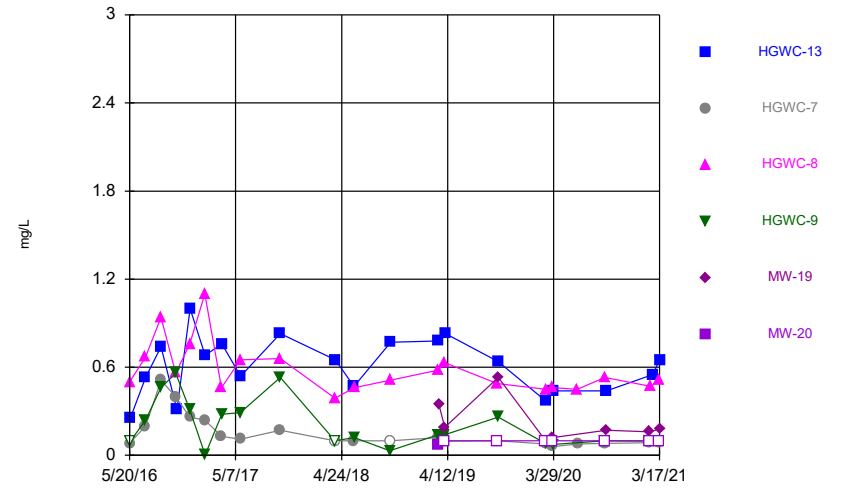
Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 6:54 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



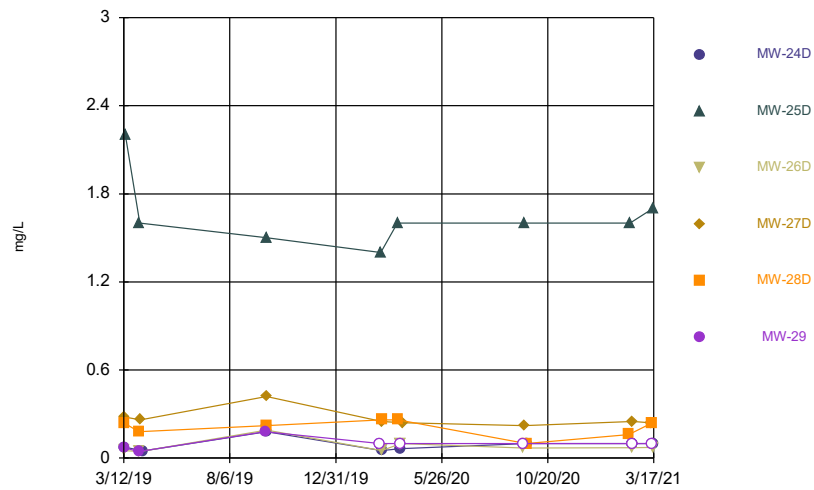
Constituent: Fluoride Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



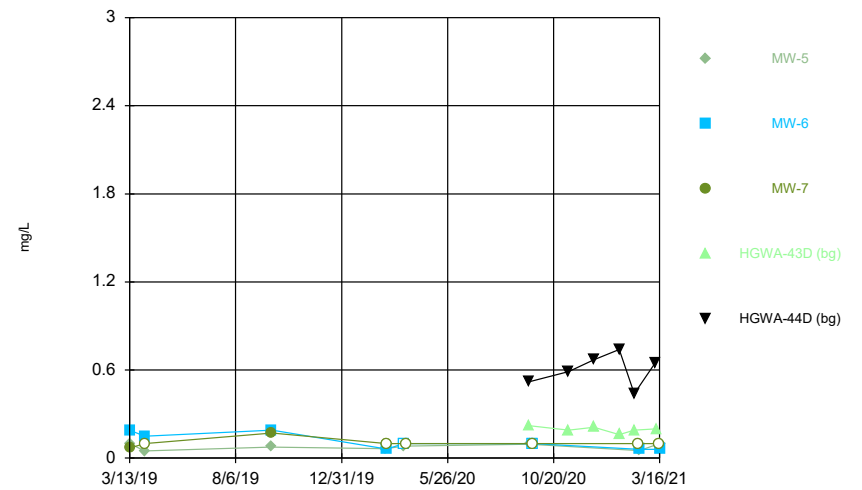
Constituent: Fluoride Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



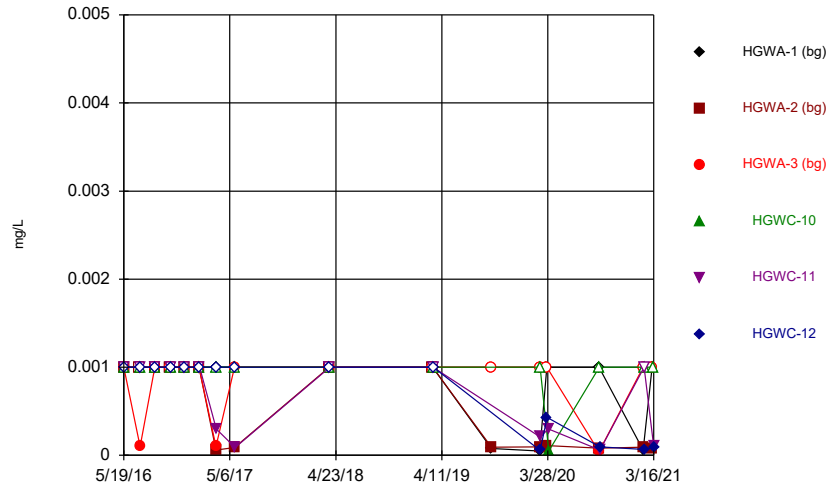
Constituent: Fluoride Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



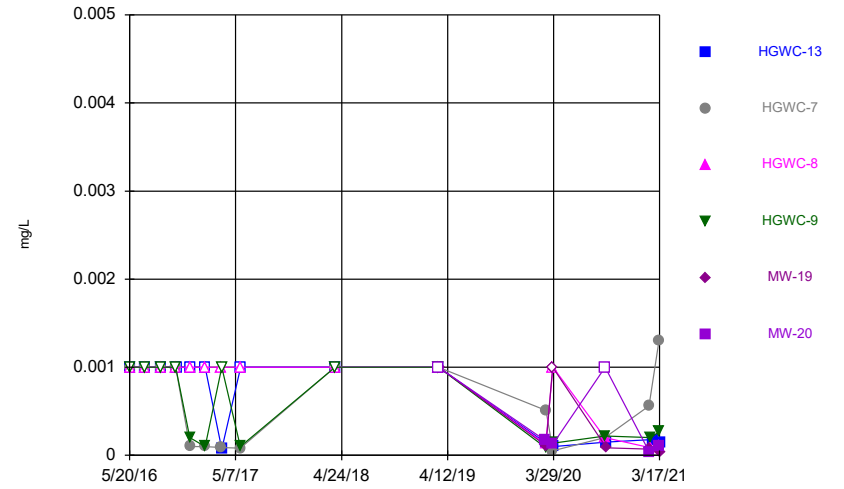
Constituent: Fluoride Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



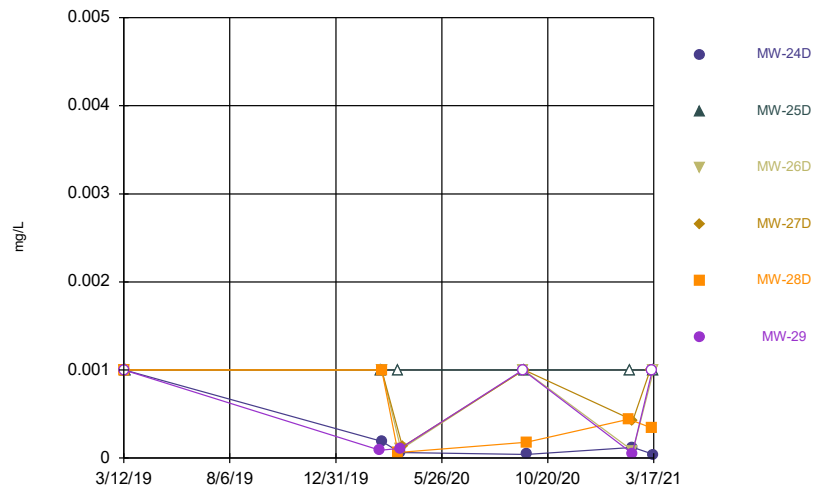
Constituent: Lead Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



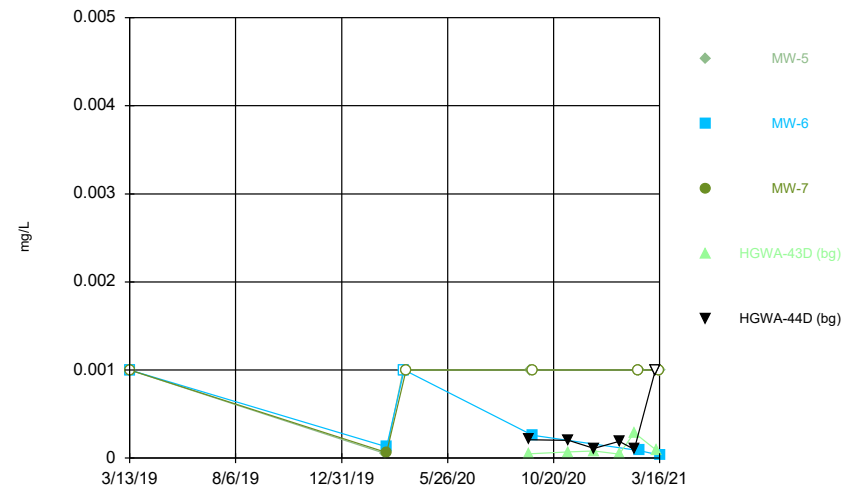
Constituent: Lead Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



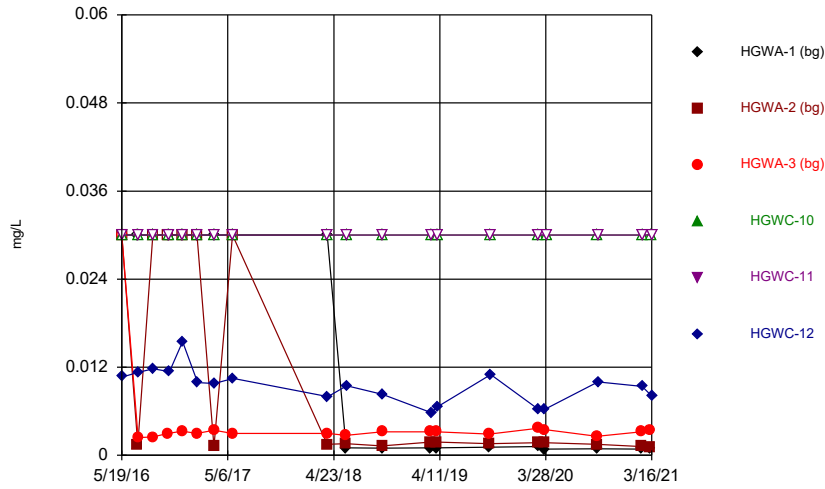
Constituent: Lead Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



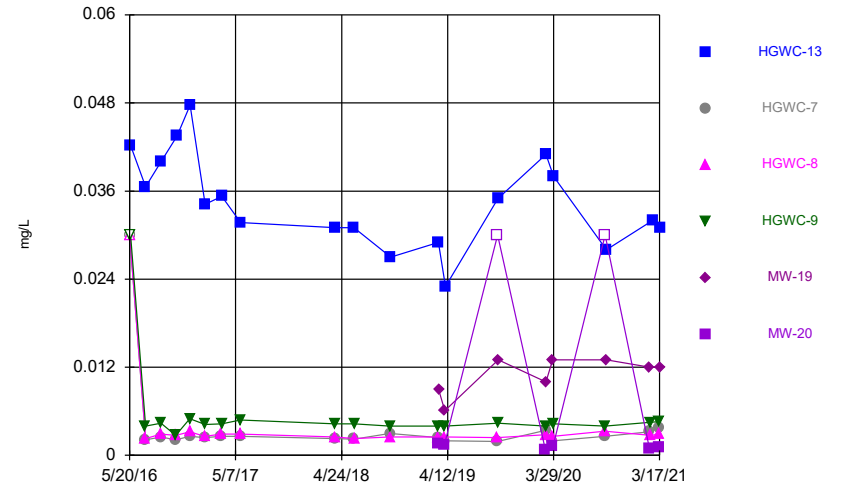
Constituent: Lead Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



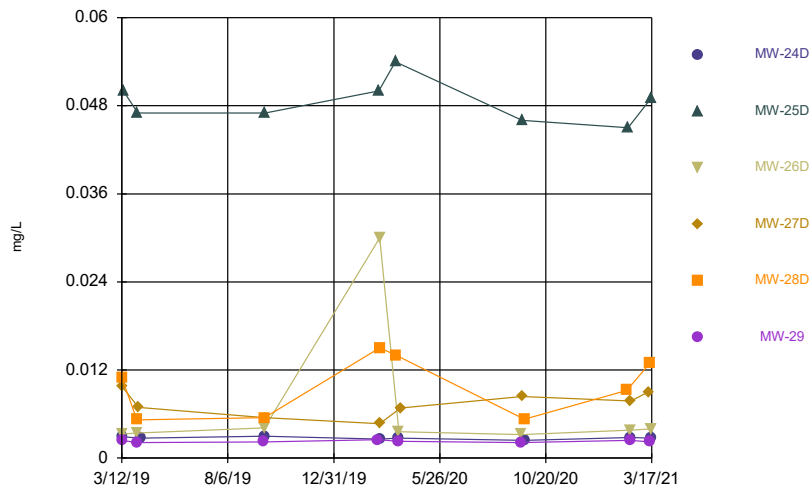
Constituent: Lithium Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



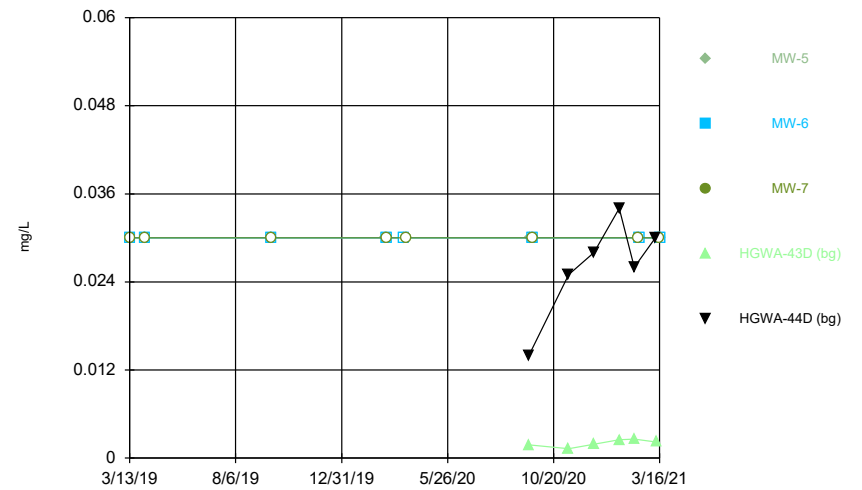
Constituent: Lithium Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



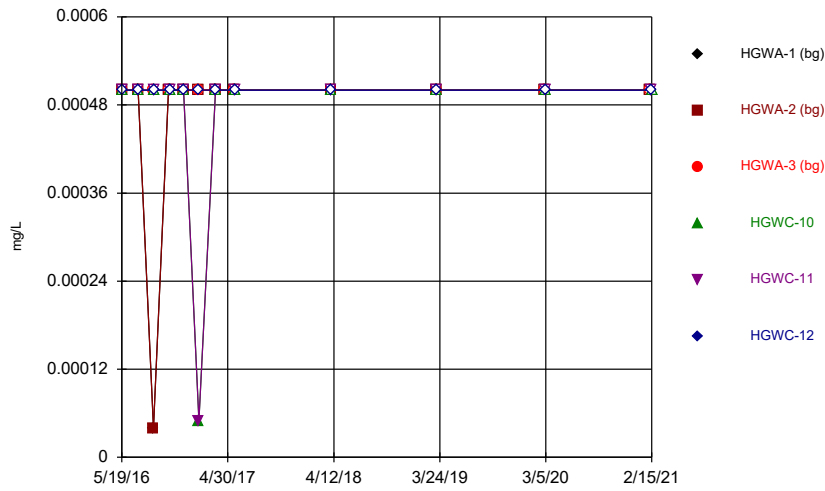
Constituent: Lithium Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



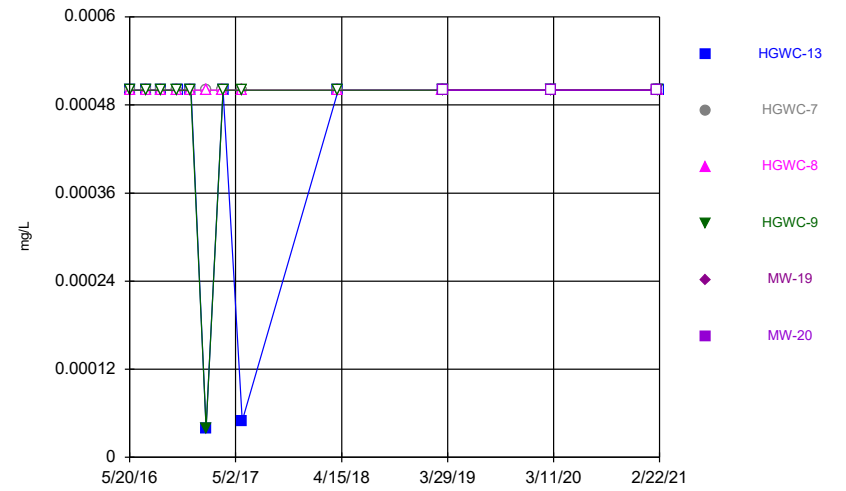
Constituent: Lithium Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



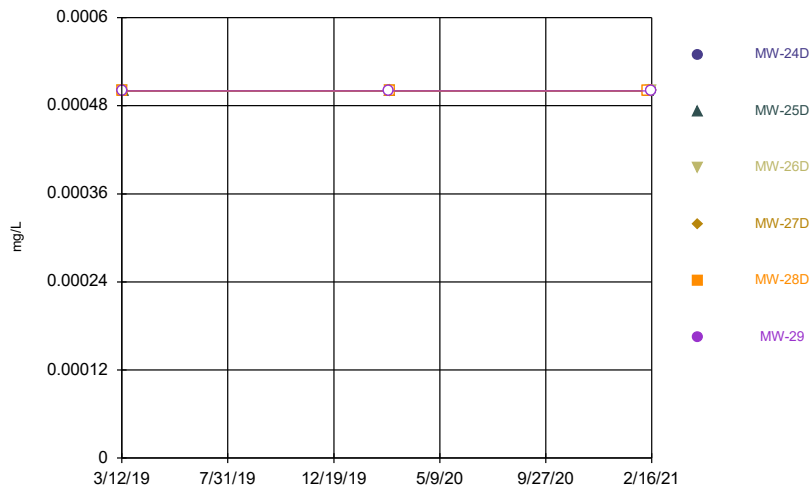
Constituent: Mercury Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



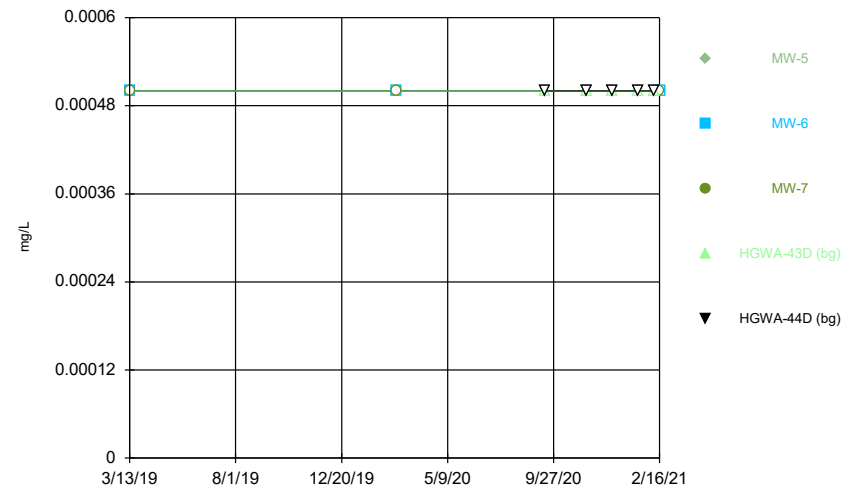
Constituent: Mercury Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



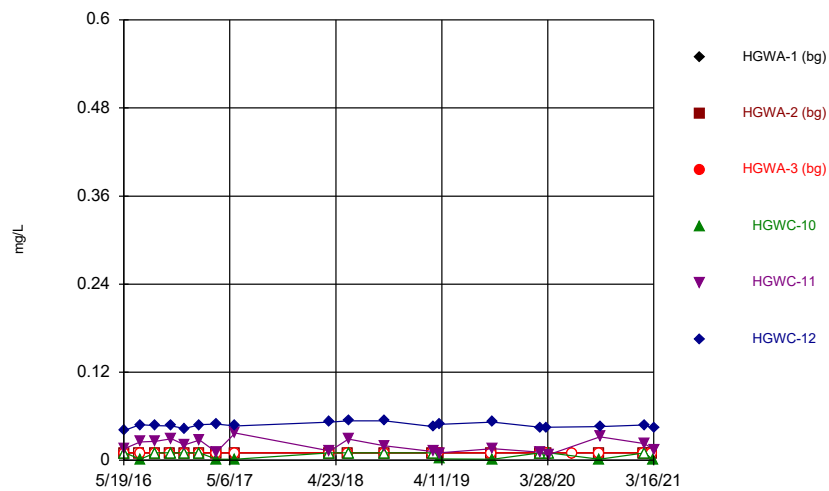
Constituent: Mercury Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



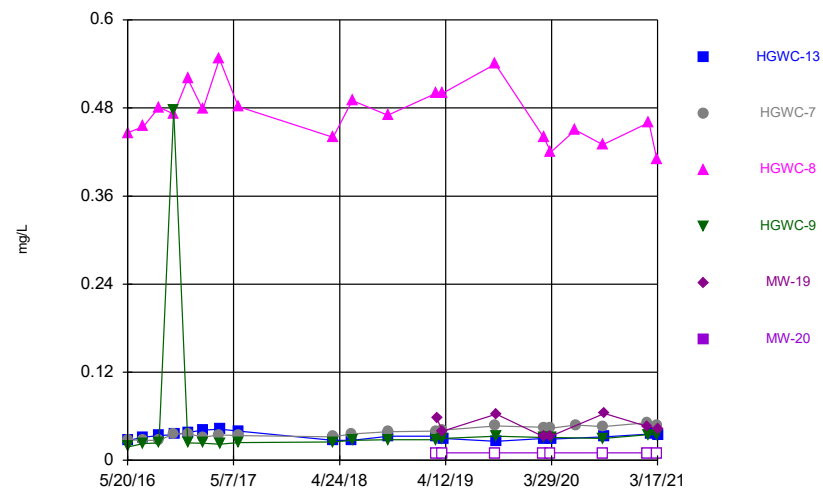
Constituent: Mercury Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



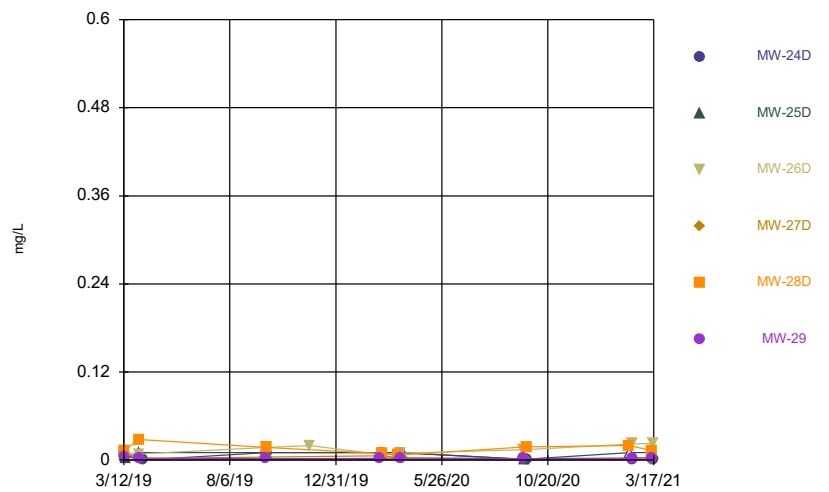
Constituent: Molybdenum Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



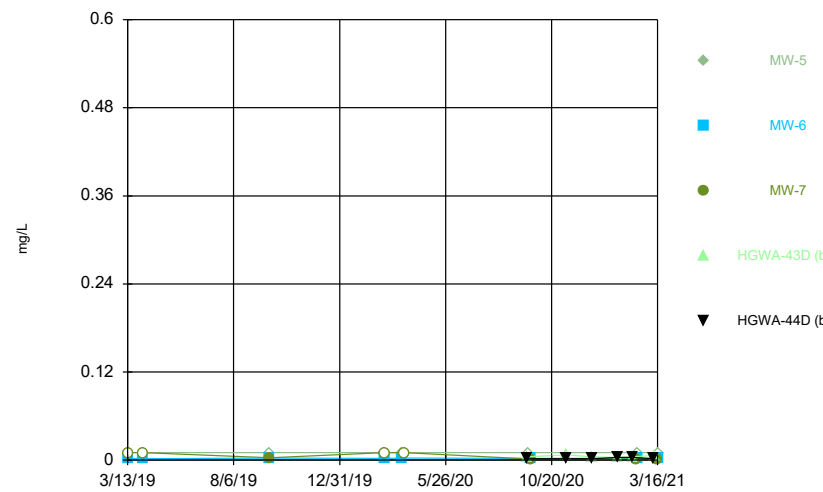
Constituent: Molybdenum Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



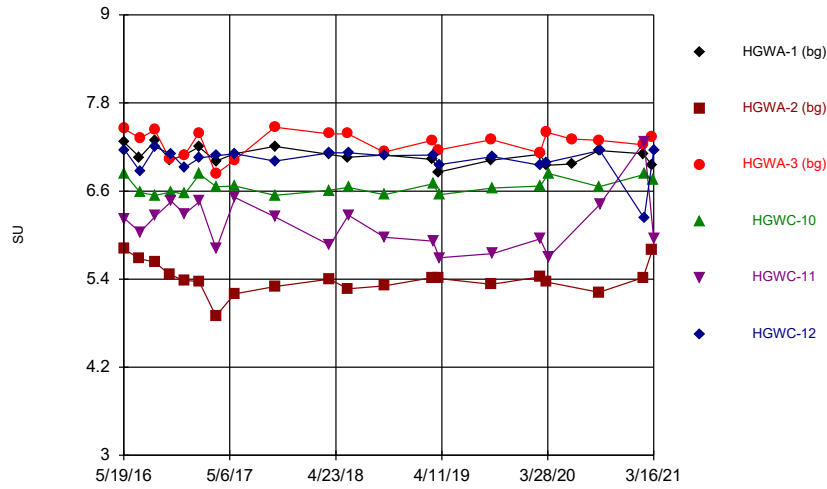
Constituent: Molybdenum Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



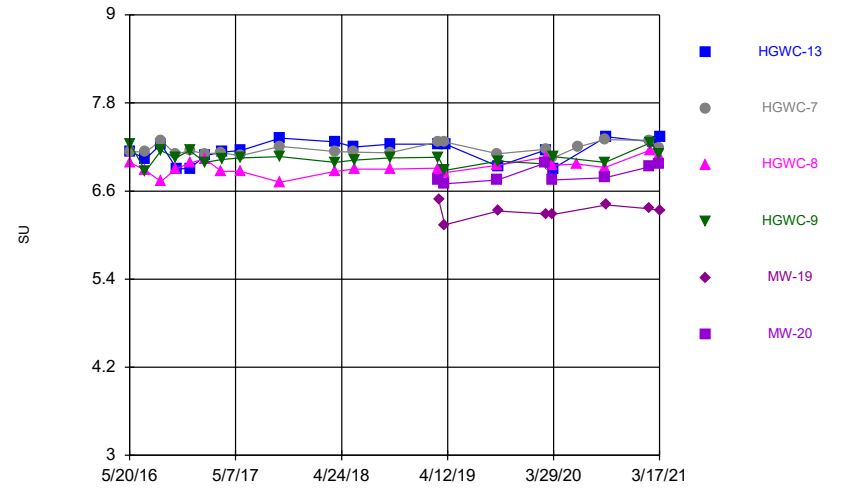
Constituent: Molybdenum Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



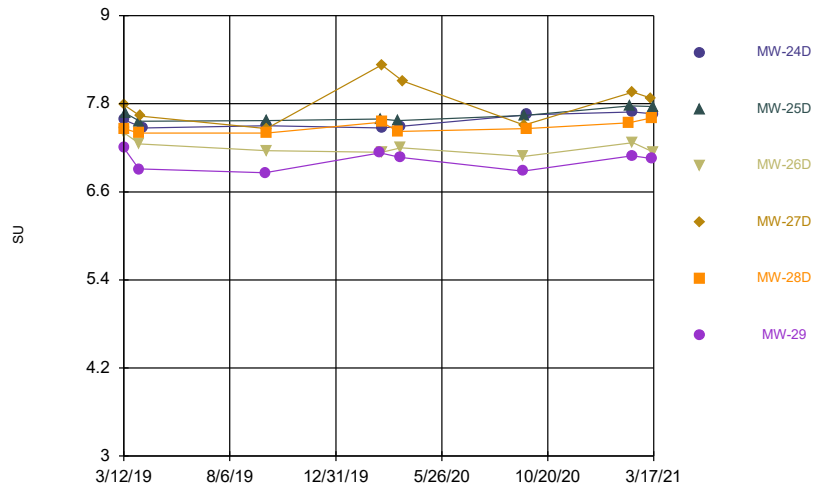
Constituent: pH, Field Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



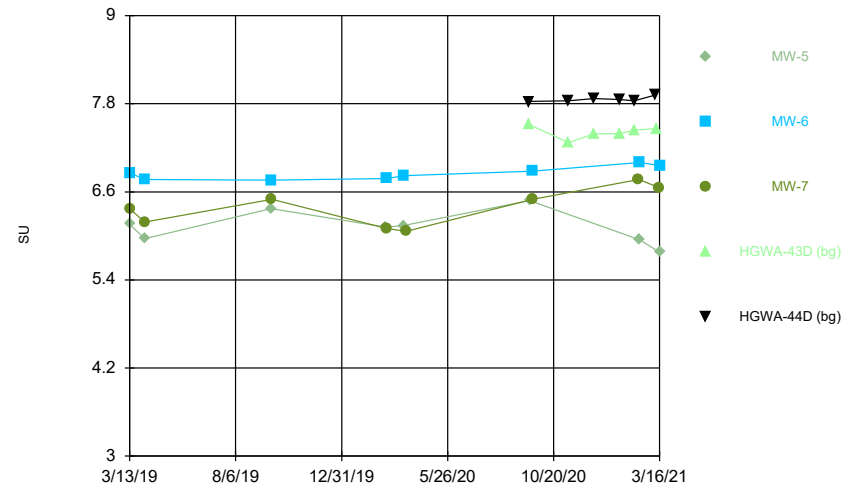
Constituent: pH, Field Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



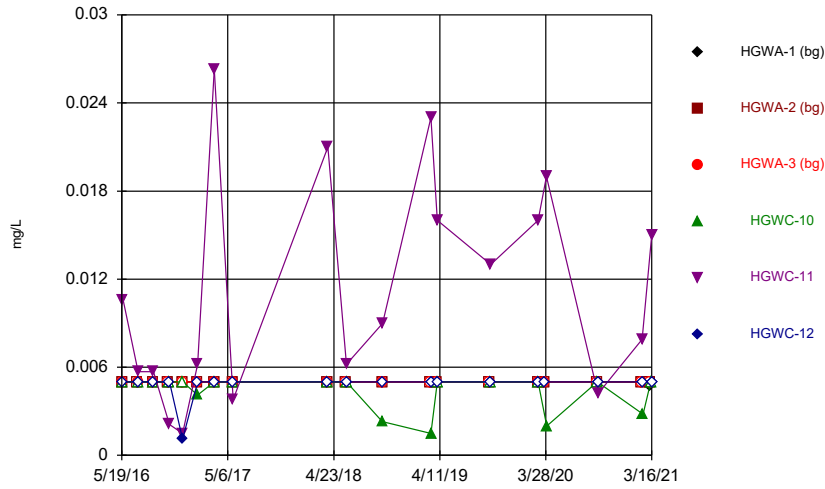
Constituent: pH, Field Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



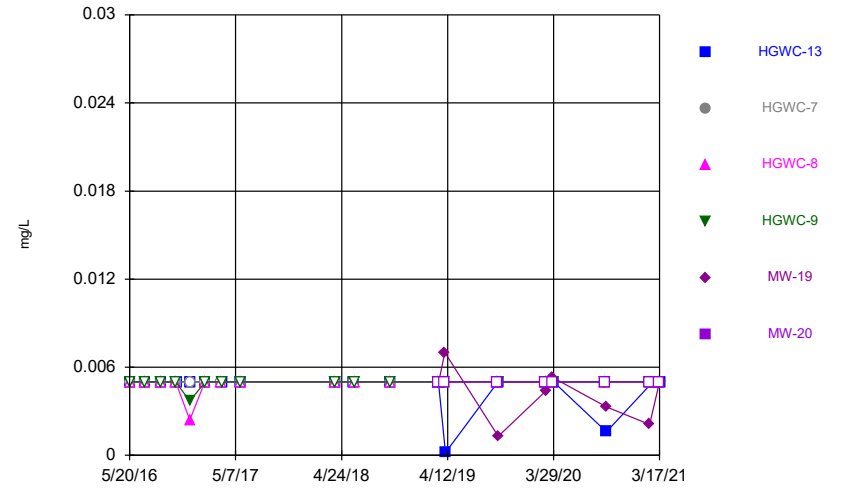
Constituent: pH, Field Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



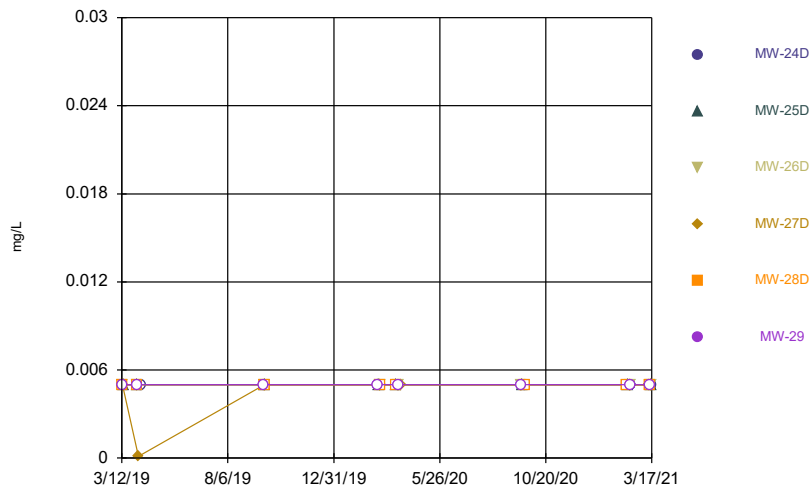
Constituent: Seleniun Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



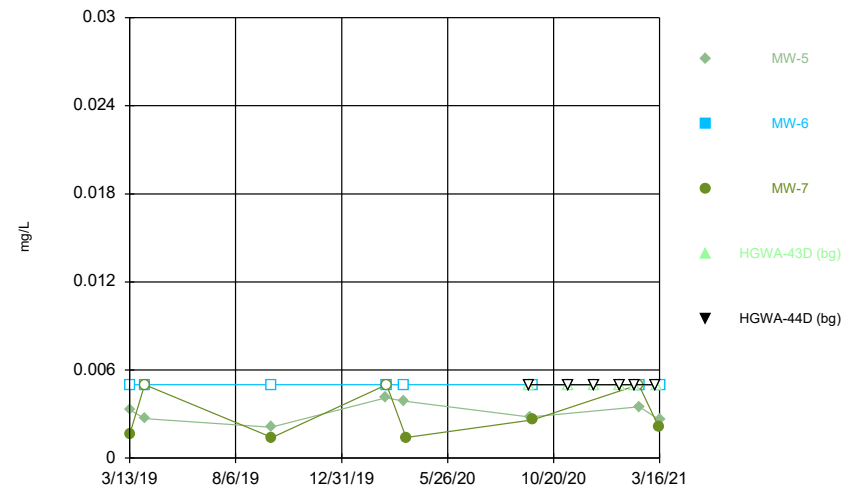
Constituent: Seleniun Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



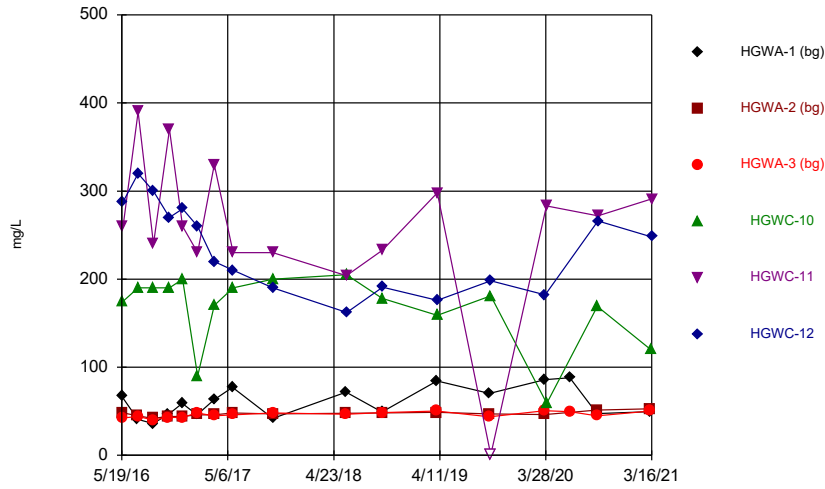
Constituent: Seleniun Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



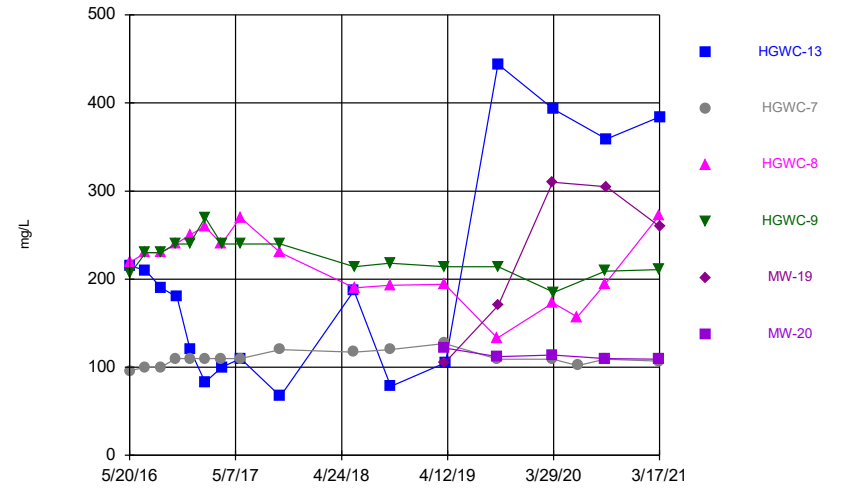
Constituent: Seleniun Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



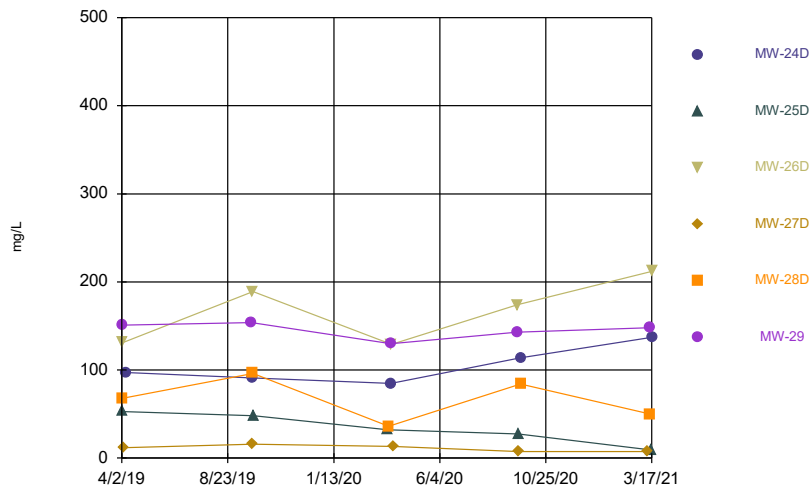
Constituent: Sulfate Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



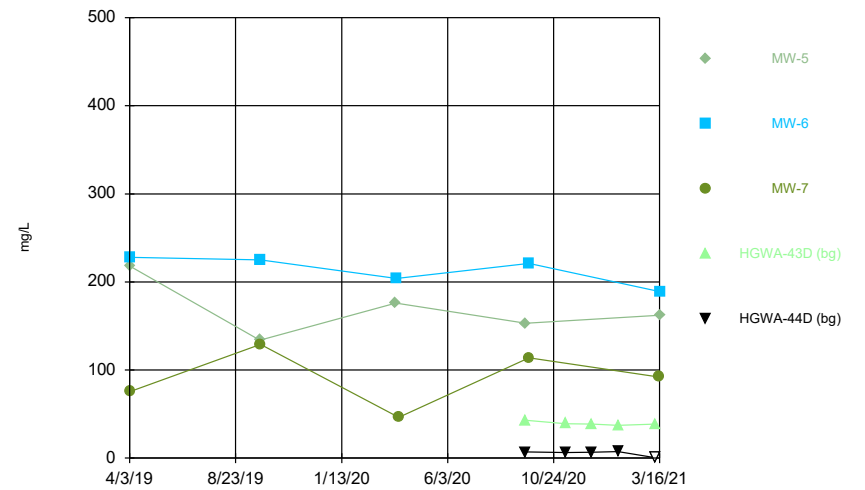
Constituent: Sulfate Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



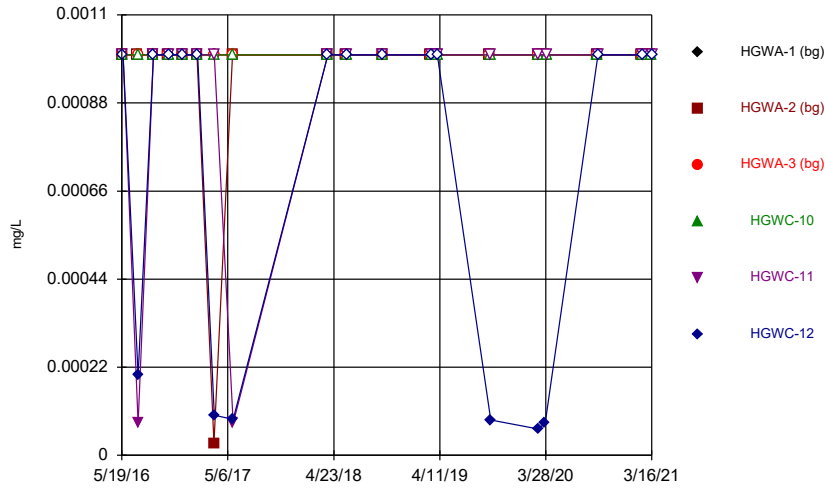
Constituent: Sulfate Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



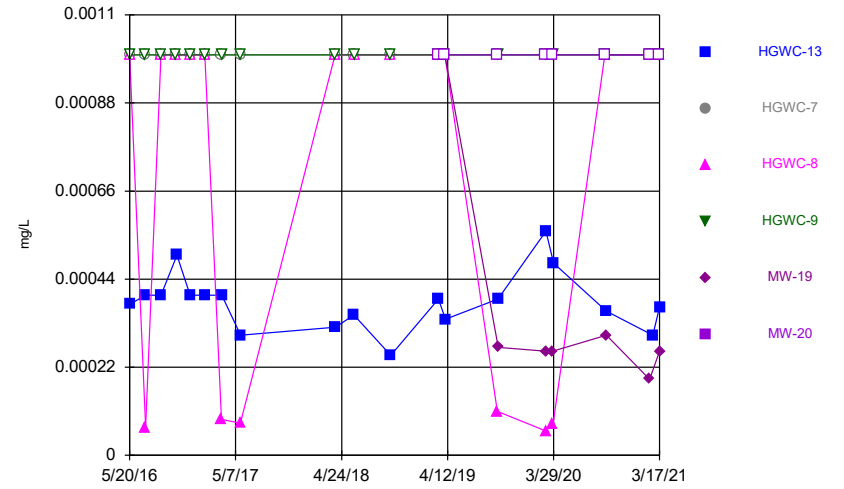
Constituent: Sulfate Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



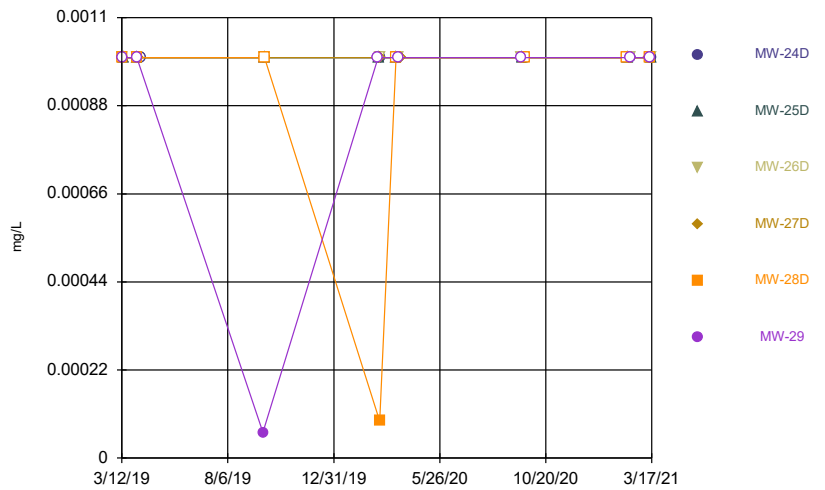
Constituent: Thallium Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



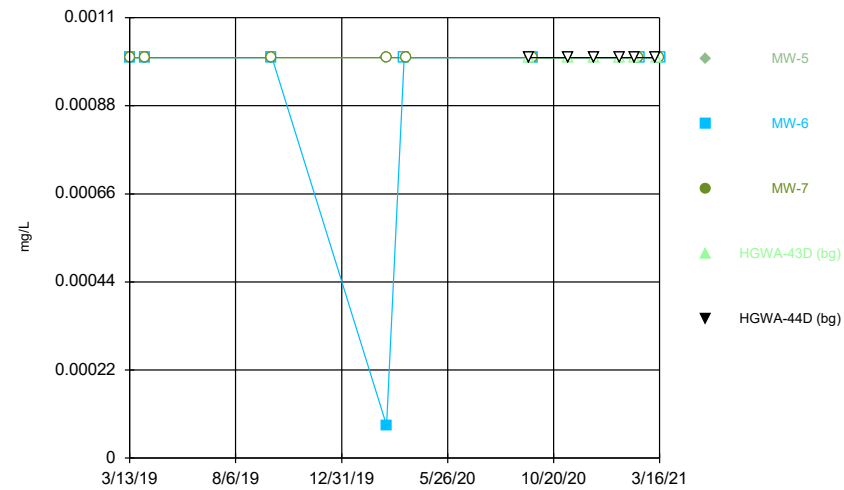
Constituent: Thallium Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



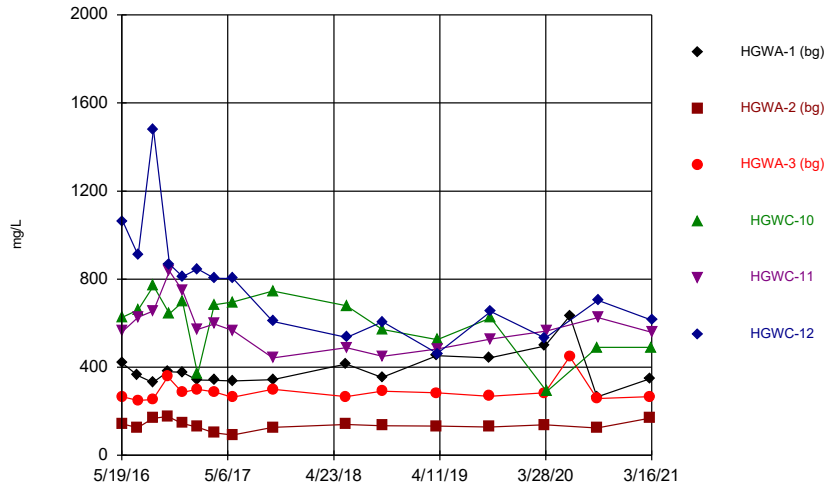
Constituent: Thallium Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



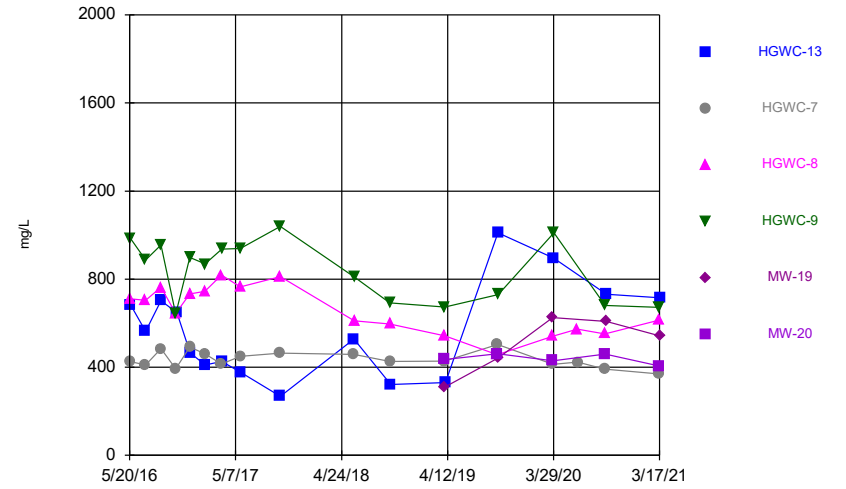
Constituent: Thallium Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



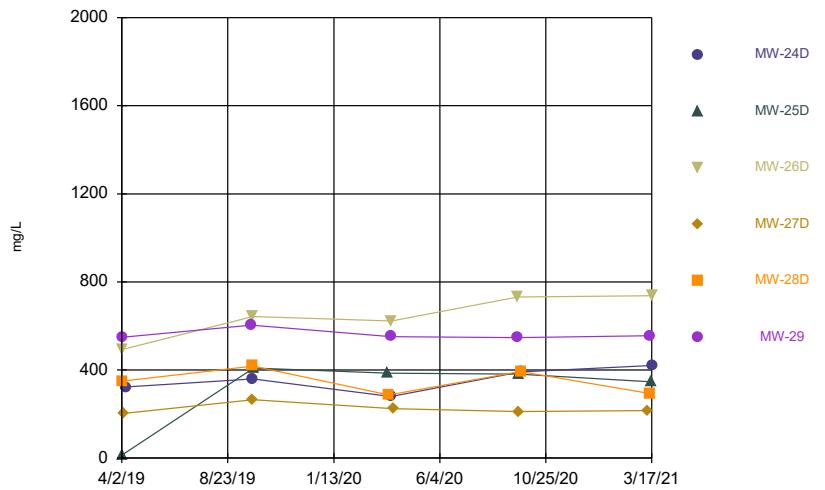
Constituent: Total Dissolved Solids Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



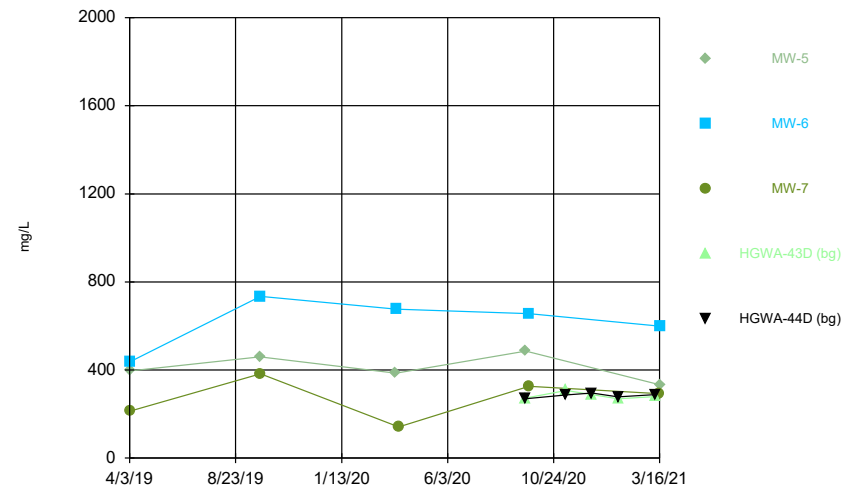
Constituent: Total Dissolved Solids Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



Constituent: Total Dissolved Solids Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



Constituent: Total Dissolved Solids Analysis Run 5/4/2021 6:54 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series

Constituent: Antimony (mg/L) Analysis Run 5/4/2021 7:00 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	<0.003	<0.003	<0.003			
5/23/2016				<0.003	<0.003	<0.003
7/11/2016	<0.003	<0.003				
7/12/2016			0.0003 (J)	<0.003	<0.003	<0.003
8/30/2016	<0.003	<0.003	<0.003			
9/1/2016				<0.003	<0.003	<0.003
10/19/2016	0.0014 (J)	<0.003	<0.003			
10/24/2016				<0.003	<0.003	<0.003
12/6/2016	<0.003	<0.003	<0.003			
12/7/2016				<0.003	<0.003	<0.003
1/24/2017	<0.003	<0.003	<0.003			
1/26/2017				<0.003	<0.003	<0.003
3/21/2017	<0.003	<0.003	<0.003			
3/22/2017				<0.003	<0.003	<0.003
5/22/2017	<0.003	<0.003	<0.003			
5/24/2017				<0.003	<0.003	<0.003
4/2/2018	<0.003	<0.003				
4/3/2018			<0.003			
4/4/2018				<0.003	<0.003	<0.003
3/12/2019	<0.003	<0.003	<0.003			
3/13/2019				<0.003	<0.003	
3/14/2019						<0.003
4/1/2019			<0.003			
4/2/2019	<0.003	<0.003				
4/3/2019				<0.003	<0.003	<0.003
9/23/2019	<0.003	<0.003	<0.003			
9/27/2019				<0.003	<0.003	<0.003
3/2/2020	<0.003	<0.003	<0.003			
3/3/2020				<0.003	<0.003	<0.003
3/25/2020	<0.003	<0.003	<0.003			
3/26/2020						<0.003
3/31/2020					<0.003	
4/1/2020				<0.003		
9/15/2020	<0.003	<0.003	<0.003			
9/16/2020				<0.003		
9/18/2020					0.00038 (J)	<0.003
2/8/2021	<0.003					
2/9/2021		0.00062 (JB)	0.00031 (JB)			
2/12/2021					<0.003	<0.003
2/15/2021				0.00065 (J)		
3/10/2021	<0.003					
3/11/2021		<0.003	<0.003			
3/12/2021				<0.003		
3/16/2021					<0.003	<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 5/4/2021 7:00 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		<0.003	<0.003			
5/23/2016	<0.003			<0.003		
7/12/2016	0.0003 (J)	<0.003	<0.003	<0.003		
9/1/2016	<0.003	<0.003	<0.003	<0.003		
10/20/2016		<0.003	<0.003	<0.003		
10/24/2016	<0.003					
12/6/2016		<0.003	<0.003	<0.003		
12/7/2016	<0.003					
1/25/2017		<0.003	<0.003			
1/26/2017	<0.003			<0.003		
3/21/2017		<0.003	<0.003			
3/22/2017	<0.003			<0.003		
5/23/2017		<0.003	<0.003	<0.003		
5/24/2017	<0.003					
4/3/2018		<0.003	<0.003	<0.003		
4/4/2018	<0.003					
3/12/2019			<0.003			
3/13/2019	<0.003	<0.003		<0.003		<0.003
3/14/2019				<0.003		
4/2/2019		<0.003				<0.003
4/3/2019			<0.003	<0.003	<0.003	
4/5/2019	0.00021 (J)					
9/24/2019			<0.003			
9/25/2019		<0.003				<0.003
9/26/2019	<0.003					
9/27/2019				<0.003	<0.003	
3/2/2020						<0.003
3/3/2020			<0.003			
3/4/2020	0.00061 (J)	<0.003		0.00032 (J)	<0.003	
3/26/2020				<0.003		
3/27/2020		<0.003	<0.003			<0.003
3/30/2020	0.00036 (J)					
3/31/2020				0.00042 (J)		
9/16/2020		0.00034 (J)	<0.003			
9/17/2020				<0.003		<0.003
9/21/2020	0.00029 (J)			<0.003		
2/10/2021		<0.003				
2/11/2021						<0.003
2/12/2021				<0.003		
2/16/2021			0.00064 (J)	0.00043 (J)		
2/22/2021	0.00047 (J)					
3/15/2021		<0.003	<0.003			<0.003
3/16/2021				<0.003		
3/17/2021	0.00049 (J)			<0.003		

Time Series

Constituent: Antimony (mg/L) Analysis Run 5/4/2021 7:00 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
3/12/2019					<0.003	<0.003
3/13/2019	<0.003		<0.003	<0.003		
3/14/2019		<0.003				
4/2/2019					<0.003	<0.003
4/3/2019		<0.003	<0.003			
4/4/2019				0.00016 (J)		
4/8/2019	<0.003					
9/24/2019						<0.003
9/26/2019	<0.003		<0.003	0.0003 (J)	<0.003	
9/27/2019		<0.003				
3/2/2020						<0.003
3/3/2020		<0.003				
3/4/2020	0.0017 (J)		0.002 (J)	0.00037 (J)	<0.003	
3/26/2020		<0.003				
3/27/2020					<0.003	
3/30/2020	<0.003					<0.003
3/31/2020			0.0013 (J)			
4/2/2020				0.0003 (J)		
9/16/2020						<0.003
9/17/2020			<0.003			
9/18/2020		<0.003		0.00031 (J)		
9/21/2020	<0.003				<0.003	
2/10/2021					0.0019 (J)	
2/12/2021		<0.003				
2/15/2021						0.00094 (J)
2/16/2021	<0.003		<0.003	0.00038 (J)		
3/12/2021				<0.003		
3/15/2021					<0.003	<0.003
3/16/2021		<0.003				
3/17/2021	<0.003		<0.003			

Time Series

Constituent: Antimony (mg/L) Analysis Run 5/4/2021 7:00 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
3/13/2019	<0.003	<0.003	0.00086 (J)		
4/3/2019	<0.003	<0.003	<0.003		
9/25/2019	<0.003				
9/26/2019		<0.003	<0.003		
3/2/2020	<0.003				
3/3/2020		<0.003	0.0013 (J)		
3/26/2020	<0.003				
3/27/2020		<0.003			
3/30/2020			<0.003		
9/16/2020				0.00051 (J)	0.00049 (J)
9/17/2020	<0.003				
9/21/2020		0.0014 (J)	0.00051 (J)		
11/10/2020				0.00043 (J)	<0.003
12/15/2020				0.00031 (J)	0.00047 (J)
1/19/2021				0.00029 (J)	0.00067 (JB)
2/9/2021				0.00037 (JB)	0.00042 (J)
2/15/2021			0.0021 (J)		
2/16/2021	<0.003	<0.003			
3/10/2021					0.00037 (J)
3/11/2021				0.00057 (J)	
3/15/2021			<0.003		
3/16/2021	<0.003	<0.003			

Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/4/2021 7:00 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	<0.005	0.00127 (J)	<0.005			
5/23/2016				<0.005	<0.005	0.0046 (J)
7/11/2016	<0.005	0.002 (J)				
7/12/2016			0.0008 (J)	<0.005	0.0015 (J)	0.005
8/30/2016	<0.005	0.0017 (J)	<0.005			
9/1/2016				<0.005	<0.005	0.0043 (J)
10/19/2016	<0.005	<0.005	<0.005			
10/24/2016				<0.005	<0.005	0.0049 (J)
12/6/2016	<0.005	<0.005	<0.005			
12/7/2016				<0.005	<0.005	0.0046 (J)
1/24/2017	<0.005	<0.005	<0.005			
1/26/2017				<0.005	<0.005	<0.005
3/21/2017	0.0005 (J)	<0.005	0.0007 (J)			
3/22/2017				<0.005	0.0053	0.0019 (J)
5/22/2017	<0.005	0.0006 (J)	0.0006 (J)			
5/24/2017				<0.005	<0.005	0.0022 (J)
4/2/2018	<0.005	<0.005				
4/3/2018			<0.005			
4/4/2018				<0.005	<0.005	<0.005
6/4/2018	<0.005	0.00088 (J)	0.0008 (J)			
6/5/2018				<0.005	0.0012 (J)	
6/6/2018						0.0048 (J)
10/1/2018	<0.005	<0.005	0.0011 (J)			
10/2/2018				<0.005		
10/3/2018					<0.005	0.0037 (J)
3/12/2019	<0.005	0.00069 (J)	0.00063 (J)			
3/13/2019				<0.005	0.0024 (J)	
3/14/2019						0.0026 (J)
4/1/2019			<0.005			
4/2/2019	<0.005	<0.005				
4/3/2019				<0.005	0.00094 (J)	0.0022 (J)
9/23/2019	0.00046 (J)	0.00067 (J)	0.0011 (J)			
9/27/2019				<0.005	0.0018 (J)	0.0061
3/2/2020	<0.005	0.00043 (J)	0.0004 (J)			
3/3/2020				<0.005	0.0022 (J)	0.0023 (J)
3/25/2020	<0.005	<0.005	<0.005			
3/26/2020						0.0028 (J)
3/31/2020					0.0022 (J)	
4/1/2020				<0.005		
9/15/2020	<0.005	<0.005	<0.005			
9/16/2020				<0.005		
9/18/2020					0.00081 (J)	0.0031 (J)
2/8/2021	<0.005					
2/9/2021		<0.005	<0.005			
2/12/2021					0.002 (J)	0.0045 (J)
2/15/2021				<0.005		
3/10/2021	<0.005					
3/11/2021		<0.005	<0.005			
3/12/2021				<0.005		
3/16/2021					0.0017 (J)	0.0038 (J)

Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/4/2021 7:00 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		<0.005	<0.005			
5/23/2016	0.329			<0.005		
7/12/2016	0.297	<0.005	<0.005	<0.005		
9/1/2016	0.314	<0.005	<0.005	<0.005		
10/20/2016		<0.005	<0.005	<0.005		
10/24/2016	0.334					
12/6/2016		<0.005	<0.005	<0.005		
12/7/2016	0.35					
1/25/2017		<0.005	<0.005			
1/26/2017	0.424			<0.005		
3/21/2017		<0.005	<0.005			
3/22/2017	0.419			0.0008 (J)		
5/23/2017		<0.005	<0.005	<0.005		
5/24/2017	0.393					
4/3/2018		<0.005	<0.005	<0.005		
4/4/2018	0.49					
6/5/2018	0.38	<0.005				
6/6/2018			<0.005	<0.005		
10/2/2018		0.0019 (J)	<0.005	<0.005		
10/5/2018	0.34					
3/12/2019			<0.005			
3/13/2019	0.42	<0.005		0.00075 (J)		0.0023 (J)
3/14/2019				<0.005		
4/2/2019		<0.005				<0.005
4/3/2019			<0.005	<0.005	<0.005	
4/5/2019	0.36					
9/24/2019			<0.005			
9/25/2019		<0.005				<0.005
9/26/2019	0.44					
9/27/2019				0.00037 (J)	<0.005	
3/2/2020						0.00038 (J)
3/3/2020			<0.005			
3/4/2020	0.52	<0.005		<0.005	0.00045 (J)	
3/26/2020					<0.005	
3/27/2020		<0.005	<0.005			<0.005
3/30/2020	0.47					
3/31/2020				<0.005		
9/16/2020		<0.005	<0.005			
9/17/2020				<0.005		<0.005
9/21/2020	0.39				<0.005	
2/10/2021		<0.005				
2/11/2021						0.00094 (J)
2/12/2021					<0.005	
2/16/2021			<0.005	<0.005		
2/22/2021	0.45					
3/15/2021		<0.005	<0.005			<0.005
3/16/2021				<0.005		
3/17/2021	0.39				<0.005	

Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/4/2021 7:00 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
3/12/2019					<0.005	<0.005
3/13/2019	<0.005		<0.005	<0.005		
3/14/2019		0.0019 (J)				
4/2/2019					<0.005	<0.005
4/3/2019		<0.005	<0.005			
4/4/2019				0.0002 (J)		
4/8/2019	<0.005					
9/24/2019						<0.005
9/26/2019	<0.005		<0.005	<0.005	<0.005	
9/27/2019		0.0011 (J)				
3/2/2020						<0.005
3/3/2020		0.001 (J)				
3/4/2020	<0.005		0.0006 (J)	0.00069 (J)	<0.005	
3/26/2020		0.00075 (J)				
3/27/2020					<0.005	
3/30/2020	<0.005					0.00037 (J)
3/31/2020			<0.005			
4/2/2020				<0.005		
9/16/2020						<0.005
9/17/2020			<0.005			
9/18/2020		<0.005		<0.005		
9/21/2020	<0.005				<0.005	
2/10/2021					0.0011 (J)	
2/12/2021		<0.005				
2/15/2021						<0.005
2/16/2021	<0.005		0.0008 (J)	0.001 (J)		
3/12/2021				<0.005		
3/15/2021					<0.005	<0.005
3/16/2021		<0.005				
3/17/2021	<0.005		<0.005			

Time Series

Constituent: Arsenic (mg/L) Analysis Run 5/4/2021 7:00 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
3/13/2019	<0.005	<0.005	<0.005		
4/3/2019	<0.005	<0.005	<0.005		
9/25/2019	<0.005				
9/26/2019		<0.005	<0.005		
3/2/2020	<0.005				
3/3/2020		<0.005	<0.005		
3/26/2020	<0.005				
3/27/2020		<0.005			
3/30/2020			<0.005		
9/16/2020				<0.005	<0.005
9/17/2020	<0.005				
9/21/2020		<0.005	<0.005		
11/10/2020				0.0021 (J)	<0.005
12/15/2020				<0.005	<0.005
1/19/2021				0.0011 (J)	<0.005
2/9/2021				0.0017 (JB)	0.00083 (J)
2/15/2021			<0.005		
2/16/2021	<0.005	<0.005			
3/10/2021					<0.005
3/11/2021				0.0013 (J)	
3/15/2021			<0.005		
3/16/2021	<0.005	<0.005			

Time Series

Constituent: Barium (mg/L) Analysis Run 5/4/2021 7:00 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	0.0346	0.114	0.111			
5/23/2016				0.0877	0.0466	0.133
7/11/2016	0.0311	0.112				
7/12/2016			0.115	0.0926	0.0616	0.135
8/30/2016	0.0293	0.131	0.113			
9/1/2016				0.0994	0.0497	0.123
10/19/2016	0.0293	0.111	0.123			
10/24/2016				0.101	0.0794	0.135
12/6/2016	0.0304	0.108	0.127			
12/7/2016				0.107	0.1	0.13
1/24/2017	0.028	0.102	0.126			
1/26/2017				0.0538	0.0696	0.127
3/21/2017	0.0275	0.095	0.12			
3/22/2017				0.0962	0.0346	0.112
5/22/2017	0.0281	0.103	0.117			
5/24/2017				0.0996	0.0437	0.106
4/2/2018	0.026	0.099				
4/3/2018			0.11			
4/4/2018				0.084	0.029	0.083
6/4/2018	0.035	0.11	0.12			
6/5/2018				0.086	0.039	
6/6/2018						0.09
10/1/2018	0.029	0.11	0.14			
10/2/2018				0.076		
10/3/2018					0.033	0.087
3/12/2019	0.042	0.12	0.13			
3/13/2019				0.044	0.024	
3/14/2019						0.081
4/1/2019			0.13			
4/2/2019	0.04	0.13				
4/3/2019				0.076	0.023	0.077
9/23/2019	0.042	0.13	0.13			
9/27/2019				0.078	0.033	0.096
3/2/2020	0.034	0.11	0.14			
3/3/2020				0.048	0.022	0.092
3/25/2020	0.043	0.12	0.13			
3/26/2020						0.089
3/31/2020					0.026	
4/1/2020				0.058		
9/15/2020	0.035	0.12	0.12			
9/16/2020				0.068		
9/18/2020					0.043	0.086
2/8/2021	0.032					
2/9/2021		0.12	0.13			
2/12/2021					0.039	0.09
2/15/2021				0.06		
3/10/2021	0.03					
3/11/2021		0.07	0.13			
3/12/2021				0.058		
3/16/2021					0.035	0.084

Time Series

Constituent: Barium (mg/L) Analysis Run 5/4/2021 7:00 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		0.0687	0.0808			
5/23/2016	0.0779			0.117		
7/12/2016	0.0697	0.0731	0.083	0.13		
9/1/2016	0.07	0.0747	0.0829	0.13		
10/20/2016		0.072	0.0811	0.0806		
10/24/2016	0.0882					
12/6/2016		0.0752	0.0845	0.128		
12/7/2016	0.0798					
1/25/2017		0.0747	0.078			
1/26/2017	0.0738			0.142		
3/21/2017		0.0722	0.0791			
3/22/2017	0.0755			0.122		
5/23/2017		0.0794	0.0846	0.127		
5/24/2017	0.0627					
4/3/2018		0.075	0.065	0.1		
4/4/2018	0.099					
6/5/2018	0.13	0.071				
6/6/2018			0.063	0.11		
10/2/2018		0.078	0.061	0.11		
10/5/2018	0.076					
3/12/2019			0.062			
3/13/2019	0.1	0.083		0.1		0.087
3/14/2019					0.06	
4/2/2019		0.072				0.08
4/3/2019			0.066	0.12	0.05	
4/5/2019	0.079					
9/24/2019			0.053			
9/25/2019		0.061				0.085
9/26/2019	0.11					
9/27/2019				0.11	0.068	
3/2/2020						0.099
3/3/2020			0.052			
3/4/2020	0.1	0.068		0.11	0.069	
3/26/2020					0.067	
3/27/2020		0.059	0.059			0.093
3/30/2020	0.08					
3/31/2020				0.11		
9/16/2020		0.068	0.06			
9/17/2020				0.11		0.096
9/21/2020	0.052				0.056	
2/10/2021		0.069				
2/11/2021						0.093
2/12/2021					0.051	
2/16/2021			0.069	0.11		
2/22/2021	0.061					
3/15/2021		0.074	0.063			0.096
3/16/2021				0.11		
3/17/2021	0.056				0.049	

Time Series

Constituent: Barium (mg/L) Analysis Run 5/4/2021 7:00 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
3/12/2019					0.82	0.089
3/13/2019	0.053		0.099	1.5		
3/14/2019		0.44				
4/2/2019					0.37	0.078
4/3/2019		0.38	0.12			
4/4/2019				1.2		
4/8/2019	0.043					
9/24/2019						0.081
9/26/2019	0.12		0.12	0.95	0.15	
9/27/2019		0.39				
3/2/2020						0.088
3/3/2020		0.42				
3/4/2020	0.081		0.17	0.95	0.77	
3/26/2020		0.45				
3/27/2020					0.64	
3/30/2020	0.056					0.08
3/31/2020			0.11			
4/2/2020				1		
9/16/2020						0.076
9/17/2020			0.099			
9/18/2020		0.44		1		
9/21/2020	0.053				0.18	
2/10/2021					0.26	
2/12/2021		0.46				
2/15/2021						0.081
2/16/2021	0.062		0.093	1		
3/12/2021				1.1		
3/15/2021					0.45	0.078
3/16/2021		0.51				
3/17/2021	0.055		0.094			

Time Series

Constituent: Barium (mg/L) Analysis Run 5/4/2021 7:00 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
3/13/2019	0.056	0.1	0.063		
4/3/2019	0.049	0.09	0.058		
9/25/2019	0.046				
9/26/2019		0.089	0.066		
3/2/2020	0.049				
3/3/2020		0.09	0.043		
3/26/2020	0.046				
3/27/2020		0.086			
3/30/2020			0.05		
9/16/2020				0.26	0.24
9/17/2020	0.043				
9/21/2020		0.083	0.065		
11/10/2020				0.25	0.38
12/15/2020				0.29	0.39
1/19/2021				0.32	0.41
2/9/2021				0.34	0.46
2/15/2021			0.048		
2/16/2021	0.05	0.085			
3/10/2021					0.26
3/11/2021				0.32	
3/15/2021			0.053		
3/16/2021	0.046	0.081			

Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/4/2021 7:00 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	<0.0005	<0.0005	<0.0005			
5/23/2016				<0.0005	<0.0005	<0.0005
7/11/2016	<0.0005	0.0001 (J)				
7/12/2016			<0.0005	<0.0005	<0.0005	<0.0005
8/30/2016	<0.0005	<0.0005	<0.0005			
9/1/2016				<0.0005	<0.0005	<0.0005
10/19/2016	<0.0005	0.0001 (J)	<0.0005			
10/24/2016				<0.0005	<0.0005	<0.0005
12/6/2016	<0.0005	0.0002 (J)	<0.0005			
12/7/2016				<0.0005	<0.0005	<0.0005
1/24/2017	<0.0005	0.0001 (J)	<0.0005			
1/26/2017				<0.0005	<0.0005	<0.0005
3/21/2017	<0.0005	0.0001 (J)	<0.0005			
3/22/2017				<0.0005	9E-05 (J)	<0.0005
5/22/2017	<0.0005	0.0001 (J)	<0.0005			
5/24/2017				<0.0005	<0.0005	<0.0005
4/2/2018	<0.0005	<0.0005				
4/3/2018			<0.0005			
4/4/2018				<0.0005	<0.0005	<0.0005
3/12/2019	<0.0005	0.00017 (J)	<0.0005			
3/13/2019				<0.0005	0.0001 (J)	
3/14/2019						<0.0005
4/1/2019			<0.0005			
4/2/2019	<0.0005	0.00015 (J)				
4/3/2019				<0.0005	0.00017 (J)	<0.0005
9/23/2019	<0.0005	0.00011 (J)	<0.0005			
9/27/2019				<0.0005	8.6E-05 (J)	<0.0005
3/2/2020	<0.0005	0.00014 (J)	<0.0005			
3/3/2020				<0.0005	0.00012 (J)	<0.0005
3/25/2020	<0.0005	0.00016 (J)	<0.0005			
3/26/2020						<0.0005
3/31/2020					0.00015 (J)	
4/1/2020				<0.0005		
9/15/2020	<0.0005	0.00013 (J)	<0.0005			
9/16/2020				<0.0005		
9/18/2020					<0.0005	<0.0005
2/8/2021	<0.0005					
2/9/2021		0.00014 (J)	<0.0005			
2/12/2021					<0.0005	<0.0005
2/15/2021				<0.0005		
3/10/2021	<0.0005					
3/11/2021		8.6E-05 (J)	<0.0005			
3/12/2021				<0.0005		
3/16/2021					8.1E-05 (J)	<0.0005

Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/4/2021 7:00 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		<0.0005	<0.0005			
5/23/2016	<0.0005			<0.0005		
7/12/2016	<0.0005	<0.0005	<0.0005	<0.0005		
9/1/2016	<0.0005	<0.0005	<0.0005	<0.0005		
10/20/2016		<0.0005	<0.0005	<0.0005		
10/24/2016	<0.0005					
12/6/2016		<0.0005	<0.0005	<0.0005		
12/7/2016	<0.0005					
1/25/2017		<0.0005	<0.0005			
1/26/2017	<0.0005			<0.0005		
3/21/2017		<0.0005	<0.0005			
3/22/2017	<0.0005			<0.0005		
5/23/2017		<0.0005	<0.0005	<0.0005		
5/24/2017	<0.0005					
4/3/2018		<0.0005	<0.0005	<0.0005		
4/4/2018	<0.0005					
3/12/2019			<0.0005			
3/13/2019	6.2E-05 (J)	<0.0005		<0.0005		<0.0005
3/14/2019				<0.0005		
4/2/2019		<0.0005				<0.0005
4/3/2019			7.4E-05 (J)	<0.0005	<0.0005	
4/5/2019	<0.0005					
9/24/2019			<0.0005			
9/25/2019		<0.0005				<0.0005
9/26/2019	0.00011 (J)					
9/27/2019				<0.0005	<0.0005	
3/2/2020						<0.0005
3/3/2020			<0.0005			
3/4/2020	9.3E-05 (J)	7.7E-05 (J)		<0.0005	<0.0005	
3/26/2020				<0.0005		
3/27/2020		<0.0005	<0.0005			<0.0005
3/30/2020	9.9E-05 (J)					
3/31/2020				<0.0005		
9/16/2020		<0.0005	0.0001 (J)			
9/17/2020				<0.0005		<0.0005
9/21/2020	0.00011 (J)			<0.0005		
2/10/2021		8.1E-05 (J)				
2/11/2021						<0.0005
2/12/2021				<0.0005		
2/16/2021			7.1E-05 (J)	<0.0005		
2/22/2021	9.7E-05 (J)					
3/15/2021		0.00019 (J)	7.8E-05 (J)			<0.0005
3/16/2021				<0.0005		
3/17/2021	9E-05 (J)			<0.0005		

Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/4/2021 7:00 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
3/12/2019					<0.0005	<0.0005
3/13/2019	<0.0005		<0.0005	<0.0005		
3/14/2019		<0.0005				
4/2/2019					<0.0005	<0.0005
4/3/2019		<0.0005	<0.0005			
4/4/2019				<0.0005		
4/8/2019	<0.0005					
9/24/2019						<0.0005
9/26/2019	<0.0005		<0.0005	<0.0005	<0.0005	
9/27/2019		<0.0005				
3/2/2020						<0.0005
3/3/2020		<0.0005				
3/4/2020	<0.0005		<0.0005	<0.0005	0.00014 (J)	
3/26/2020		<0.0005				
3/27/2020					<0.0005	
3/30/2020	<0.0005					<0.0005
3/31/2020			<0.0005			
4/2/2020				<0.0005		
9/16/2020						<0.0005
9/17/2020			<0.0005			
9/18/2020		<0.0005		<0.0005		
9/21/2020	<0.0005				<0.0005	
2/10/2021					5.4E-05 (J)	
2/12/2021		<0.0005				
2/15/2021						<0.0005
2/16/2021	<0.0005		<0.0005	<0.0005		
3/12/2021				<0.0005		
3/15/2021					4.8E-05 (J)	<0.0005
3/16/2021		<0.0005				
3/17/2021	<0.0005		<0.0005			

Time Series

Constituent: Beryllium (mg/L) Analysis Run 5/4/2021 7:00 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
3/13/2019	<0.0005	<0.0005	<0.0005		
4/3/2019	<0.0005	<0.0005	5.1E-05 (J)		
9/25/2019	<0.0005				
9/26/2019		<0.0005	<0.0005		
3/2/2020	<0.0005				
3/3/2020		<0.0005	<0.0005		
3/26/2020	<0.0005				
3/27/2020		<0.0005			
3/30/2020			<0.0005		
9/16/2020				<0.0005	<0.0005
9/17/2020	<0.0005				
9/21/2020		<0.0005	<0.0005		
11/10/2020				<0.0005	<0.0005
12/15/2020				<0.0005	<0.0005
1/19/2021				<0.0005	<0.0005
2/9/2021				<0.0005	<0.0005
2/15/2021			<0.0005		
2/16/2021	<0.0005	<0.0005			
3/10/2021					<0.0005
3/11/2021				<0.0005	
3/15/2021			<0.0005		
3/16/2021	<0.0005	<0.0005			

Time Series

Constituent: Boron (mg/L) Analysis Run 5/4/2021 7:00 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	0.0214 (J)	0.0321 (J)	<0.1			
5/23/2016				0.72	0.787	2.2
7/11/2016	0.0142 (J)	0.0337 (J)				
7/12/2016			0.0074 (J)	0.778	1.17	1.98
8/30/2016	0.0074 (J)	0.0173 (J)	<0.1			
9/1/2016				0.786	1.49	2.28
10/19/2016	0.0224 (J)	0.0341 (J)	0.0085 (J)			
10/24/2016				0.831	2.54	2.75
12/6/2016	0.0211 (J)	0.0326 (J)	0.0085 (J)			
12/7/2016				1.01	2.96	3.35
1/24/2017	0.0165 (J)	0.0365 (J)	0.01 (J)			
1/26/2017				0.108	2.23	3.07
3/21/2017	0.0187 (J)	0.0349 (J)	0.0079 (J)			
3/22/2017				0.788	0.84	3.04
5/22/2017	0.0782	0.0475	0.0131 (J)			
5/24/2017				0.814	2.29	2.95
10/3/2017	0.0198 (J)	0.0386 (J)	0.0097 (J)	0.871	1.47	2.35
6/4/2018	0.02 (J)	0.036 (J)	0.017 (J)			
6/5/2018				1.2	1.3	
6/6/2018						2.5
10/1/2018	0.013 (J)	0.035 (J)	0.0061 (J)			
10/2/2018				0.62		
10/3/2018					0.91	2.3
4/1/2019			0.0066 (J)			
4/2/2019	0.016 (J)	0.034 (J)				
4/3/2019				0.66	0.23	1.8
9/23/2019	0.021 (J)	0.04 (J)	0.0081 (J)			
9/27/2019				1	0.53	2.1
3/25/2020	0.025 (J)	0.039 (J)	0.0096 (J)			
3/26/2020						1.6
3/31/2020					0.17	
4/1/2020				0.23		
6/16/2020	0.021 (J)		0.01 (J)			
9/15/2020	0.017 (J)	0.044 (J)	0.0071 (J)			
9/16/2020				1.1		
9/18/2020					0.91	1.6
3/10/2021	0.015 (J)					
3/11/2021		0.056	0.015 (J)			
3/12/2021				0.64		
3/16/2021					0.53	1.9

Time Series

Constituent: Boron (mg/L) Analysis Run 5/4/2021 7:00 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		0.885	1.71			
5/23/2016	2.15			1.76		
7/12/2016	1.91	0.857	1.43	1.56		
9/1/2016	2.3	0.904	1.91	2		
10/20/2016		0.936	1.72	1.68		
10/24/2016	4.01					
12/6/2016		1.06	2.06	2.15		
12/7/2016	3.85					
1/25/2017		0.764	2.01			
1/26/2017	2.45			1.87		
3/21/2017		0.857	2.08			
3/22/2017	1.99			1.99		
5/23/2017		0.91	2.32	2.29		
5/24/2017	1.74					
10/3/2017	1.43	0.967	2.84	2.05		
6/5/2018	1.3	0.86				
6/6/2018			2.6	2.3		
10/2/2018		0.98	2.7	2.5		
10/5/2018	1.6					
4/2/2019		0.99				0.11
4/3/2019			2.8	2.3	0.63	
4/5/2019	0.86 (J)					
9/24/2019			2.8			
9/25/2019		1.1				0.091
9/26/2019	1.7					
9/27/2019				2.9	0.58	
3/26/2020				1		
3/27/2020		1.2	2.4			0.12
3/30/2020	1.8					
3/31/2020				2.2		
6/16/2020			2.2			
6/17/2020		1				
9/16/2020		1.1	1.9			
9/17/2020				2		0.11
9/21/2020	1.6				0.89	
3/15/2021		1.1	1.7			0.12
3/16/2021				2.2		
3/17/2021	0.89				0.69	

Time Series

Constituent: Boron (mg/L) Analysis Run 5/4/2021 7:00 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
4/2/2019					0.17	1.2
4/3/2019		0.37	1.5			
4/4/2019				0.12 (J)		
4/8/2019	0.47 (J)					
9/24/2019						1.2
9/26/2019	0.49		2	0.14	0.6	
9/27/2019		0.36				
3/26/2020		0.44				
3/27/2020					0.14	
3/30/2020	0.51					1.3
3/31/2020			1.8			
4/2/2020				0.13		
9/16/2020						1.7
9/17/2020			2			
9/18/2020		0.36		0.12		
9/21/2020	0.45				0.45	
3/12/2021				0.13		
3/15/2021					0.36	1.2
3/16/2021		0.4				
3/17/2021	0.49		2.1			

Time Series

Constituent: Boron (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
4/3/2019	0.03 (J)	0.67	0.094		
9/25/2019	0.11				
9/26/2019		0.93	0.26		
3/26/2020	0.041 (J)				
3/27/2020		0.77			
3/30/2020			0.051 (J)		
9/16/2020				0.061 (J)	0.23
9/17/2020	0.067 (J)				
9/21/2020		0.82	0.2		
11/10/2020				0.057 (J)	0.29
12/15/2020				0.052 (J)	0.31
1/19/2021				0.049 (J)	0.4
3/10/2021					0.39
3/11/2021				0.06	
3/15/2021			0.16		
3/16/2021	0.037 (J)	0.81			

Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	<0.0005	<0.0005	<0.0005			
5/23/2016				0.000115 (J)	<0.0005	<0.0005
7/11/2016	<0.0005	<0.0005				
7/12/2016			<0.0005	<0.0005	<0.0005	<0.0005
8/30/2016	<0.0005	<0.0005	<0.0005			
9/1/2016				0.0001 (J)	<0.0005	<0.0005
10/19/2016	<0.0005	<0.0005	<0.0005			
10/24/2016				0.0001 (J)	<0.0005	<0.0005
12/6/2016	<0.0005	<0.0005	<0.0005			
12/7/2016				0.0001 (J)	0.0001 (J)	0.0002 (J)
1/24/2017	<0.0005	0.0001 (J)	<0.0005			
1/26/2017				<0.0005	<0.0005	<0.0005
3/21/2017	<0.0005	7E-05 (J)	<0.0005			
3/22/2017				0.0001 (J)	0.0001 (J)	0.0003 (J)
5/22/2017	<0.0005	0.0001 (J)	<0.0005			
5/24/2017				0.0002 (J)	<0.0005	9E-05 (J)
4/2/2018	<0.0005	<0.0005				
4/3/2018			<0.0005			
4/4/2018				<0.0005	<0.0005	<0.0005
3/12/2019	<0.0005	0.00013 (J)	<0.0005			
3/13/2019				<0.0005	<0.0005	
3/14/2019						<0.0005
4/1/2019			<0.0005			
4/2/2019	<0.0005	0.00015 (J)				
4/3/2019				0.0001 (J)	9.6E-05 (J)	<0.0005
9/23/2019	<0.0005	<0.0005	<0.0005			
9/27/2019				<0.0005	<0.0005	<0.0005
3/2/2020	<0.0005	<0.0005	<0.0005			
3/3/2020				<0.0005	<0.0005	0.00015 (J)
3/25/2020	<0.0005	0.00014 (J)	<0.0005			
3/26/2020						<0.0005
3/31/2020					<0.0005	
4/1/2020				<0.0005		
9/15/2020	<0.0005	0.00012 (J)	<0.0005			
9/16/2020				<0.0005		
9/18/2020					<0.0005	<0.0005
2/8/2021	<0.0005					
2/9/2021		0.00016 (J)	<0.0005			
2/12/2021					<0.0005	<0.0005
2/15/2021				<0.0005		
3/10/2021	<0.0005					
3/11/2021		<0.0005	<0.0005			
3/12/2021				<0.0005		
3/16/2021					<0.0005	<0.0005

Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		<0.0005	0.00024 (J)			
5/23/2016	<0.0005			<0.0005		
7/12/2016	<0.0005	<0.0005	0.0002 (J)	<0.0005		
9/1/2016	<0.0005	<0.0005	0.0001 (J)	<0.0005		
10/20/2016		<0.0005	0.0001 (J)	0.0002 (J)		
10/24/2016	<0.0005					
12/6/2016		0.0002 (J)	0.0017	0.0001 (J)		
12/7/2016	<0.0005					
1/25/2017		0.0002 (J)	0.0002 (J)			
1/26/2017	<0.0005			<0.0005		
3/21/2017		0.0002 (J)	0.0002 (J)			
3/22/2017	<0.0005			7E-05 (J)		
5/23/2017		0.0001 (J)	0.0003 (J)	<0.0005		
5/24/2017	<0.0005					
4/3/2018		<0.0005	<0.0005	<0.0005		
4/4/2018	<0.0005					
3/12/2019			0.0002 (J)			
3/13/2019	<0.0005	<0.0005		<0.0005		<0.0005
3/14/2019				<0.0005		
4/2/2019		<0.0005				<0.0005
4/3/2019			0.00032 (J)	<0.0005	<0.0005	
4/5/2019	<0.0005					
9/24/2019			0.0002 (J)			
9/25/2019		<0.0005				<0.0005
9/26/2019	<0.0005					
9/27/2019				<0.0005	0.00013 (J)	
3/2/2020						<0.0005
3/3/2020			0.00017 (J)			
3/4/2020	<0.0005	<0.0005		<0.0005	0.00026 (J)	
3/26/2020					0.00019 (J)	
3/27/2020		<0.0005	0.00014 (J)			<0.0005
3/30/2020	<0.0005					
3/31/2020				<0.0005		
9/16/2020		<0.0005	0.00023 (J)			
9/17/2020				<0.0005		<0.0005
9/21/2020	<0.0005				0.00018 (J)	
2/10/2021		<0.0005				
2/11/2021						<0.0005
2/12/2021					0.0002 (J)	
2/16/2021			0.00037 (J)	<0.0005		
2/22/2021	<0.0005					
3/15/2021		<0.0005	0.00017 (J)			<0.0005
3/16/2021				<0.0005		
3/17/2021	<0.0005				0.00016 (J)	

Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
3/12/2019					<0.0005	<0.0005
3/13/2019	<0.0005		<0.0005	<0.0005		
3/14/2019		<0.0005				
4/2/2019					<0.0005	<0.0005
4/3/2019		<0.0005	<0.0005			
4/4/2019				<0.0005		
4/8/2019	<0.0005					
9/24/2019						<0.0005
9/26/2019	<0.0005		<0.0005	<0.0005	<0.0005	
9/27/2019		<0.0005				
3/2/2020						<0.0005
3/3/2020		<0.0005				
3/4/2020	<0.0005		<0.0005	<0.0005	<0.0005	
3/26/2020		<0.0005				
3/27/2020					<0.0005	
3/30/2020	<0.0005					<0.0005
3/31/2020			<0.0005			
4/2/2020				<0.0005		
9/16/2020						<0.0005
9/17/2020			<0.0005			
9/18/2020		<0.0005		<0.0005		
9/21/2020	<0.0005				<0.0005	
2/10/2021					<0.0005	
2/12/2021		<0.0005				
2/15/2021						<0.0005
2/16/2021	<0.0005		<0.0005	<0.0005		
3/12/2021				<0.0005		
3/15/2021					<0.0005	<0.0005
3/16/2021		<0.0005				
3/17/2021	<0.0005		<0.0005			

Time Series

Constituent: Cadmium (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
3/13/2019	<0.0005	<0.0005	<0.0005		
4/3/2019	<0.0005	<0.0005	<0.0005		
9/25/2019	<0.0005				
9/26/2019		<0.0005	<0.0005		
3/2/2020	<0.0005				
3/3/2020		<0.0005	<0.0005		
3/26/2020	<0.0005				
3/27/2020		<0.0005			
3/30/2020			<0.0005		
9/16/2020				<0.0005	<0.0005
9/17/2020	<0.0005				
9/21/2020		<0.0005	<0.0005		
11/10/2020				<0.0005	<0.0005
12/15/2020				<0.0005	<0.0005
1/19/2021				<0.0005	<0.0005
2/9/2021				<0.0005	<0.0005
2/15/2021			<0.0005		
2/16/2021	<0.0005	<0.0005			
3/10/2021					<0.0005
3/11/2021				<0.0005	
3/15/2021			<0.0005		
3/16/2021	<0.0005	<0.0005			

Time Series

Constituent: Calcium (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	138	22.9	76.2			
5/23/2016				167	131	195
7/11/2016	97.2	22.3				
7/12/2016			61.5	143	124	181
8/30/2016	97.5	26.4	65.1			
9/1/2016				156	107	179
10/19/2016	99.2	21.7	73.2			
10/24/2016				156	145	193
12/6/2016	105	18.2	74.9			
12/7/2016				183	159	193
1/24/2017	95.7	18.5	69.6			
1/26/2017				82.6	121	172
3/21/2017	106	18.6	75.7			
3/22/2017				154	130	162
5/22/2017	107	17.8	71.5			
5/24/2017				171	117	158
10/3/2017	102	20.2	76.3	162	87.7	130
6/4/2018	124	19.1	73.4			
6/5/2018				167	113	
6/6/2018						136
10/1/2018	108	20.5 (J)	80.9			
10/2/2018				144		
10/3/2018					89	125
4/1/2019			80.5			
4/2/2019	132	22.5 (J)				
4/3/2019				137	112	114
9/23/2019	118	19.5	71			
9/27/2019				157	113	153
3/25/2020	127	23	89.8			
3/26/2020						145
3/31/2020					124	
4/1/2020				96.2		
6/16/2020	130		85.1			
9/15/2020	103	21.1	73.1			
9/16/2020				139		
9/18/2020					122	163
3/10/2021	111					
3/11/2021		43.8	83.8			
3/12/2021				146 (M1)		
3/16/2021					132	166

Time Series

Constituent: Calcium (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		117	159			
5/23/2016	133			179		
7/12/2016	101	88.8	127	174		
9/1/2016	120	96.3	135	170		
10/20/2016		96.9	134	133		
10/24/2016	127					
12/6/2016		104	142	181		
12/7/2016	113					
1/25/2017		94.5	142			
1/26/2017	77.9			175		
3/21/2017		109	148			
3/22/2017	85.1			183		
5/23/2017		93.3	140	181		
5/24/2017	77.1					
10/3/2017	62	108	158	188		
6/5/2018	110	99.8				
6/6/2018			127	184		
10/2/2018		108	118	173		
10/5/2018	73.6					
4/2/2019		101				109
4/3/2019			125	164	74.9	
4/5/2019	77.1					
9/24/2019			113			
9/25/2019		105				113
9/26/2019	195					
9/27/2019				175	90	
3/26/2020					171	
3/27/2020		119	133			126
3/30/2020	234					
3/31/2020				182		
6/16/2020			120			
6/17/2020		112				
9/16/2020		98	119			
9/17/2020				164		110
9/21/2020	173				135	
3/15/2021		113	156			121
3/16/2021				182		
3/17/2021	184				130	

Time Series

Constituent: Calcium (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
4/2/2019					64.6	131
4/3/2019		25.4	122			
4/4/2019				26.3		
4/8/2019	83					
9/24/2019						140
9/26/2019	83.1		158	32.1	84	
9/27/2019		26.4				
3/26/2020		27				
3/27/2020					53	
3/30/2020	84.4					148
3/31/2020			155			
4/2/2020				28.4		
9/16/2020						126
9/17/2020			150			
9/18/2020		25.1		24.8		
9/21/2020	87.6				76.8	
3/12/2021				28		
3/15/2021					66.1	145
3/16/2021		24.8				
3/17/2021	102		175			

Time Series

Constituent: Calcium (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
4/3/2019	82	178	50.2		
9/25/2019	105				
9/26/2019		189	83.9		
3/26/2020	89.6				
3/27/2020		186			
3/30/2020			31.1		
9/16/2020				56	30
9/17/2020	103				
9/21/2020		173	75.3		
11/10/2020				63.3	33.6
12/15/2020				62.6	28.7
1/19/2021				60.1	33
3/10/2021					5.9
3/11/2021				59.6	
3/15/2021			76.9		
3/16/2021	71.8	184			

Time Series

Constituent: Chloride (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	9.94	6.14	5.93			
5/23/2016				56.1	51.9	160
7/11/2016	6.3	5.9				
7/12/2016			6.2	63	100	160
8/30/2016	6	6.2	6.4			
9/1/2016				77	58	140
10/19/2016	5.8	6.1	6.5			
10/24/2016				99	220	160
12/6/2016	5.4	6	7.2			
12/7/2016				96	180	190
1/24/2017	5.2	6.1	6.4			
1/26/2017				7	90	160
3/21/2017	4.6	5.9	7.5			
3/22/2017				82	37	130
5/22/2017	4.6	5.9	6.5			
5/24/2017				81	69	120
10/3/2017	5.6	6.3	6.5	100	28	93
6/4/2018	13.1	6.1	6.3			
6/5/2018				66.6	56.1	
6/6/2018						46.4
10/1/2018	6.6	6.4	6.4			
10/2/2018				48.3		
10/3/2018					24.8	88.4
4/1/2019			6.5			
4/2/2019	20.3	5.8				
4/3/2019				49.3	4.6	62.8
9/23/2019	17.7	5.1	5.9			
9/27/2019				49.9	27.9	81
3/25/2020	20.4	5.2	6.1			
3/26/2020						48
3/31/2020					3.2	
4/1/2020				5.4		
6/16/2020	41.1		5.8			
9/15/2020	13.4	5	6			
9/16/2020				39.7		
9/18/2020					34.9	74.6
3/10/2021	7.4					
3/11/2021		5.1	5.9			
3/12/2021				35		
3/16/2021					11.5	56.8

Time Series

Constituent: Chloride (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		50.4	109			
5/23/2016	93.2			152		
7/12/2016	78	50	110	160		
9/1/2016	100	50	110	160		
10/20/2016		49	110	110		
10/24/2016	140					
12/6/2016		51	100	150		
12/7/2016	110					
1/25/2017		54	110			
1/26/2017	70			170		
3/21/2017		46	110			
3/22/2017	59			160		
5/23/2017		49	130	150		
5/24/2017	50					
10/3/2017	29	52	130	160		
6/5/2018	72.3	52.3				
6/6/2018			44.8	138		
10/2/2018		52.6	89.4	142		
10/5/2018	32.3					
4/2/2019		55.5				27.5
4/3/2019			91.6	130	19.5	
4/5/2019	36.4					
9/24/2019			60.2			
9/25/2019		49.8				25.7
9/26/2019	109					
9/27/2019				126	46.2	
3/26/2020				64		
3/27/2020		48.3	79.8			28.8
3/30/2020	75.1					
3/31/2020				105		
6/16/2020			67.9			
6/17/2020		45.2				
9/16/2020		46.4	74.6			
9/17/2020				105		29.7
9/21/2020	41.2				35	
3/15/2021		44.5	72.4			31.1
3/16/2021				94.7		
3/17/2021	31.4				19.8	

Time Series

Constituent: Chloride (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
4/2/2019					44	80.9
4/3/2019		32	90.6			
4/4/2019				26.9		
4/8/2019	43.3					
9/24/2019						83.8
9/26/2019	39.7		118	31.8	43.5	
9/27/2019		36.2				
3/26/2020		34.6				
3/27/2020					33	
3/30/2020	37.4					71.2
3/31/2020			98			
4/2/2020				27.9		
9/16/2020						75.3
9/17/2020			103			
9/18/2020		33.4		30.4		
9/21/2020	45.2				42.9	
3/12/2021				31.3		
3/15/2021					35.8	73.6
3/16/2021		29.2				
3/17/2021	42.9		95.3			

Time Series

Constituent: Chloride (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
4/3/2019	1.8	60.9	5.6		
9/25/2019	35.9				
9/26/2019		64.9	15.6		
3/26/2020	0.73 (J)				
3/27/2020		48.6			
3/30/2020			1.5		
9/16/2020				4.1	7.2
9/17/2020	28.7				
9/21/2020		58.1	11.1		
11/10/2020				4.4	7.8
12/15/2020				4.7	9.4
1/19/2021				4.1	9.5
3/10/2021					12.3
3/11/2021				4.5	
3/15/2021			6.8		
3/16/2021	1.4	49.8			

Time Series

Constituent: Chromium (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	<0.005	<0.005	<0.005			
5/23/2016				<0.005	<0.005	<0.005
7/11/2016	<0.005	<0.005				
7/12/2016			<0.005	<0.005	<0.005	<0.005
8/30/2016	<0.005	<0.005	<0.005			
9/1/2016				<0.005	<0.005	<0.005
10/19/2016	<0.005	<0.005	<0.005			
10/24/2016				<0.005	<0.005	<0.005
12/6/2016	<0.005	<0.005	<0.005			
12/7/2016				<0.005	<0.005	<0.005
1/24/2017	<0.005	<0.005	<0.005			
1/26/2017				<0.005	<0.005	<0.005
3/21/2017	0.0005 (J)	<0.005	<0.005			
3/22/2017				<0.005	0.0003 (J)	0.0004 (J)
5/22/2017	<0.005	<0.005	0.0007 (J)			
5/24/2017				<0.005	<0.005	<0.005
4/2/2018	<0.005	<0.005				
4/3/2018			<0.005			
4/4/2018				<0.005	<0.005	<0.005
3/12/2019	<0.005	<0.005	<0.005			
3/13/2019				<0.005	<0.005	
3/14/2019						0.0025 (J)
4/1/2019			<0.005			
4/2/2019	<0.005	0.0079 (J)				
4/3/2019				0.02	<0.005	<0.005
9/23/2019	<0.005	0.00058 (J)	<0.005			
9/27/2019				<0.005	<0.005	<0.005
3/2/2020	<0.005	0.00041 (J)	<0.005			
3/3/2020				<0.005	0.00061 (J)	<0.005
3/25/2020	0.00072 (J)	<0.005	<0.005			
3/26/2020						<0.005
3/31/2020					<0.005	
4/1/2020				<0.005		
9/15/2020	<0.005	<0.005	<0.005			
9/16/2020				<0.005		
9/18/2020					<0.005	0.00091 (J)
2/8/2021	<0.005					
2/9/2021		<0.005	<0.005			
2/12/2021					<0.005	<0.005
2/15/2021				<0.005		
3/10/2021	<0.005					
3/11/2021		<0.005	<0.005			
3/12/2021				<0.005		
3/16/2021					<0.005	<0.005

Time Series

Constituent: Chromium (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		<0.005	<0.005			
5/23/2016	<0.005			<0.005		
7/12/2016	<0.005	<0.005	<0.005	<0.005		
9/1/2016	<0.005	<0.005	<0.005	<0.005		
10/20/2016		<0.005	<0.005	<0.005		
10/24/2016	<0.005					
12/6/2016		<0.005	<0.005	<0.005		
12/7/2016	<0.005					
1/25/2017		<0.005	<0.005			
1/26/2017	<0.005			<0.005		
3/21/2017		<0.005	0.0005 (J)			
3/22/2017	0.0004 (J)			<0.005		
5/23/2017		<0.005	<0.005	<0.005		
5/24/2017	<0.005					
4/3/2018		<0.005	<0.005	<0.005		
4/4/2018	<0.005					
3/12/2019			<0.005			
3/13/2019	<0.005	<0.005		<0.005		<0.005
3/14/2019				<0.005		
4/2/2019		<0.005				<0.005
4/3/2019			<0.005	<0.005	<0.005	
4/5/2019	<0.005					
9/24/2019			<0.005			
9/25/2019		0.071				<0.005
9/26/2019	<0.005					
9/27/2019				<0.005	<0.005	
3/2/2020						0.00071 (J)
3/3/2020			0.0007 (J)			
3/4/2020	<0.005	0.0016 (J)		<0.005	0.00066 (J)	
3/26/2020					0.00047 (J)	
3/27/2020		0.0004 (J)	<0.005			0.00051 (J)
3/30/2020	0.00059 (J)					
3/31/2020				0.00052 (J)		
9/16/2020		0.00074 (J)	0.0015 (J)			
9/17/2020				<0.005		<0.005
9/21/2020	0.00056 (J)				0.0014 (J)	
2/10/2021		0.0014 (J)				
2/11/2021						<0.005
2/12/2021					0.00059 (J)	
2/16/2021			<0.005	0.00067 (J)		
2/22/2021	<0.005					
3/15/2021		0.0021 (J)	0.00082 (J)			0.00068 (J)
3/16/2021				<0.005		
3/17/2021	<0.005				0.0022 (J)	

Time Series

Constituent: Chromium (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
3/12/2019					<0.005	<0.005
3/13/2019	<0.005		<0.005	<0.005		
3/14/2019		<0.005				
4/2/2019					<0.005	<0.005
4/3/2019		<0.005	<0.005			
4/4/2019				<0.005		
4/8/2019	<0.005					
9/24/2019						<0.005
9/26/2019	0.00042 (J)		0.00076 (J)	<0.005	0.00081 (J)	
9/27/2019		<0.005				
3/2/2020						<0.005
3/3/2020		<0.005				
3/4/2020	<0.005		0.0028 (J)	<0.005	0.0027 (J)	
3/26/2020		0.00061 (J)				
3/27/2020					<0.005	
3/30/2020	<0.005					0.001 (J)
3/31/2020			0.001 (J)			
4/2/2020				<0.005		
9/16/2020						<0.005
9/17/2020			<0.005			
9/18/2020		<0.005		0.0007 (J)		
9/21/2020	<0.005				0.00085 (J)	
2/10/2021					0.0014 (J)	
2/12/2021		<0.005				
2/15/2021						<0.005
2/16/2021	<0.005		0.001 (J)	0.00082 (J)		
3/12/2021				<0.005		
3/15/2021					0.00078 (J)	<0.005
3/16/2021		<0.005				
3/17/2021	0.0017 (J)		0.0015 (J)			

Time Series

Constituent: Chromium (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
3/13/2019	0.003 (J)	<0.005	<0.005		
4/3/2019	0.003 (J)	<0.005	0.0023 (J)		
9/25/2019	0.0052 (J)				
9/26/2019		<0.005	0.0013 (J)		
3/2/2020	0.0042 (J)				
3/3/2020		0.00044 (J)	0.0015 (J)		
3/26/2020	0.0044 (J)				
3/27/2020		0.00059 (J)			
3/30/2020			0.0021 (J)		
9/16/2020				<0.005	0.0012 (J)
9/17/2020	0.0021 (J)				
9/21/2020		<0.005	0.0017 (J)		
11/10/2020				<0.005	0.00089 (J)
12/15/2020				<0.005	0.00072 (J)
1/19/2021				<0.005	0.0011 (J)
2/9/2021				0.00095 (J)	0.00066 (J)
2/15/2021			0.0015 (J)		
2/16/2021	0.0032 (J)	<0.005			
3/10/2021					<0.005
3/11/2021				<0.005	
3/15/2021			0.0018 (J)		
3/16/2021	0.0024 (J)	<0.005			

Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	<0.005	0.0293	<0.005			
5/23/2016				<0.005	<0.005	<0.005
7/11/2016	0.0004 (J)	0.0267				
7/12/2016			<0.005	0.0006 (J)	0.0021 (J)	0.0018 (J)
8/30/2016	<0.005	0.028	<0.005			
9/1/2016				0.0007 (J)	0.0025 (J)	0.0016 (J)
10/19/2016	<0.005	0.0201	<0.005			
10/24/2016				0.0009 (J)	0.0032 (J)	0.0017 (J)
12/6/2016	<0.005	0.0184	<0.005			
12/7/2016				0.0012 (J)	0.003 (J)	0.0021 (J)
1/24/2017	<0.005	0.0206	<0.005			
1/26/2017				<0.005	0.0014 (J)	0.0016 (J)
3/21/2017	<0.005	0.0251	<0.005			
3/22/2017				0.0006 (J)	0.0014 (J)	0.0018 (J)
5/22/2017	<0.005	0.0263	<0.005			
5/24/2017				0.0006 (J)	0.0008 (J)	0.0015 (J)
4/2/2018	<0.005	0.019				
4/3/2018			<0.005			
4/4/2018				<0.005	<0.005	<0.005
3/12/2019	<0.005	0.017	<0.005			
3/13/2019				<0.005	0.00098 (J)	
3/14/2019						0.0011 (J)
4/1/2019			<0.005			
4/2/2019	<0.005	0.019				
4/3/2019				<0.005	0.0018 (J)	0.0011 (J)
9/23/2019	<0.005	0.038	<0.005			
9/27/2019				<0.005	0.00071 (J)	0.0012 (J)
3/2/2020	<0.005	0.019	<0.005			
3/3/2020				<0.005	0.00087 (J)	0.0013 (J)
3/25/2020	<0.005	0.02	<0.005			
3/26/2020						0.0012 (J)
3/31/2020					0.0014 (J)	
4/1/2020				<0.005		
9/15/2020	<0.005	0.021	<0.005			
9/16/2020				<0.005		
9/18/2020					<0.005	0.0014 (J)
2/8/2021	<0.005					
2/9/2021		0.02	<0.005			
2/12/2021					<0.005	0.0012 (J)
2/15/2021				<0.005		
3/10/2021	<0.005					
3/11/2021		0.013	<0.005			
3/12/2021				<0.005		
3/16/2021					<0.005	0.0012 (J)

Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		<0.005	0.00207 (J)			
5/23/2016	0.00361 (J)			<0.005		
7/12/2016	0.0032 (J)	0.0003 (J)	0.0019 (J)	0.0006 (J)		
9/1/2016	0.0033 (J)	<0.005	0.0023 (J)	0.0007 (J)		
10/20/2016		0.0008 (J)	0.002 (J)	0.002 (J)		
10/24/2016	0.004 (J)					
12/6/2016		0.0009 (J)	0.0026 (J)	0.0011 (J)		
12/7/2016	0.0034 (J)					
1/25/2017		0.0005 (J)	0.002 (J)			
1/26/2017	0.0024 (J)			0.0006 (J)		
3/21/2017		0.0005 (J)	0.0023 (J)			
3/22/2017	0.0026 (J)			0.0005 (J)		
5/23/2017		0.0005 (J)	0.0023 (J)	0.0006 (J)		
5/24/2017	0.0022 (J)					
4/3/2018		<0.005	<0.005	<0.005		
4/4/2018	<0.005					
3/12/2019			0.002 (J)			
3/13/2019	0.0022 (J)	0.00067 (J)		0.00065 (J)		0.0011 (J)
3/14/2019					0.025	
4/2/2019		0.00069 (J)				<0.005
4/3/2019			0.0019 (J)	0.00069 (J)	0.036	
4/5/2019	0.0017 (J)					
9/24/2019			0.0015 (J)			
9/25/2019		0.0026 (J)				<0.005
9/26/2019	0.0042 (J)					
9/27/2019				0.00057 (J)	0.033	
3/2/2020						<0.005
3/3/2020			0.002 (J)			
3/4/2020	0.0066	0.0011 (J)		0.00053 (J)	0.048	
3/26/2020					0.045	
3/27/2020		0.00074 (J)	0.0018 (J)			<0.005
3/30/2020	0.0053					
3/31/2020				0.00051 (J)		
9/16/2020		0.00065 (J)	0.0019 (J)			
9/17/2020				0.0007 (J)		<0.005
9/21/2020	0.0032 (J)				0.032	
2/10/2021		0.00081 (J)				
2/11/2021						<0.005
2/12/2021					0.037	
2/16/2021			0.002 (J)	0.00061 (J)		
2/22/2021	0.003 (J)					
3/15/2021		0.0014 (J)	0.0019 (J)			<0.005
3/16/2021				0.00069 (J)		
3/17/2021	0.0029 (J)				0.037	

Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
3/12/2019					<0.005	0.00057 (J)
3/13/2019	<0.005		<0.005	<0.005		
3/14/2019		<0.005				
4/2/2019					<0.005	0.00084 (J)
4/3/2019		<0.005	<0.005			
4/4/2019				9.1E-05 (J)		
4/8/2019	0.00025 (J)					
9/24/2019						0.0015 (J)
9/26/2019	0.0011 (J)		0.00053 (J)	<0.005	<0.005	
9/27/2019		<0.005				
3/2/2020						0.00067 (J)
3/3/2020		<0.005				
3/4/2020	0.00056 (J)		<0.005	0.00045 (J)	0.00093 (J)	
3/26/2020		<0.005				
3/27/2020					<0.005	
3/30/2020	<0.005					0.00063 (J)
3/31/2020			0.0003 (J)			
4/2/2020				<0.005		
9/16/2020						0.0013 (J)
9/17/2020			<0.005			
9/18/2020		<0.005		<0.005		
9/21/2020	<0.005				<0.005	
2/10/2021					<0.005	
2/12/2021		<0.005				
2/15/2021						0.00097 (J)
2/16/2021	<0.005		0.00045 (J)	0.0004 (J)		
3/12/2021				<0.005		
3/15/2021					<0.005	0.0011 (J)
3/16/2021		<0.005				
3/17/2021	<0.005		0.00044 (J)			

Time Series

Constituent: Cobalt (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
3/13/2019	<0.005	0.00055 (J)	<0.005		
4/3/2019	<0.005	<0.005	<0.005		
9/25/2019	<0.005				
9/26/2019		0.00036 (J)	<0.005		
3/2/2020	<0.005				
3/3/2020		0.00094 (J)	<0.005		
3/26/2020	<0.005				
3/27/2020		0.00059 (J)			
3/30/2020			<0.005		
9/16/2020				<0.005	<0.005
9/17/2020	<0.005				
9/21/2020		0.00041 (J)	<0.005		
11/10/2020				<0.005	<0.005
12/15/2020				<0.005	<0.005
1/19/2021				<0.005	<0.005
2/9/2021				<0.005	<0.005
2/15/2021			<0.005		
2/16/2021	<0.005	0.00045 (J)			
3/10/2021					<0.005
3/11/2021				<0.005	
3/15/2021			<0.005		
3/16/2021	<0.005	0.00042 (J)			

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/4/2021 7:01 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	0.397 (U)	0.627 (U)	0.342 (U)			
5/23/2016				0.419 (U)	0.509 (U)	1.12
7/11/2016	0.738 (U)	1.38				
7/12/2016			0.499 (U)	0.855	0.784 (U)	1.61
8/30/2016	0.581 (U)	1.05 (U)	0.976 (U)			
9/1/2016				0.844 (U)	0.261 (U)	1.23
10/19/2016	0.213 (U)	1.11 (U)	0.626 (U)			
10/24/2016				0.917 (U)	1.42	1.98
12/6/2016	0.444 (U)	0.741 (U)	0.805 (U)			
12/7/2016				0.558 (U)	0.781 (U)	0.319 (U)
1/24/2017	0.373 (U)	0.908 (U)	0.336 (U)			
1/26/2017				0.922 (U)	0.842 (U)	0.54 (U)
3/21/2017	0.816 (U)	0.567 (U)	0.358 (U)			
3/22/2017				0.751 (U)	0.318 (U)	0.635 (U)
5/22/2017	0.554 (U)	0.638 (U)	0.744 (U)			
5/24/2017				0.725 (U)	0.687 (U)	1.01
4/2/2018	0.405 (U)	0.761 (U)				
4/3/2018			0.684 (U)			
4/4/2018				0.715 (U)	1.5	0.956
6/4/2018	1.13 (U)	0.975 (U)	0.0291 (U)			
6/5/2018				0.718 (U)	0.549 (U)	
6/6/2018						0.424 (U)
10/1/2018	0.132 (U)	0.434 (U)	0.781 (U)			
10/2/2018				0.948		
10/3/2018					1.48	0.57 (U)
3/12/2019	0.327 (U)	0.454 (U)	1.01 (U)			
3/13/2019				1.19 (U)	0.584 (U)	
3/14/2019						0.992 (U)
4/1/2019			0.76 (U)			
4/2/2019	0.739 (U)	0.651 (U)				
4/3/2019				1.82 (U)	0.36 (U)	0.734 (U)
9/27/2019				1.16 (U)	1.78	0.958 (U)
9/30/2019	0.306 (U)	1.04 (U)	0.384 (U)			
3/2/2020	0.61 (U)	1.58	0.249 (U)			
3/3/2020				0.667 (U)	0.716 (U)	0.971 (U)
3/25/2020	4.36	0.621 (U)	0.833 (U)			
3/26/2020						0.209 (U)
3/31/2020					1.3 (U)	
4/1/2020				0.235 (U)		
9/15/2020	0.748 (U)	0.124 (U)	0.161 (U)			
9/16/2020				0 (U)		
9/18/2020					1.24 (U)	0.916 (U)
2/8/2021	0.223 (U)					
2/9/2021		0.721 (U)	0.447 (U)			
2/12/2021					1.1	0.236 (U)
2/15/2021				1.91		
3/10/2021	0 (U)					
3/11/2021		0.737 (U)	0.128 (U)			
3/12/2021				1.12 (U)		
3/16/2021					1.71	0.245 (U)

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/4/2021 7:01 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		0.62 (U)	0.56 (U)			
5/23/2016	0.625 (U)			0.826 (U)		
7/12/2016	0.478 (U)	0.283 (U)	0.636 (U)	0.511 (U)		
9/1/2016	0.595 (U)	0.703 (U)	0.818 (U)	0.762 (U)		
10/20/2016		1.97	1.04 (U)	1.17		
10/24/2016	1.54					
12/6/2016		2	0.771 (U)	0.126 (U)		
12/7/2016	0.657 (U)					
1/25/2017		1.06 (U)	0.859 (U)			
1/26/2017	1.22			0.515 (U)		
3/21/2017		0.668 (U)	0.851 (U)			
3/22/2017	0.285 (U)			0.451 (U)		
5/23/2017		0.621 (U)	0.705 (U)	0.924 (U)		
5/24/2017	0.655 (U)					
4/3/2018		0.538 (U)	0.311 (U)	0.732 (U)		
4/4/2018	0.882 (U)					
6/5/2018	1.1 (U)	0.985 (U)				
6/6/2018			0.896 (U)	0.813 (U)		
10/2/2018		0.837 (U)	1.21	0.61 (U)		
10/5/2018	0.558 (U)					
3/12/2019			0.544 (U)			
3/13/2019	0.39 (U)	0.403 (U)		1 (U)		0.538 (U)
3/14/2019				0.347 (U)		
4/2/2019		0.865 (U)				1.02 (U)
4/3/2019			0.885 (U)	0.156 (U)	0.884 (U)	
4/5/2019	0.422 (U)					
9/24/2019			1.3			
9/25/2019		0.884 (U)				1.35 (U)
9/26/2019	0.939 (U)					
9/27/2019				0.428 (U)	0.534 (U)	
3/2/2020						0.653 (U)
3/3/2020			0.835 (U)			
3/4/2020	0.708 (U)	0.624 (U)		1.03	1.04	
3/26/2020					1.1 (U)	
3/27/2020		0.485 (U)	1.04 (U)			0.1 (U)
3/30/2020	0.602 (U)					
3/31/2020				1.2 (U)		
9/16/2020		0.135 (U)	0.526 (U)			
9/17/2020				1.38 (U)		0.469 (U)
9/21/2020	1.53			1.36 (U)		
2/10/2021		0.281 (U)				
2/11/2021						0.334 (U)
2/12/2021					0.764 (U)	
2/16/2021			0.764 (U)	1.17 (U)		
2/22/2021	1.02					
3/15/2021		0.666 (U)	1.3 (U)			1.24 (U)
3/16/2021				0.446 (U)		
3/17/2021	1.45 (U)			0.466 (U)		

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/4/2021 7:01 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
3/12/2019					0.926 (U)	1.37
3/13/2019	0.311 (U)		0.627 (U)	1.81		
3/14/2019		1.28 (U)				
4/2/2019					0.479 (U)	0.62 (U)
4/3/2019		0.662 (U)	0.205 (U)			
4/4/2019				1.33		
4/8/2019	0.573 (U)					
9/24/2019						0.675 (U)
9/26/2019	0.878 (U)		0.912 (U)	0.974 (U)	0.997 (U)	
9/27/2019		0.945 (U)				
3/2/2020						0.413 (U)
3/3/2020		1.36				
3/4/2020	0.333 (U)		1.27 (U)	1.12	1.31	
3/26/2020		0.793 (U)				
3/27/2020					1.59	
3/30/2020	0.107 (U)					0.885 (U)
3/31/2020			1.65			
4/2/2020				2.48		
9/16/2020						0.193 (U)
9/17/2020			0.42 (U)			
9/18/2020		1.17 (U)		1.13 (U)		
9/21/2020	1.23 (U)				1.39 (U)	
2/10/2021					0.201 (U)	
2/12/2021		1.17				
2/15/2021						1.17 (U)
2/16/2021	0.156 (U)		0.505 (U)	1.21		
3/12/2021				0.649 (U)		
3/15/2021					0.564 (U)	0.436 (U)
3/16/2021		0.742 (U)				
3/17/2021	0.174 (U)		0.165 (U)			

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 5/4/2021 7:01 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
3/13/2019	0.621 (U)	2.07	1.23		
4/3/2019	0.932 (U)	0.872 (U)	1.05 (U)		
9/25/2019	0.798 (U)				
9/26/2019		0.745 (U)	0.947 (U)		
3/2/2020	0.964 (U)				
3/3/2020		0.757 (U)	1.15		
3/26/2020	1.1				
3/27/2020		0.758 (U)			
3/30/2020			0.83 (U)		
9/16/2020				0.531 (U)	0.422 (U)
9/17/2020	0.618 (U)				
9/21/2020		0.796 (U)	1.55 (U)		
11/10/2020				0.788 (U)	0.293 (U)
12/15/2020				1.04 (U)	0.7 (U)
1/19/2021				0.685 (U)	0.79 (U)
2/9/2021				0.138 (U)	0.486 (U)
2/15/2021			0.892 (U)		
2/16/2021	0.466 (U)	0.198 (U)			
3/10/2021					0.811 (U)
3/11/2021				1.51 (U)	
3/15/2021			0.386 (U)		
3/16/2021	1.22	0.727 (U)			

Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	0.105 (J)	0.0303 (J)	0.0513 (J)			
5/23/2016				0.0394 (J)	0.203 (J)	0.212 (J)
7/11/2016	0.16 (J)	0.05 (J)				
7/12/2016			0.12 (J)	0.15 (J)	0.44	0.31
8/30/2016	0.09 (J)	0.06 (J)	0.09 (J)			
9/1/2016				0.5	0.67	0.62
10/19/2016	0.1 (J)	0.04 (J)	0.1 (J)			
10/24/2016				0.06 (J)	0.26 (J)	0.19 (J)
12/6/2016	0.11 (J)	0.36	0.21 (J)			
12/7/2016				0.44	0.55	0.73
1/24/2017	0.09 (J)	<0.1	0.06 (J)			
1/26/2017				0.29 (J)	0.27 (J)	0.12 (J)
3/21/2017	0.13 (J)	<0.1	0.005 (J)			
3/22/2017				0.34	0.66	0.44
5/22/2017	0.12 (J)	<0.1	0.05 (J)			
5/24/2017				0.13 (J)	0.35	0.34
10/3/2017	0.13 (J)	<0.1	0.13 (J)	0.46	0.56	0.58
4/2/2018	<0.1	<0.1				
4/3/2018			<0.1			
4/4/2018				<0.1	0.39	<0.1
6/4/2018	0.074 (J)	<0.1	<0.1			
6/5/2018				<0.1	0.24 (J)	
6/6/2018						0.21 (J)
10/1/2018	<0.1	<0.1	<0.1			
10/2/2018				0.17 (J)		
10/3/2018					0.31	0.15 (J)
3/12/2019	0.29 (J)	0.038 (J)	0.072 (J)			
3/13/2019				0.17 (J)	0.51	
3/14/2019						1.1
4/1/2019			0.029 (J)			
4/2/2019	0.1 (J)	0.071 (J)				
4/3/2019				0.082 (J)	0.43	0.3 (J)
9/23/2019	0.078 (J)	<0.1	<0.1			
9/27/2019				0.17 (J)	0.42	0.26 (J)
3/2/2020	0.076 (J)	<0.1	<0.1			
3/3/2020				0.11 (J)	0.24 (J)	0.21 (J)
3/25/2020	0.098 (J)	<0.1	<0.1			
3/26/2020						0.17 (J)
3/31/2020					0.19 (J)	
4/1/2020				0.12 (J)		
6/16/2020	0.071 (J)		<0.1			
9/15/2020	0.082 (J)	<0.1	<0.1			
9/16/2020				<0.1		
9/18/2020					0.15	0.15
2/8/2021	0.078 (J)					
2/9/2021		<0.1	0.074 (J)			
2/12/2021					0.17	0.19
2/15/2021				0.08 (J)		
3/10/2021	0.079 (J)					
3/11/2021		0.1	<0.1			
3/12/2021				0.054 (J)		
3/16/2021					0.21	0.2

Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		0.0828 (J)	0.499			
5/23/2016	0.2587 (J)			<0.1		
7/12/2016	0.53	0.2 (J)	0.67	0.24 (J)		
9/1/2016	0.74	0.51	0.94	0.46		
10/20/2016		0.4	0.56	0.56		
10/24/2016	0.31					
12/6/2016		0.26 (J)	0.76	0.31		
12/7/2016	1					
1/25/2017		0.24 (J)	1.1			
1/26/2017	0.68			0.004 (J)		
3/21/2017		0.13 (J)	0.46			
3/22/2017	0.76			0.28 (J)		
5/23/2017		0.11 (J)	0.65	0.29 (J)		
5/24/2017	0.54					
10/3/2017	0.83	0.17 (J)	0.66	0.53		
4/3/2018		<0.1	0.39	<0.1		
4/4/2018	0.65					
6/5/2018	0.47	0.099 (J)				
6/6/2018			0.46	0.12 (J)		
10/2/2018		<0.1	0.51	0.031 (J)		
10/5/2018	0.77					
3/12/2019			0.58			
3/13/2019	0.78	0.12 (J)		0.14 (J)		0.072 (J)
3/14/2019					0.35	
4/2/2019		0.097 (J)				<0.1
4/3/2019			0.63	0.14 (J)	0.19 (J)	
4/5/2019	0.83					
9/24/2019			0.49			
9/25/2019		0.1 (J)				<0.1
9/26/2019	0.64					
9/27/2019				0.26 (J)	0.53	
3/2/2020						<0.1
3/3/2020			0.45			
3/4/2020	0.37	0.077 (J)		0.08 (J)	0.096 (J)	
3/26/2020					0.12 (J)	
3/27/2020		0.059 (J)	0.46			<0.1
3/30/2020	0.44					
3/31/2020				0.074 (J)		
6/16/2020			0.45			
6/17/2020		0.077 (J)				
9/16/2020		0.081 (J)	0.53			
9/17/2020				0.1		<0.1
9/21/2020	0.44				0.17	
2/10/2021		0.085 (J)				
2/11/2021						<0.1
2/12/2021					0.16	
2/16/2021			0.47	0.096 (J)		
2/22/2021	0.55					
3/15/2021		0.086 (J)	0.51			<0.1
3/16/2021				0.098 (J)		
3/17/2021	0.65				0.18	

Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
3/12/2019					0.24 (J)	0.07 (J)
3/13/2019	0.074 (J)		0.052 (J)	0.28 (J)		
3/14/2019		2.2				
4/2/2019					0.18 (J)	0.045 (J)
4/3/2019		1.6	0.044 (J)			
4/4/2019				0.26 (J)		
4/8/2019	0.048 (J)					
9/24/2019						0.18 (J)
9/26/2019	0.18 (J)		0.19 (J)	0.42	0.22 (J)	
9/27/2019		1.5				
3/2/2020						<0.1
3/3/2020		1.4				
3/4/2020	0.051 (J)		0.052 (J)	0.25 (J)	0.26 (J)	
3/26/2020		1.6				
3/27/2020					0.26 (J)	
3/30/2020	0.064 (J)					<0.1
3/31/2020			<0.1			
4/2/2020				0.24 (J)		
9/16/2020						<0.1
9/17/2020			0.069 (J)			
9/18/2020		1.6		0.22		
9/21/2020	<0.1				0.1	
2/10/2021					0.16	
2/12/2021		1.6				
2/15/2021						<0.1
2/16/2021	<0.1		0.071 (J)	0.25		
3/12/2021				0.24		
3/15/2021					0.24	<0.1
3/16/2021		1.7				
3/17/2021	<0.1		0.072 (J)			

Time Series

Constituent: Fluoride (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
3/13/2019	0.1 (J)	0.19 (J)	0.069 (J)		
4/3/2019	0.049 (J)	0.15 (J)	<0.1		
9/25/2019	0.076 (J)				
9/26/2019		0.19 (J)	0.17 (J)		
3/2/2020	0.065 (J)				
3/3/2020		0.062 (J)	<0.1		
3/26/2020	0.082 (J)				
3/27/2020		<0.1			
3/30/2020			<0.1		
9/16/2020				0.22	0.52
9/17/2020	0.094 (J)				
9/21/2020		<0.1	<0.1		
11/10/2020				0.19	0.59
12/15/2020				0.21	0.67
1/19/2021				0.16	0.74
2/9/2021				0.19	0.44
2/15/2021			<0.1		
2/16/2021	0.051 (J)	0.059 (J)			
3/10/2021					0.65
3/11/2021				0.2	
3/15/2021			<0.1		
3/16/2021	<0.1	0.06 (J)			

Time Series

Constituent: Lead (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	<0.001	<0.001	<0.001			
5/23/2016				<0.001	<0.001	<0.001
7/11/2016	<0.001	<0.001				
7/12/2016			0.0001 (J)	<0.001	<0.001	<0.001
8/30/2016	<0.001	<0.001	<0.001			
9/1/2016				<0.001	<0.001	<0.001
10/19/2016	<0.001	<0.001	<0.001			
10/24/2016				<0.001	<0.001	<0.001
12/6/2016	<0.001	<0.001	<0.001			
12/7/2016				<0.001	<0.001	<0.001
1/24/2017	<0.001	<0.001	<0.001			
1/26/2017				<0.001	<0.001	<0.001
3/21/2017	<0.001	6E-05 (J)	0.0001 (J)			
3/22/2017				<0.001	0.0003 (J)	<0.001
5/22/2017	<0.001	9E-05 (J)	<0.001			
5/24/2017				<0.001	9E-05 (J)	<0.001
4/2/2018	<0.001	<0.001				
4/3/2018			<0.001			
4/4/2018				<0.001	<0.001	<0.001
3/12/2019	<0.001	<0.001	<0.001			
3/13/2019				<0.001	<0.001	
3/14/2019						<0.001
9/23/2019	7.8E-05 (J)	9.2E-05 (J)	<0.001			
3/2/2020	4.8E-05 (J)	9.5E-05 (J)	<0.001			
3/3/2020				<0.001	0.00021 (J)	5.6E-05 (J)
3/25/2020	<0.001	0.00011 (J)	<0.001			
3/26/2020						0.00043 (J)
3/31/2020					0.0003 (J)	
4/1/2020				5E-05 (J)		
9/15/2020	<0.001	8E-05 (J)	4.2E-05 (J)			
9/16/2020				<0.001		
9/18/2020					6E-05 (J)	9.6E-05 (J)
2/8/2021	5.8E-05 (J)					
2/9/2021		9.4E-05 (J)	<0.001			
2/12/2021					<0.001	6.7E-05 (J)
2/15/2021				<0.001		
3/10/2021	<0.001					
3/11/2021		7.6E-05 (J)	<0.001			
3/12/2021				<0.001		
3/16/2021					9.9E-05 (J)	8.9E-05 (J)

Time Series

Constituent: Lead (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		<0.001	<0.001			
5/23/2016	<0.001			<0.001		
7/12/2016	<0.001	<0.001	<0.001	<0.001		
9/1/2016	<0.001	<0.001	<0.001	<0.001		
10/20/2016		<0.001	<0.001	<0.001		
10/24/2016	<0.001					
12/6/2016		0.0001 (J)	<0.001	0.0002 (J)		
12/7/2016	<0.001					
1/25/2017		0.0001 (J)	<0.001			
1/26/2017	<0.001			0.0001 (J)		
3/21/2017		9E-05 (J)	<0.001			
3/22/2017	7E-05 (J)			<0.001		
5/23/2017		8E-05 (J)	<0.001	0.0001 (J)		
5/24/2017	<0.001					
4/3/2018		<0.001	<0.001	<0.001		
4/4/2018	<0.001					
3/12/2019			<0.001			
3/13/2019	<0.001	<0.001		<0.001		<0.001
3/14/2019				<0.001		
3/2/2020						0.00017 (J)
3/3/2020			0.00013 (J)			
3/4/2020	0.00014 (J)	0.00051 (J)		8.4E-05 (J)	0.00011 (J)	
3/26/2020				<0.001		
3/27/2020		5.4E-05 (J)	<0.001			0.00013 (J)
3/30/2020	0.0001 (J)					
3/31/2020				0.00014 (J)		
9/16/2020		0.0002 (J)	0.0002 (J)			
9/17/2020				0.00022 (J)		<0.001
9/21/2020	0.00015 (J)				8.5E-05 (J)	
2/10/2021		0.00056 (J)				
2/11/2021						3.9E-05 (J)
2/12/2021					7.1E-05 (J)	
2/16/2021			8.6E-05 (J)	0.0002 (J)		
2/22/2021	0.00018 (J)					
3/15/2021		0.0013	0.00011 (J)			0.0001 (J)
3/16/2021				0.00027 (J)		
3/17/2021	0.00015 (J)				3.8E-05 (J)	

Time Series

Constituent: Lead (mg/L) Analysis Run 5/4/2021 7:01 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
3/12/2019					<0.001	<0.001
3/13/2019	<0.001		<0.001	<0.001		
3/14/2019		<0.001				
3/2/2020						9E-05 (J)
3/3/2020		<0.001				
3/4/2020	0.00019 (J)		<0.001	<0.001	0.001 (J)	
3/26/2020		<0.001				
3/27/2020					6.2E-05 (J)	
3/30/2020	6.4E-05 (J)					0.00011 (J)
3/31/2020			0.0001 (J)			
4/2/2020				0.00013 (J)		
9/16/2020						<0.001
9/17/2020			<0.001			
9/18/2020		<0.001		<0.001		
9/21/2020	4.2E-05 (J)				0.00018 (J)	
2/10/2021					0.00044 (J)	
2/12/2021		<0.001				
2/15/2021						5.2E-05 (J)
2/16/2021	0.00012 (J)		8E-05 (J)	0.00043 (J)		
3/12/2021				<0.001		
3/15/2021					0.00034 (J)	<0.001
3/16/2021		<0.001				
3/17/2021	4E-05 (J)		<0.001			

Time Series

Constituent: Lead (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
3/13/2019	<0.001	<0.001	<0.001		
3/2/2020	4.7E-05 (J)				
3/3/2020		0.00013 (J)	6.2E-05 (J)		
3/26/2020	<0.001				
3/27/2020		<0.001			
3/30/2020			<0.001		
9/16/2020				5E-05 (J)	0.00021 (J)
9/17/2020	<0.001				
9/21/2020		0.00026 (J)	<0.001		
11/10/2020				6.9E-05 (J)	0.0002 (J)
12/15/2020				8.2E-05 (J)	0.00011 (J)
1/19/2021				4.4E-05 (J)	0.00019 (J)
2/9/2021				0.00029 (J)	0.0001 (J)
2/15/2021			<0.001		
2/16/2021	<0.001	8.4E-05 (J)			
3/10/2021					<0.001
3/11/2021				9.4E-05 (J)	
3/15/2021			<0.001		
3/16/2021	<0.001	3.6E-05 (J)			

Time Series

Constituent: Lithium (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	<0.03	<0.03	<0.03			
5/23/2016				<0.03	<0.03	0.0107 (J)
7/11/2016	<0.03	0.0014 (J)				
7/12/2016			0.0024 (J)	<0.03	<0.03	0.0113 (J)
8/30/2016	<0.03	<0.03	0.0025 (J)			
9/1/2016				<0.03	<0.03	0.0118 (J)
10/19/2016	<0.03	<0.03	0.003 (J)			
10/24/2016				<0.03	<0.03	0.0114 (J)
12/6/2016	<0.03	<0.03	0.0033 (J)			
12/7/2016				<0.03	<0.03	0.0155 (J)
1/24/2017	<0.03	<0.03	0.003 (J)			
1/26/2017				<0.03	<0.03	0.0099 (J)
3/21/2017	<0.03	0.0012 (J)	0.0034 (J)			
3/22/2017				<0.03	<0.03	0.0098 (J)
5/22/2017	<0.03	<0.03	0.003 (J)			
5/24/2017				<0.03	<0.03	0.0105 (J)
4/2/2018	<0.03	0.0015 (J)				
4/3/2018			0.003 (J)			
4/4/2018				<0.03	<0.03	0.008 (J)
6/4/2018	0.001 (J)	0.0016 (J)	0.0027 (J)			
6/5/2018				<0.03	<0.03	
6/6/2018						0.0095 (J)
10/1/2018	0.00099 (J)	0.0013 (J)	0.0032 (J)			
10/2/2018				<0.03		
10/3/2018					<0.03	0.0083 (J)
3/12/2019	0.001 (J)	0.0018 (J)	0.0032 (J)			
3/13/2019				<0.03	<0.03	
3/14/2019						0.0058 (J)
4/1/2019			0.0032 (J)			
4/2/2019	0.001 (J)	0.0018 (J)				
4/3/2019				<0.03	<0.03	0.0066 (J)
9/23/2019	0.0011 (J)	0.0016 (J)	0.0029 (J)			
9/27/2019				<0.03	<0.03	0.011 (J)
3/2/2020	0.0012 (J)	0.0017 (J)	0.0037 (J)			
3/3/2020				<0.03	<0.03	0.0063 (J)
3/25/2020	0.00083 (J)	0.0017 (J)	0.0035 (J)			
3/26/2020						0.0063 (J)
3/31/2020					<0.03	
4/1/2020				<0.03		
9/15/2020	0.00087 (J)	0.0015 (J)	0.0026 (J)			
9/16/2020				<0.03		
9/18/2020					<0.03	0.01 (J)
2/8/2021	0.00086 (J)					
2/9/2021		0.0012 (J)	0.0032 (J)			
2/12/2021					<0.03	0.0094 (J)
2/15/2021				<0.03		
3/10/2021	0.0009 (J)					
3/11/2021		0.0011 (J)	0.0035 (J)			
3/12/2021				<0.03		
3/16/2021					<0.03	0.0081 (J)

Time Series

Constituent: Lithium (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		<0.03	<0.03			
5/23/2016	0.0422 (J)			<0.03		
7/12/2016	0.0366 (J)	0.0021 (J)	0.0023 (J)	0.004 (J)		
9/1/2016	0.04 (J)	0.0025 (J)	0.0029 (J)	0.0044 (J)		
10/20/2016		0.0021 (J)	0.0027 (J)	0.0027 (J)		
10/24/2016	0.0435 (J)					
12/6/2016		0.0026 (J)	0.0032 (J)	0.005 (J)		
12/7/2016	0.0477 (J)					
1/25/2017		0.0024 (J)	0.0026 (J)			
1/26/2017	0.0342 (J)			0.0042 (J)		
3/21/2017		0.0026 (J)	0.0029 (J)			
3/22/2017	0.0353 (J)			0.0043 (J)		
5/23/2017		0.0026 (J)	0.0029 (J)	0.0048 (J)		
5/24/2017	0.0317 (J)					
4/3/2018		0.0023 (J)	0.0025 (J)	0.0043 (J)		
4/4/2018	0.031 (J)					
6/5/2018	0.031 (J)	0.0022 (J)				
6/6/2018			0.0023 (J)	0.0043 (J)		
10/2/2018		0.003 (J)	0.0025 (J)	0.004 (J)		
10/5/2018	0.027 (J)					
3/12/2019			0.0025 (J)			
3/13/2019	0.029 (J)	0.0024 (J)		0.004 (J)		0.0016 (J)
3/14/2019					0.0089 (J)	
4/2/2019		0.002 (J)				0.0015 (J)
4/3/2019			0.0025 (J)	0.004 (J)	0.0061 (J)	
4/5/2019	0.023 (J)					
9/24/2019			0.0024 (J)			
9/25/2019		0.0019 (J)				<0.03
9/26/2019	0.035					
9/27/2019				0.0044 (J)	0.013 (J)	
3/2/2020						0.00082 (J)
3/3/2020			0.0028 (J)			
3/4/2020	0.041	0.0034 (J)		0.004 (J)	0.01 (J)	
3/26/2020					0.013 (J)	
3/27/2020		0.002 (J)	0.0026 (J)			0.0012 (J)
3/30/2020	0.038					
3/31/2020				0.0043 (J)		
9/16/2020		0.0026 (J)	0.0033 (J)			
9/17/2020				0.004 (J)		<0.03
9/21/2020	0.028 (J)				0.013 (J)	
2/10/2021		0.0032 (J)				
2/11/2021						0.001 (J)
2/12/2021					0.012 (J)	
2/16/2021			0.0027 (J)	0.0045 (J)		
2/22/2021	0.032					
3/15/2021		0.0038 (J)	0.0029 (J)			0.0011 (J)
3/16/2021				0.0046 (J)		
3/17/2021	0.031				0.012 (J)	

Time Series

Constituent: Lithium (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
3/12/2019					0.011 (J)	0.0024 (J)
3/13/2019	0.0029 (J)		0.0033 (J)	0.0097 (J)		
3/14/2019		0.05				
4/2/2019					0.0052 (J)	0.0021 (J)
4/3/2019		0.047 (J)	0.0034 (J)			
4/4/2019				0.0069 (J)		
4/8/2019	0.0027 (J)					
9/24/2019						0.0022 (J)
9/26/2019	0.003 (J)		0.0041 (J)	0.0055 (J)	0.0055 (J)	
9/27/2019		0.047				
3/2/2020						0.0025 (J)
3/3/2020		0.05				
3/4/2020	0.0026 (J)		0.03 (J)	0.0047 (J)	0.015 (J)	
3/26/2020		0.054				
3/27/2020					0.014 (J)	
3/30/2020	0.0027 (J)					0.0023 (J)
3/31/2020			0.0036 (J)			
4/2/2020				0.0068 (J)		
9/16/2020						0.0021 (J)
9/17/2020			0.0032 (J)			
9/18/2020		0.046		0.0084 (J)		
9/21/2020	0.0024 (J)				0.0053 (J)	
2/10/2021					0.0092 (J)	
2/12/2021		0.045				
2/15/2021						0.0024 (J)
2/16/2021	0.0028 (J)		0.0038 (J)	0.0078 (J)		
3/12/2021				0.009 (J)		
3/15/2021					0.013 (J)	0.0022 (J)
3/16/2021		0.049				
3/17/2021	0.0027 (J)		0.004 (J)			

Time Series

Constituent: Lithium (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
3/13/2019	<0.03	<0.03	<0.03		
4/3/2019	<0.03	<0.03	<0.03		
9/25/2019	<0.03				
9/26/2019		<0.03	<0.03		
3/2/2020	<0.03				
3/3/2020		<0.03	<0.03		
3/26/2020	<0.03				
3/27/2020		<0.03			
3/30/2020			<0.03		
9/16/2020				0.0018 (J)	0.014 (J)
9/17/2020	<0.03				
9/21/2020		<0.03	<0.03		
11/10/2020				0.0013 (J)	0.025 (J)
12/15/2020				0.0019 (J)	0.028 (J)
1/19/2021				0.0025 (J)	0.034
2/9/2021				0.0026 (J)	0.026 (J)
2/15/2021			<0.03		
2/16/2021	<0.03	<0.03			
3/10/2021					0.03
3/11/2021				0.0022 (J)	
3/15/2021			<0.03		
3/16/2021	<0.03	<0.03			

Time Series

Constituent: Mercury (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	<0.0005	<0.0005	<0.0005			
5/23/2016				<0.0005	<0.0005	<0.0005
7/11/2016	<0.0005	<0.0005				
7/12/2016			<0.0005	<0.0005	<0.0005	<0.0005
8/30/2016	4E-05 (J)	4E-05 (J)	<0.0005			
9/1/2016				<0.0005	<0.0005	<0.0005
10/19/2016	<0.0005	<0.0005	<0.0005			
10/24/2016				<0.0005	<0.0005	<0.0005
12/6/2016	<0.0005	<0.0005	<0.0005			
12/7/2016				<0.0005	<0.0005	<0.0005
1/24/2017	<0.0005	<0.0005	<0.0005			
1/26/2017				5E-05 (J)	5E-05 (J)	<0.0005
3/21/2017	<0.0005	<0.0005	<0.0005			
3/22/2017				<0.0005	<0.0005	<0.0005
5/22/2017	<0.0005	<0.0005	<0.0005			
5/24/2017				<0.0005	<0.0005	<0.0005
4/2/2018	<0.0005	<0.0005				
4/3/2018			<0.0005			
4/4/2018				<0.0005	<0.0005	<0.0005
3/12/2019	<0.0005	<0.0005	<0.0005			
3/13/2019				<0.0005	<0.0005	
3/14/2019						<0.0005
3/2/2020	<0.0005	<0.0005	<0.0005			
3/3/2020				<0.0005	<0.0005	<0.0005
2/8/2021	<0.0005					
2/9/2021		<0.0005	<0.0005			
2/12/2021					<0.0005	<0.0005
2/15/2021				<0.0005		

Time Series

Constituent: Mercury (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		<0.0005	<0.0005			
5/23/2016	<0.0005			<0.0005		
7/12/2016	<0.0005	<0.0005	<0.0005	<0.0005		
9/1/2016	<0.0005	<0.0005	<0.0005	<0.0005		
10/20/2016		<0.0005	<0.0005	<0.0005		
10/24/2016	<0.0005					
12/6/2016		<0.0005	<0.0005	<0.0005		
12/7/2016	<0.0005					
1/25/2017		<0.0005	<0.0005			
1/26/2017	4E-05 (J)			4E-05 (J)		
3/21/2017		<0.0005	<0.0005			
3/22/2017	<0.0005			<0.0005		
5/23/2017		<0.0005	<0.0005	<0.0005		
5/24/2017	5E-05 (J)					
4/3/2018		<0.0005	<0.0005	<0.0005		
4/4/2018	<0.0005					
3/12/2019			<0.0005			
3/13/2019	<0.0005	<0.0005		<0.0005		<0.0005
3/14/2019				<0.0005		
3/2/2020						<0.0005
3/3/2020			<0.0005			
3/4/2020	<0.0005	<0.0005		<0.0005	<0.0005	
2/10/2021		<0.0005				
2/11/2021						<0.0005
2/12/2021				<0.0005		
2/16/2021			<0.0005	<0.0005		
2/22/2021	<0.0005					

Time Series

Constituent: Mercury (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
3/12/2019					<0.0005	<0.0005
3/13/2019	<0.0005		<0.0005	<0.0005		
3/14/2019		<0.0005				
3/2/2020						<0.0005
3/3/2020		<0.0005				
3/4/2020	<0.0005		<0.0005	<0.0005	<0.0005	
2/10/2021					<0.0005	
2/12/2021		<0.0005				
2/15/2021						<0.0005
2/16/2021	<0.0005		<0.0005	<0.0005		

Time Series

Constituent: Mercury (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
3/13/2019	<0.0005	<0.0005	<0.0005		
3/2/2020	<0.0005				
3/3/2020		<0.0005	<0.0005		
9/16/2020				<0.0005	<0.0005
11/10/2020				<0.0005	<0.0005
12/15/2020				<0.0005	<0.0005
1/19/2021				<0.0005	<0.0005
2/9/2021				<0.0005	<0.0005
2/15/2021			<0.0005		
2/16/2021	<0.0005	<0.0005			

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	<0.01	<0.01	<0.01			
5/23/2016				<0.01	0.0164	0.0413 (J)
7/11/2016	<0.01	<0.01				
7/12/2016			<0.01	0.0013 (J)	0.0251	0.0484
8/30/2016	<0.01	<0.01	<0.01			
9/1/2016				<0.01	0.0259	0.0474
10/19/2016	<0.01	<0.01	<0.01			
10/24/2016				<0.01	0.0293	0.047
12/6/2016	<0.01	<0.01	<0.01			
12/7/2016				<0.01	0.0209	0.0432
1/24/2017	<0.01	<0.01	<0.01			
1/26/2017				<0.01	0.0277	0.0484
3/21/2017	<0.01	<0.01	<0.01			
3/22/2017				0.0013 (J)	0.011	0.0494
5/22/2017	<0.01	<0.01	<0.01			
5/24/2017				0.0014 (J)	0.0373	0.047
4/2/2018	<0.01	<0.01				
4/3/2018			<0.01			
4/4/2018				<0.01	0.013	0.052
6/4/2018	<0.01	<0.01	<0.01			
6/5/2018				<0.01	0.029	
6/6/2018						0.054
10/1/2018	<0.01	<0.01	<0.01			
10/2/2018				<0.01		
10/3/2018					0.02	0.054
3/12/2019	<0.01	<0.01	<0.01			
3/13/2019				<0.01	0.012	
3/14/2019						0.046
4/1/2019			<0.01			
4/2/2019	<0.01	<0.01				
4/3/2019				0.0021 (J)	0.01	0.049
9/23/2019	<0.01	<0.01	<0.01			
9/27/2019				0.0014 (J)	0.016	0.052
3/2/2020	<0.01	<0.01	<0.01			
3/3/2020				<0.01	0.011	0.045
3/25/2020	<0.01	<0.01	<0.01			
3/26/2020						0.045
3/31/2020					0.0074 (J)	
4/1/2020				<0.01		
6/16/2020	<0.01		<0.01			
9/15/2020	<0.01	<0.01	<0.01			
9/16/2020				0.0014 (J)		
9/18/2020					0.032	0.046
2/8/2021	<0.01					
2/9/2021		<0.01	<0.01			
2/12/2021					0.023	0.048
2/15/2021				<0.01		
3/10/2021	<0.01					
3/11/2021		<0.01	<0.01			
3/12/2021				0.0007 (J)		
3/16/2021					0.015	0.044

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		0.028	0.446			
5/23/2016	0.027			0.0187		
7/12/2016	0.0316	0.0273	0.455	0.0229		
9/1/2016	0.0336	0.0274	0.481	0.0239		
10/20/2016		0.036	0.472	0.477		
10/24/2016	0.0352					
12/6/2016		0.0365	0.52	0.0236		
12/7/2016	0.0383					
1/25/2017		0.0317	0.478			
1/26/2017	0.041			0.0234		
3/21/2017		0.0346	0.547			
3/22/2017	0.0426			0.0219		
5/23/2017		0.0336	0.482	0.0242		
5/24/2017	0.04					
4/3/2018		0.032	0.44	0.025		
4/4/2018	0.027					
6/5/2018	0.027	0.036				
6/6/2018			0.49	0.027		
10/2/2018		0.039	0.47	0.028		
10/5/2018	0.033					
3/12/2019			0.5			
3/13/2019	0.033	0.04		0.028		<0.01
3/14/2019				0.057		
4/2/2019		0.041				<0.01
4/3/2019			0.5	0.03	0.04	
4/5/2019	0.03					
9/24/2019			0.54			
9/25/2019		0.047				<0.01
9/26/2019	0.026					
9/27/2019				0.033	0.063	
3/2/2020						<0.01
3/3/2020			0.44			
3/4/2020	0.03	0.045		0.031	0.032	
3/26/2020					0.033	
3/27/2020		0.044	0.42			<0.01
3/30/2020	0.029					
3/31/2020				0.031		
6/16/2020			0.45			
6/17/2020		0.048				
9/16/2020		0.046	0.43			
9/17/2020				0.03		<0.01
9/21/2020	0.032				0.064	
2/10/2021		0.051				
2/11/2021						<0.01
2/12/2021					0.046	
2/16/2021			0.46	0.035		
2/22/2021	0.036					
3/15/2021		0.047	0.41			<0.01
3/16/2021				0.035		
3/17/2021	0.035				0.043	

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
3/12/2019					0.013	0.0038 (J)
3/13/2019	<0.01		<0.01	<0.01		
3/14/2019		0.0022 (J)				
4/2/2019					0.028	0.0028 (J)
4/3/2019		<0.01	0.0083 (J)			
4/4/2019				0.0018 (J)		
4/8/2019	0.00027 (J)					
9/24/2019						0.0021 (J)
9/26/2019	<0.01		0.017	0.0042 (J)	0.017	
9/27/2019		<0.01				
11/25/2019			0.02			
3/2/2020						0.0025 (J)
3/3/2020		<0.01				
3/4/2020	<0.01		0.0074 (J)	0.0058 (J)	0.009 (J)	
3/26/2020		<0.01				
3/27/2020					0.0068 (J)	
3/30/2020	<0.01					0.0029 (J)
3/31/2020			0.0093 (J)			
4/2/2020				0.003 (J)		
9/16/2020						0.0021 (J)
9/17/2020			0.014			
9/18/2020		0.00094 (J)		0.0018 (J)		
9/21/2020	0.00099 (J)				0.018	
2/10/2021					0.02	
2/12/2021		<0.01				
2/15/2021						0.0029 (J)
2/16/2021	0.00096 (J)		0.022	0.0019 (J)		
3/12/2021				0.0008 (J)		
3/15/2021					0.013	0.0031 (J)
3/16/2021		<0.01				
3/17/2021	0.001 (J)		0.023			

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
3/13/2019	<0.01	0.0021 (J)	<0.01		
4/3/2019	<0.01	0.0021 (J)	<0.01		
9/25/2019	<0.01				
9/26/2019		0.0026 (J)	0.0033 (J)		
3/2/2020	<0.01				
3/3/2020		0.0022 (J)	<0.01		
3/26/2020	<0.01				
3/27/2020		0.0026 (J)			
3/30/2020			<0.01		
9/16/2020				0.0044 (J)	0.0019 (J)
9/17/2020	<0.01				
9/21/2020		0.0025 (J)	0.0015 (J)		
11/10/2020				0.0072 (J)	0.0018 (J)
12/15/2020				0.0044 (J)	0.0019 (J)
1/19/2021				0.0038 (J)	0.0035 (J)
2/9/2021				0.0045 (J)	0.0038 (J)
2/15/2021			0.0015 (J)		
2/16/2021	<0.01	0.0025 (J)			
3/10/2021					0.0019 (J)
3/11/2021				0.0064 (J)	
3/15/2021			0.0015 (J)		
3/16/2021	<0.01	0.0023 (J)			

Time Series

Constituent: pH, Field (SU) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	7.27	5.81	7.45			
5/23/2016				6.83	6.22	7.15
7/11/2016	7.06	5.68				
7/12/2016			7.32	6.58	6.04	6.87
8/30/2016	7.28	5.63	7.43			
9/1/2016				6.54	6.26	7.2
10/19/2016	7.02	5.46	7.03			
10/24/2016				6.59	6.46	7.1
12/6/2016	7.09	5.38	7.08			
12/7/2016				6.56	6.29	6.92
1/24/2017	7.2	5.37	7.39			
1/26/2017				6.83	6.46	7.05
3/21/2017	7.01	4.9	6.83			
3/22/2017				6.66	5.81	7.08
5/22/2017	7.11	5.2	7.02			
5/24/2017				6.67	6.51	7.11
10/3/2017	7.21	5.3	7.47	6.54	6.25	7.01
4/2/2018	7.1	5.4				
4/3/2018			7.38			
4/4/2018				6.61	5.86	7.12
6/4/2018	7.06	5.27	7.38			
6/5/2018				6.65	6.27	
6/6/2018						7.12
10/1/2018	7.09	5.31	7.13			
10/2/2018				6.55		
10/3/2018					5.97	7.08
3/12/2019	7.03	5.42	7.29			
3/13/2019				6.7	5.92	
3/14/2019						7.09
4/1/2019			7.16			
4/2/2019	6.86	5.41				
4/3/2019				6.55	5.69	6.96
9/23/2019	7.02	5.33	7.3			
9/27/2019				6.64	5.75	7.07
3/2/2020	7.1	5.43	7.12			
3/3/2020				6.67	5.95	6.95
3/25/2020	6.95	5.36	7.4			
3/26/2020						6.99
3/31/2020					5.7	
4/1/2020				6.84		
6/16/2020	6.97 (D)		7.31 (D)			
9/15/2020	7.15	5.22	7.29			
9/16/2020				6.66		
9/18/2020					6.42	7.15
2/8/2021	7.11					
2/9/2021		5.42	7.23			
2/12/2021					7.27	6.23
2/15/2021				6.83		
3/10/2021	6.95					
3/11/2021		5.8	7.33			
3/12/2021				6.76		
3/16/2021					5.95	7.15

Time Series

Constituent: pH, Field (SU) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		7.14	6.99			
5/23/2016	7.14			7.23		
7/12/2016	7.04	7.13	6.88	6.87		
9/1/2016	7.24	7.29	6.73	7.15		
10/20/2016		7.1	6.9	7.05		
10/24/2016	6.9					
12/6/2016		7.15	6.98	7.15		
12/7/2016	6.91					
1/25/2017		7.11	7.04			
1/26/2017	7.08			6.99		
3/21/2017		7.12	6.87			
3/22/2017	7.13			7.03		
5/23/2017		7.08	6.87	7.05		
5/24/2017	7.15					
10/3/2017	7.32	7.21	6.72	7.07		
4/3/2018		7.14	6.87	6.99		
4/4/2018	7.27					
6/5/2018	7.2	7.13				
6/6/2018			6.9	7.02		
10/2/2018		7.12	6.9	7.05		
10/5/2018	7.24					
3/12/2019			6.91			
3/13/2019	7.24	7.27		7.06		6.75
3/14/2019					6.48	
4/2/2019		7.27				6.7
4/3/2019			6.85	6.88	6.14	
4/5/2019	7.24					
9/24/2019			6.95			
9/25/2019		7.11				6.75
9/26/2019	6.94					
9/27/2019				7.01	6.33	
3/2/2020						6.98
3/3/2020			7.06			
3/4/2020	7.16	7.17		6.97	6.29	
3/26/2020					6.28	
3/27/2020		7.05	6.95			6.75
3/30/2020	6.91					
3/31/2020				7.07		
6/16/2020			6.97 (D)			
6/17/2020		7.2 (D)				
9/16/2020		7.3	6.92			
9/17/2020				6.99		6.78
9/21/2020	7.34				6.41	
2/10/2021		7.29				
2/11/2021						6.93
2/12/2021					6.36	
2/16/2021			7.16	7.26		
2/22/2021	7.27					
3/15/2021		7.19	7.09			6.97
3/16/2021				7.1		
3/17/2021	7.33				6.34	

Time Series

Constituent: pH, Field (SU) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
3/12/2019					7.46	7.2
3/13/2019	7.58		7.4	7.78		
3/14/2019		7.67				
4/2/2019					7.4	6.91
4/3/2019		7.56	7.25			
4/4/2019				7.63		
4/8/2019	7.47					
9/24/2019						6.86
9/26/2019	7.5		7.16	7.46	7.4	
9/27/2019		7.57				
3/2/2020						7.13
3/3/2020		7.59				
3/4/2020	7.47		7.14	8.33	7.55	
3/26/2020		7.57				
3/27/2020					7.42	
3/30/2020	7.49					7.07
3/31/2020			7.2			
4/2/2020				8.11		
9/16/2020						6.88
9/17/2020			7.08			
9/18/2020		7.64		7.51		
9/21/2020	7.65				7.46	
2/10/2021					7.54	
2/12/2021		7.77				
2/15/2021						7.09
2/16/2021	7.69		7.27	7.96		
3/12/2021				7.88		
3/15/2021					7.61	7.05
3/16/2021		7.76				
3/17/2021	7.66		7.14			

Time Series

Constituent: pH, Field (SU) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
3/13/2019	6.16	6.86	6.37		
4/3/2019	5.96	6.77	6.19		
9/25/2019	6.37				
9/26/2019		6.76	6.5		
3/2/2020	6.12				
3/3/2020		6.78	6.1		
3/26/2020	6.14				
3/27/2020		6.82			
3/30/2020			6.06		
9/16/2020				7.52	7.83
9/17/2020	6.48				
9/21/2020		6.88	6.5		
11/10/2020				7.27	7.84
12/15/2020				7.39	7.87
1/19/2021				7.39	7.86
2/9/2021				7.44	7.84
2/15/2021			6.77		
2/16/2021	5.95	7			
3/10/2021					7.92
3/11/2021				7.46	
3/15/2021			6.66		
3/16/2021	5.78	6.96			

Time Series

Constituent: Selenium (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	<0.005	<0.005	<0.005			
5/23/2016				<0.005	0.0106	<0.005
7/11/2016	<0.005	<0.005				
7/12/2016			<0.005	<0.005	0.0057 (J)	<0.005
8/30/2016	<0.005	<0.005	<0.005			
9/1/2016				<0.005	0.0057 (J)	<0.005
10/19/2016	<0.005	<0.005	<0.005			
10/24/2016				<0.005	0.0021 (J)	<0.005
12/6/2016	<0.005	<0.005	<0.005			
12/7/2016				<0.005	0.0015 (J)	0.0011 (J)
1/24/2017	<0.005	<0.005	<0.005			
1/26/2017				0.0041 (J)	0.0062 (J)	<0.005
3/21/2017	<0.005	<0.005	<0.005			
3/22/2017				<0.005	0.0263	<0.005
5/22/2017	<0.005	<0.005	<0.005			
5/24/2017				<0.005	0.0038 (J)	<0.005
4/2/2018	<0.005	<0.005				
4/3/2018			<0.005			
4/4/2018				<0.005	0.021	<0.005
6/4/2018	<0.005	<0.005	<0.005			
6/5/2018				<0.005	0.0062 (J)	
6/6/2018						<0.005
10/1/2018	<0.005	<0.005	<0.005			
10/2/2018				0.0023 (J)		
10/3/2018					0.009 (J)	<0.005
3/12/2019	<0.005	<0.005	<0.005			
3/13/2019				0.0015 (J)	0.023	
3/14/2019						<0.005
4/1/2019			<0.005			
4/2/2019	<0.005	<0.005				
4/3/2019				<0.005	0.016	<0.005
9/23/2019	<0.005	<0.005	<0.005			
9/27/2019				<0.005	0.013	<0.005
3/2/2020	<0.005	<0.005	<0.005			
3/3/2020				<0.005	0.016	<0.005
3/25/2020	<0.005	<0.005	<0.005			
3/26/2020						<0.005
3/31/2020					0.019	
4/1/2020				0.002 (J)		
9/15/2020	<0.005	<0.005	<0.005			
9/16/2020				<0.005		
9/18/2020					0.0042 (J)	<0.005
2/8/2021	<0.005					
2/9/2021		<0.005	<0.005			
2/12/2021					0.0079 (J)	<0.005
2/15/2021				0.0028 (J)		
3/10/2021	0.0047 (J)					
3/11/2021		<0.005	<0.005			
3/12/2021				<0.005		
3/16/2021					0.015	<0.005

Time Series

Constituent: Selenium (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		<0.005	<0.005			
5/23/2016	<0.005			<0.005		
7/12/2016	<0.005	<0.005	<0.005	<0.005		
9/1/2016	<0.005	<0.005	<0.005	<0.005		
10/20/2016		<0.005	<0.005	<0.005		
10/24/2016	<0.005					
12/6/2016		<0.005	0.0024 (J)	0.0037 (J)		
12/7/2016	<0.005					
1/25/2017		<0.005	<0.005			
1/26/2017	<0.005			<0.005		
3/21/2017		<0.005	<0.005			
3/22/2017	<0.005			<0.005		
5/23/2017		<0.005	<0.005	<0.005		
5/24/2017	<0.005					
4/3/2018		<0.005	<0.005	<0.005		
4/4/2018	<0.005					
6/5/2018	<0.005	<0.005				
6/6/2018			<0.005	<0.005		
10/2/2018		<0.005	<0.005	<0.005		
10/5/2018	<0.005					
3/12/2019			<0.005			
3/13/2019	<0.005	<0.005		<0.005		<0.005
3/14/2019				<0.005		
4/2/2019		<0.005				<0.005
4/3/2019			<0.005	<0.005	0.007 (J)	
4/5/2019	0.00018 (J)					
9/24/2019			<0.005			
9/25/2019		<0.005				<0.005
9/26/2019	<0.005					
9/27/2019				<0.005	0.0013 (J)	
3/2/2020						<0.005
3/3/2020			<0.005			
3/4/2020	<0.005	<0.005		<0.005	0.0044 (J)	
3/26/2020					0.0053 (J)	
3/27/2020		<0.005	<0.005			<0.005
3/30/2020	<0.005					
3/31/2020				<0.005		
9/16/2020		<0.005	<0.005			
9/17/2020				<0.005		<0.005
9/21/2020	0.0016 (J)				0.0033 (J)	
2/10/2021		<0.005				
2/11/2021						<0.005
2/12/2021					0.0021 (J)	
2/16/2021			<0.005	<0.005		
2/22/2021	<0.005					
3/15/2021		<0.005	<0.005			<0.005
3/16/2021				<0.005		
3/17/2021	<0.005				<0.005	

Time Series

Constituent: Selenium (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
3/12/2019					<0.005	<0.005
3/13/2019	<0.005		<0.005	<0.005		
3/14/2019		<0.005				
4/2/2019					<0.005	<0.005
4/3/2019		<0.005	<0.005			
4/4/2019				0.00012 (J)		
4/8/2019	<0.005					
9/24/2019						<0.005
9/26/2019	<0.005		<0.005	<0.005	<0.005	
9/27/2019		<0.005				
3/2/2020						<0.005
3/3/2020		<0.005				
3/4/2020	<0.005		<0.005	<0.005	<0.005	
3/26/2020		<0.005				
3/27/2020					<0.005	
3/30/2020	<0.005					<0.005
3/31/2020			<0.005			
4/2/2020				<0.005		
9/16/2020						<0.005
9/17/2020			<0.005			
9/18/2020		<0.005		<0.005		
9/21/2020	<0.005				<0.005	
2/10/2021					<0.005	
2/12/2021		<0.005				
2/15/2021						<0.005
2/16/2021	<0.005		<0.005	<0.005		
3/12/2021				<0.005		
3/15/2021					<0.005	<0.005
3/16/2021		<0.005				
3/17/2021	<0.005		<0.005			

Time Series

Constituent: Selenium (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
3/13/2019	0.0033 (J)	<0.005	0.0016 (J)		
4/3/2019	0.0027 (J)	<0.005	<0.005		
9/25/2019	0.0021 (J)				
9/26/2019		<0.005	0.0014 (J)		
3/2/2020	0.0041 (J)				
3/3/2020		<0.005	<0.005		
3/26/2020	0.0039 (J)				
3/27/2020		<0.005			
3/30/2020			0.0014 (J)		
9/16/2020				<0.005	<0.005
9/17/2020	0.0028 (J)				
9/21/2020		<0.005	0.0026 (J)		
11/10/2020				<0.005	<0.005
12/15/2020				<0.005	<0.005
1/19/2021				<0.005	<0.005
2/9/2021				<0.005	<0.005
2/15/2021			<0.005		
2/16/2021	0.0035 (J)	<0.005			
3/10/2021					<0.005
3/11/2021				<0.005	
3/15/2021			0.0021 (J)		
3/16/2021	0.0026 (J)	<0.005			

Time Series

Constituent: Sulfate (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	66.9	48.6	42.3			
5/23/2016				175	260	288
7/11/2016	41	45				
7/12/2016			44	190	390	320
8/30/2016	36	42	40			
9/1/2016				190	240	300
10/19/2016	46	44	43			
10/24/2016				190	370	270
12/6/2016	59	44	43			
12/7/2016				200	260	280
1/24/2017	46	46	48			
1/26/2017				90	230	260
3/21/2017	63	46	45			
3/22/2017				170	330	220
5/22/2017	77	48	46			
5/24/2017				190	230	210
10/3/2017	42	47	48	200	230	190
6/4/2018	71.8	47.8	46.6			
6/5/2018				205	204	
6/6/2018						162
10/1/2018	49.1	48.1	48.6			
10/2/2018				178		
10/3/2018					233	191
4/1/2019			50.4			
4/2/2019	84.3	48.7				
4/3/2019				159	298	176
9/23/2019	70.2	47.2	43.9			
9/27/2019				181	<1	198
3/25/2020	85.9	46.3	50.5			
3/26/2020						182
3/31/2020					283	
4/1/2020				59		
6/16/2020	88.2		49.5			
9/15/2020	47.3	51.5	44.7			
9/16/2020				169		
9/18/2020					272	266
3/10/2021	49.6					
3/11/2021		52.9	50.4			
3/12/2021				120		
3/16/2021					291	248

Time Series

Constituent: Sulfate (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		96	219			
5/23/2016	215			207		
7/12/2016	210	100	230	230		
9/1/2016	190	100	230	230		
10/20/2016		110	240	240		
10/24/2016	180					
12/6/2016		110	250	240		
12/7/2016	120					
1/25/2017		110	260			
1/26/2017	83			270		
3/21/2017		110	240			
3/22/2017	100			240		
5/23/2017		110	270	240		
5/24/2017	110					
10/3/2017	67	120	230	240		
6/5/2018	187	117				
6/6/2018			190	214		
10/2/2018		120	193	218		
10/5/2018	78.3					
4/2/2019		127				122
4/3/2019			194	214	105	
4/5/2019	105					
9/24/2019			133			
9/25/2019		109				112
9/26/2019	444					
9/27/2019				214	170	
3/26/2020					310	
3/27/2020		109	173			114
3/30/2020	393					
3/31/2020				185		
6/16/2020			157			
6/17/2020		102				
9/16/2020		109	194			
9/17/2020				209		110
9/21/2020	359				305	
3/15/2021		107	272			109
3/16/2021				211		
3/17/2021	384				260	

Time Series

Constituent: Sulfate (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
4/2/2019					67.7	151
4/3/2019		53	131			
4/4/2019				11.8		
4/8/2019	97.3					
9/24/2019						154
9/26/2019	91		189	15.6	96.2	
9/27/2019		48				
3/26/2020		32.3				
3/27/2020					36	
3/30/2020	84.9					130
3/31/2020			129			
4/2/2020				13.3		
9/16/2020						143
9/17/2020			174			
9/18/2020		27.4		7.5		
9/21/2020	114				84.2	
3/12/2021				7.4		
3/15/2021					50.1	148
3/16/2021		9.4				
3/17/2021	137		212			

Time Series

Constituent: Sulfate (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
4/3/2019	218	228	75.3		
9/25/2019	134				
9/26/2019		225	129		
3/26/2020	176				
3/27/2020		204			
3/30/2020			46.2		
9/16/2020				43	6.9
9/17/2020	153				
9/21/2020		221	114		
11/10/2020				39	6.3
12/15/2020				38.8	6.7
1/19/2021				37.3	7.4
3/10/2021					<1
3/11/2021				38.6	
3/15/2021			92.1		
3/16/2021	162	189			

Time Series

Constituent: Thallium (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	<0.001	<0.001	<0.001			
5/23/2016				<0.001	<0.001	<0.001
7/11/2016	<0.001	<0.001				
7/12/2016			<0.001	<0.001	8E-05 (J)	0.0002 (J)
8/30/2016	<0.001	<0.001	<0.001			
9/1/2016				<0.001	<0.001	<0.001
10/19/2016	<0.001	<0.001	<0.001			
10/24/2016				<0.001	<0.001	<0.001
12/6/2016	<0.001	<0.001	<0.001			
12/7/2016				<0.001	<0.001	<0.001
1/24/2017	<0.001	<0.001	<0.001			
1/26/2017				<0.001	<0.001	<0.001
3/21/2017	<0.001	3E-05 (J)	<0.001			
3/22/2017				<0.001	<0.001	0.0001 (J)
5/22/2017	<0.001	<0.001	<0.001			
5/24/2017				<0.001	8E-05 (J)	9E-05 (J)
4/2/2018	<0.001	<0.001				
4/3/2018			<0.001			
4/4/2018				<0.001	<0.001	<0.001
6/4/2018	<0.001	<0.001	<0.001			
6/5/2018				<0.001	<0.001	
6/6/2018						<0.001
10/1/2018	<0.001	<0.001	<0.001			
10/2/2018				<0.001		
10/3/2018					<0.001	<0.001
3/12/2019	<0.001	<0.001	<0.001			
3/13/2019				<0.001	<0.001	
3/14/2019						<0.001
4/1/2019			<0.001			
4/2/2019	<0.001	<0.001				
4/3/2019				<0.001	<0.001	<0.001
9/23/2019	<0.001	<0.001	<0.001			
9/27/2019				<0.001	<0.001	8.8E-05 (J)
3/2/2020	<0.001	<0.001	<0.001			
3/3/2020				<0.001	<0.001	6.6E-05 (J)
3/25/2020	<0.001	<0.001	<0.001			
3/26/2020						8E-05 (J)
3/31/2020					<0.001	
4/1/2020				<0.001		
9/15/2020	<0.001	<0.001	<0.001			
9/16/2020				<0.001		
9/18/2020					<0.001	<0.001
2/8/2021	<0.001					
2/9/2021		<0.001	<0.001			
2/12/2021					<0.001	<0.001
2/15/2021				<0.001		
3/10/2021	<0.001					
3/11/2021		<0.001	<0.001			
3/12/2021				<0.001		
3/16/2021					<0.001	<0.001

Time Series

Constituent: Thallium (mg/L) Analysis Run 5/4/2021 7:01 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		<0.001	<0.001			
5/23/2016	0.000378 (J)			<0.001		
7/12/2016	0.0004 (J)	<0.001	7E-05 (J)	<0.001		
9/1/2016	0.0004 (J)	<0.001	<0.001	<0.001		
10/20/2016		<0.001	<0.001	<0.001		
10/24/2016	0.0005 (J)					
12/6/2016		<0.001	<0.001	<0.001		
12/7/2016	0.0004 (J)					
1/25/2017		<0.001	<0.001			
1/26/2017	0.0004 (J)			<0.001		
3/21/2017		<0.001	9E-05 (J)			
3/22/2017	0.0004 (J)			<0.001		
5/23/2017		<0.001	8E-05 (J)	<0.001		
5/24/2017	0.0003 (J)					
4/3/2018		<0.001	<0.001	<0.001		
4/4/2018	0.00032 (J)					
6/5/2018	0.00035 (J)	<0.001				
6/6/2018			<0.001	<0.001		
10/2/2018		<0.001	<0.001	<0.001		
10/5/2018	0.00025 (J)					
3/12/2019			<0.001			
3/13/2019	0.00039 (J)	<0.001		<0.001		<0.001
3/14/2019				<0.001		
4/2/2019		<0.001				<0.001
4/3/2019			<0.001	<0.001	<0.001	
4/5/2019	0.00034 (J)					
9/24/2019			0.00011 (J)			
9/25/2019		<0.001				<0.001
9/26/2019	0.00039 (J)					
9/27/2019				<0.001	0.00027 (J)	
3/2/2020						<0.001
3/3/2020			6.1E-05 (J)			
3/4/2020	0.00056 (J)	<0.001		<0.001	0.00026 (J)	
3/26/2020					0.00026 (J)	
3/27/2020		<0.001	7.7E-05 (J)			<0.001
3/30/2020	0.00048 (J)					
3/31/2020				<0.001		
9/16/2020		<0.001	<0.001			
9/17/2020				<0.001		<0.001
9/21/2020	0.00036 (J)				0.0003 (J)	
2/10/2021		<0.001				
2/11/2021						<0.001
2/12/2021					0.00019 (J)	
2/16/2021			<0.001	<0.001		
2/22/2021	0.0003 (J)					
3/15/2021		<0.001	<0.001			<0.001
3/16/2021				<0.001		
3/17/2021	0.00037 (J)				0.00026 (J)	

Time Series

Constituent: Thallium (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
3/12/2019					<0.001	<0.001
3/13/2019	<0.001		<0.001	<0.001		
3/14/2019		<0.001				
4/2/2019					<0.001	<0.001
4/3/2019		<0.001	<0.001			
4/4/2019				<0.001		
4/8/2019	<0.001					
9/24/2019						6.4E-05 (J)
9/26/2019	<0.001		<0.001	<0.001	<0.001	
9/27/2019		<0.001				
3/2/2020						<0.001
3/3/2020		<0.001				
3/4/2020	<0.001		<0.001	<0.001	9.2E-05 (J)	
3/26/2020		<0.001				
3/27/2020					<0.001	
3/30/2020	<0.001					<0.001
3/31/2020			<0.001			
4/2/2020				<0.001		
9/16/2020						<0.001
9/17/2020			<0.001			
9/18/2020		<0.001		<0.001		
9/21/2020	<0.001				<0.001	
2/10/2021					<0.001	
2/12/2021		<0.001				
2/15/2021						<0.001
2/16/2021	<0.001		<0.001	<0.001		
3/12/2021				<0.001		
3/15/2021					<0.001	<0.001
3/16/2021		<0.001				
3/17/2021	<0.001		<0.001			

Time Series

Constituent: Thallium (mg/L) Analysis Run 5/4/2021 7:01 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
3/13/2019	<0.001	<0.001	<0.001		
4/3/2019	<0.001	<0.001	<0.001		
9/25/2019	<0.001				
9/26/2019		<0.001	<0.001		
3/2/2020	<0.001				
3/3/2020		8.2E-05 (J)	<0.001		
3/26/2020	<0.001				
3/27/2020		<0.001			
3/30/2020			<0.001		
9/16/2020				<0.001	<0.001
9/17/2020	<0.001				
9/21/2020		<0.001	<0.001		
11/10/2020				<0.001	<0.001
12/15/2020				<0.001	<0.001
1/19/2021				<0.001	<0.001
2/9/2021				<0.001	<0.001
2/15/2021			<0.001		
2/16/2021	<0.001	<0.001			
3/10/2021					<0.001
3/11/2021				<0.001	
3/15/2021			<0.001		
3/16/2021	<0.001	<0.001			

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2021 7:01 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWC-10	HGWC-11	HGWC-12
5/19/2016	421	143	267			
5/23/2016				629	564	1060
7/11/2016	363	125				
7/12/2016			249	661	627	909
8/30/2016	330	168	254			
9/1/2016				769	656	1480
10/19/2016	380	176	357			
10/24/2016				643	836	868
12/6/2016	377	145	285			
12/7/2016				697	748	811
1/24/2017	342	129	300			
1/26/2017				368	571	846
3/21/2017	340	103	288			
3/22/2017				683	597	804
5/22/2017	338	92	263			
5/24/2017				696	566	803
10/3/2017	343	127	300	746	443	608
6/4/2018	415	140	266			
6/5/2018				679	489	
6/6/2018						535
10/1/2018	354	135	291			
10/2/2018				572		
10/3/2018					449	607
4/1/2019			284			
4/2/2019	452	133				
4/3/2019				525	483	462
9/23/2019	442	129	268			
9/27/2019				624	528	653
3/25/2020	496	138	284			
3/26/2020						533
3/31/2020					565	
4/1/2020				290		
6/16/2020	632		448			
9/15/2020	265	124	258			
9/16/2020				490		
9/18/2020					626	704
3/10/2021	348					
3/11/2021		169	267			
3/12/2021				490 (H1)		
3/16/2021					558	614

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2021 7:01 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWC-7	HGWC-8	HGWC-9	MW-19	MW-20
5/20/2016		427	711			
5/23/2016	683			984		
7/12/2016	563	410	704	887		
9/1/2016	702	484	763	956		
10/20/2016		393	644	642		
10/24/2016	647					
12/6/2016		492	733	899		
12/7/2016	465					
1/25/2017		461	744			
1/26/2017	411			869		
3/21/2017		415	818			
3/22/2017	427			936		
5/23/2017		450	765	939		
5/24/2017	377					
10/3/2017	268	464	812	1040		
6/5/2018	528	459				
6/6/2018			611	810		
10/2/2018		426	597	693		
10/5/2018	322					
4/2/2019		428				435
4/3/2019			543	673	310	
4/5/2019	331					
9/24/2019			457			
9/25/2019		503				461
9/26/2019	1010					
9/27/2019				730	442	
3/26/2020					626	
3/27/2020		413	541			429
3/30/2020	895					
3/31/2020				1010		
6/16/2020			573			
6/17/2020		423				
9/16/2020		392	552			
9/17/2020				680		460
9/21/2020	732				608	
3/15/2021		370	614			406
3/16/2021				672		
3/17/2021	716				543	

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2021 7:01 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-24D	MW-25D	MW-26D	MW-27D	MW-28D	MW-29
4/2/2019					350	548
4/3/2019		15 (J)	493			
4/4/2019				203		
4/8/2019	323					
9/24/2019						603
9/26/2019	360		643	265	418	
9/27/2019		409				
3/26/2020		385				
3/27/2020					287	
3/30/2020	280					552
3/31/2020			623			
4/2/2020				224		
9/16/2020						547
9/17/2020			732			
9/18/2020		382		211		
9/21/2020	391				393	
3/12/2021				215		
3/15/2021					293	555
3/16/2021		347				
3/17/2021	420		738			

Time Series

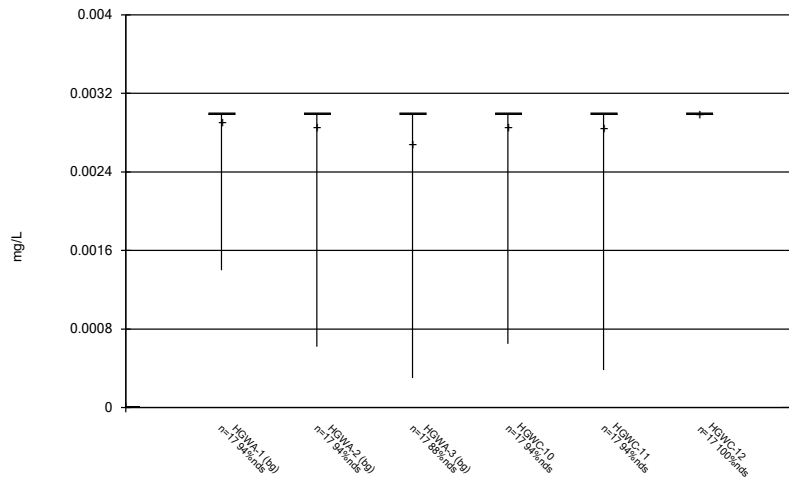
Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2021 7:01 PM

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-5	MW-6	MW-7	HGWA-43D (bg)	HGWA-44D (bg)
4/3/2019	396	437	213		
9/25/2019	460				
9/26/2019		735	383		
3/26/2020	385				
3/27/2020		676			
3/30/2020			142		
9/16/2020				272	270
9/17/2020	486				
9/21/2020		656	326		
11/10/2020				307	287
12/15/2020				289	295
1/19/2021				270	278
3/10/2021					289
3/11/2021				279	
3/15/2021			293		
3/16/2021	333	600			

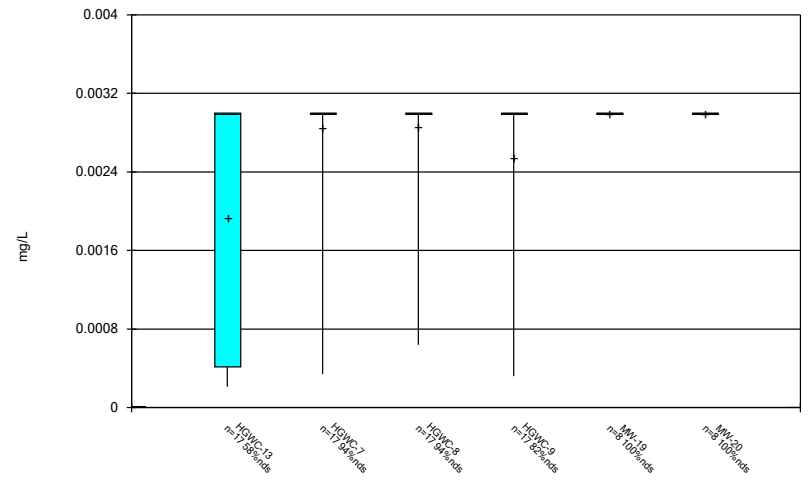
FIGURE B.

Box & Whiskers Plot



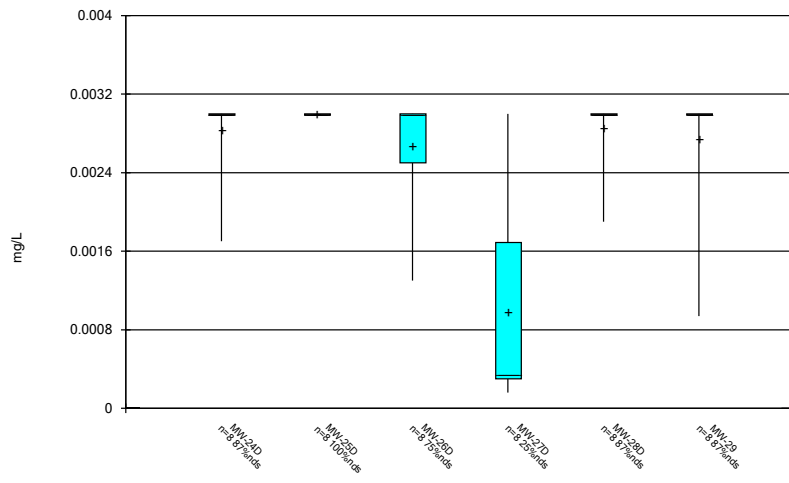
Constituent: Antimony Analysis Run 5/4/2021 7:12 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



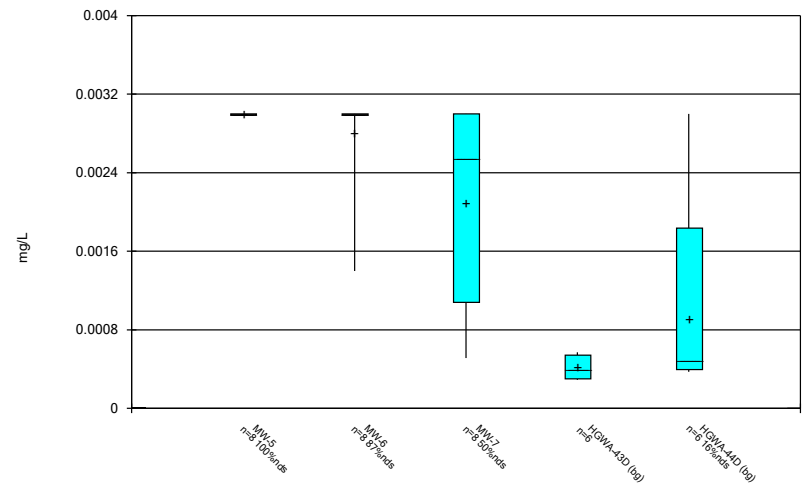
Constituent: Antimony Analysis Run 5/4/2021 7:12 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



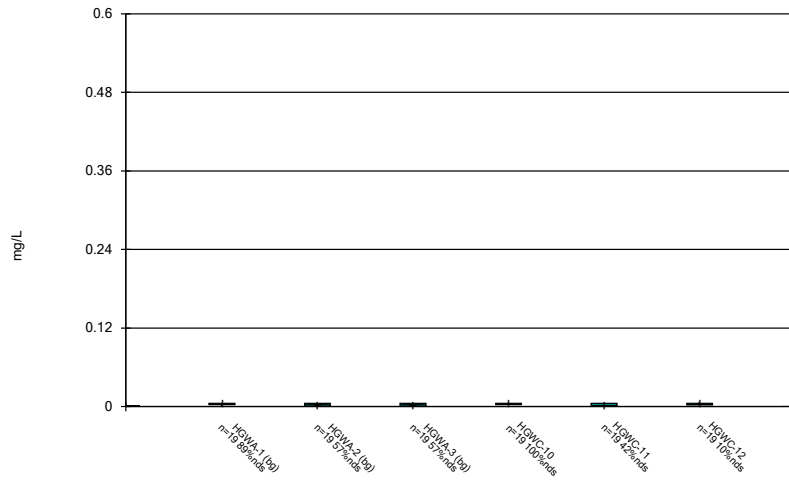
Constituent: Antimony Analysis Run 5/4/2021 7:12 PM
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



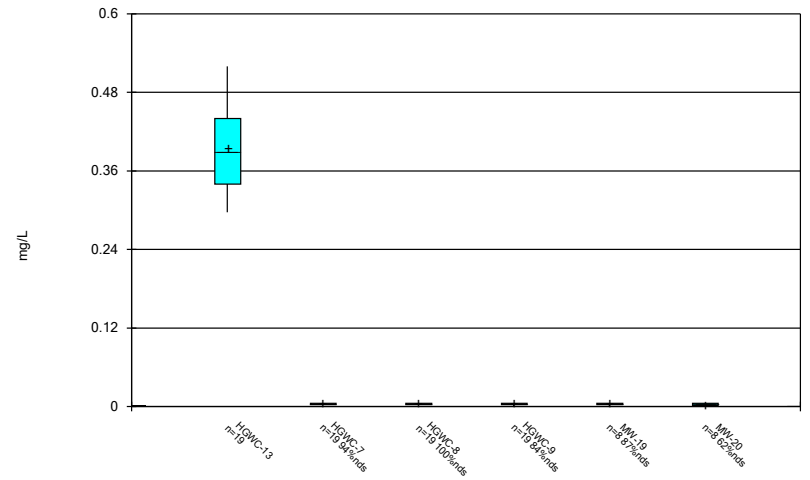
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Box & Whiskers Plot



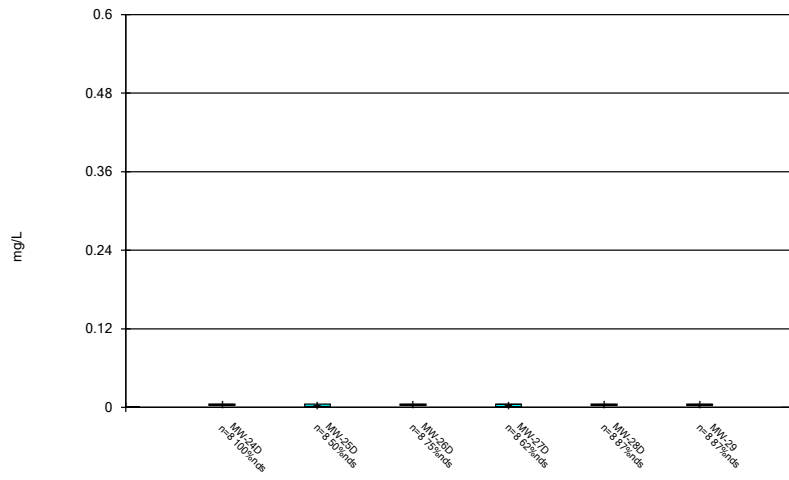
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Box & Whiskers Plot



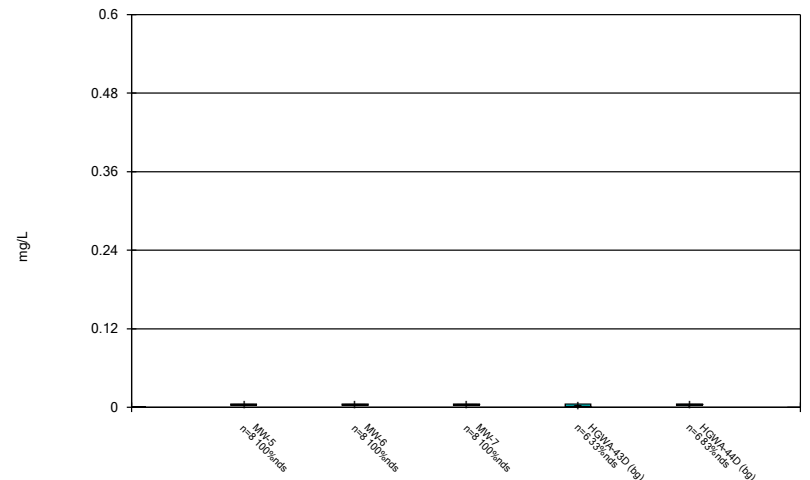
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



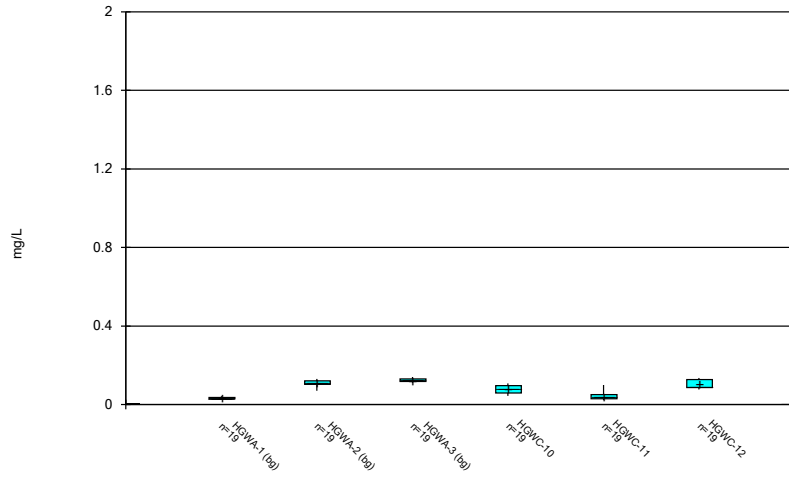
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Box & Whiskers Plot



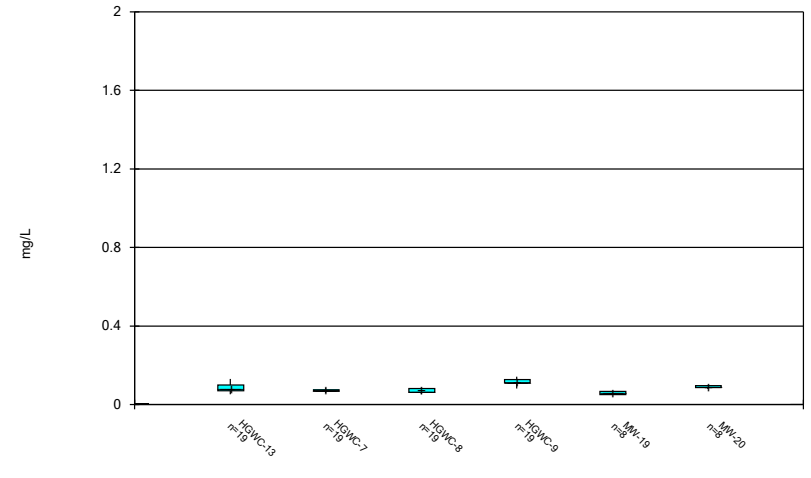
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Box & Whiskers Plot



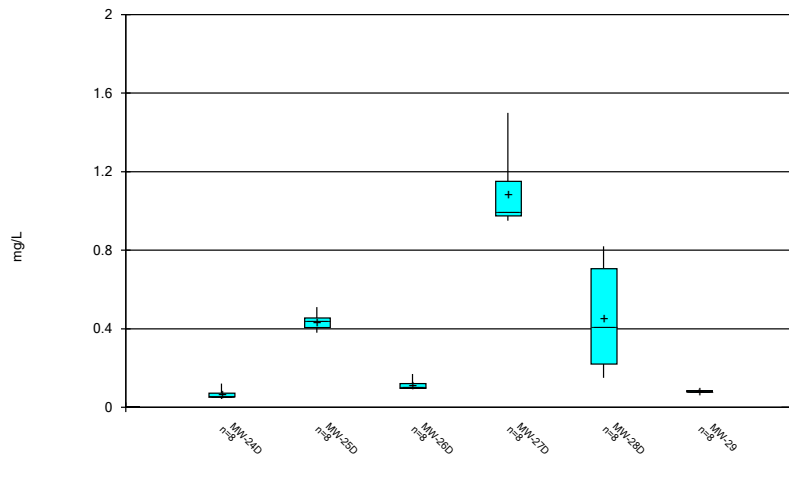
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Box & Whiskers Plot



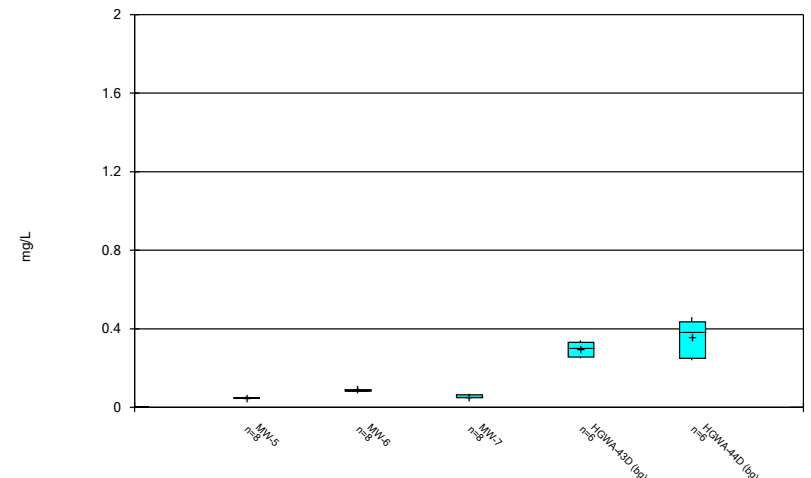
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Box & Whiskers Plot



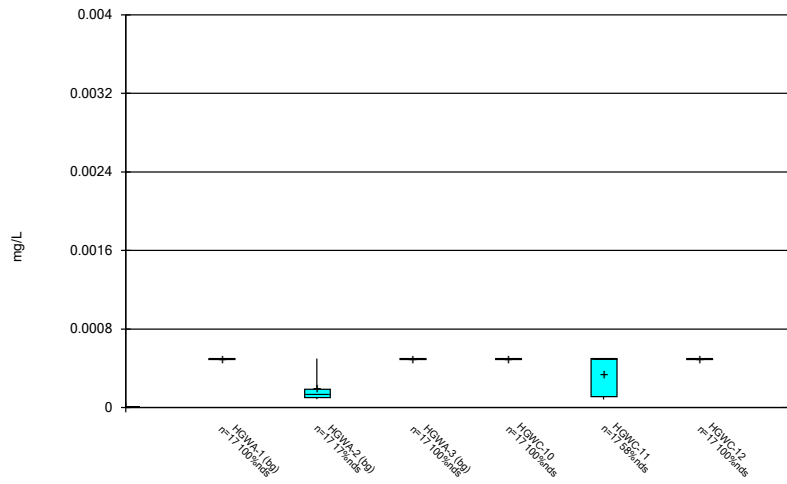
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Box & Whiskers Plot



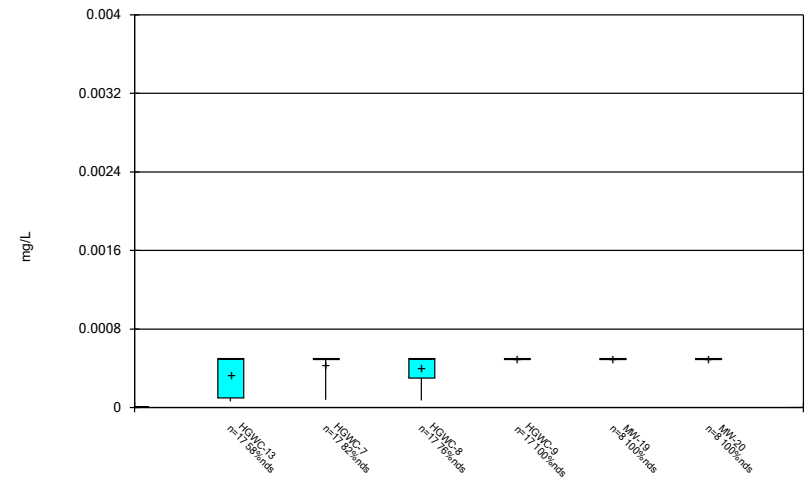
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Box & Whiskers Plot



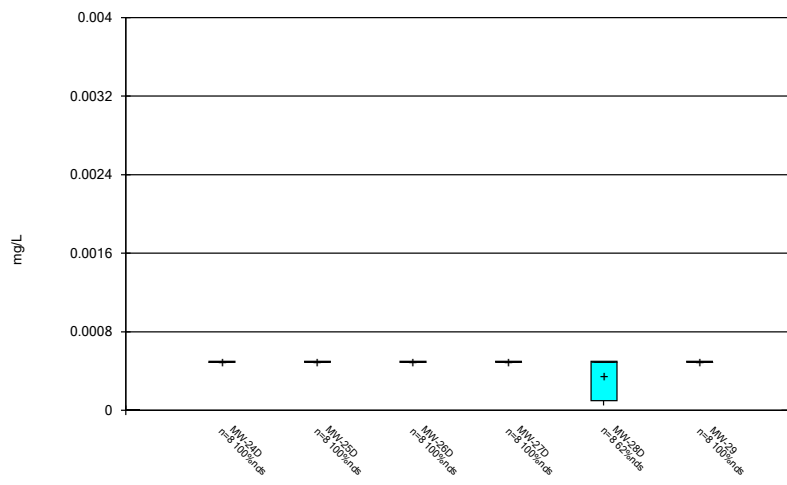
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Box & Whiskers Plot



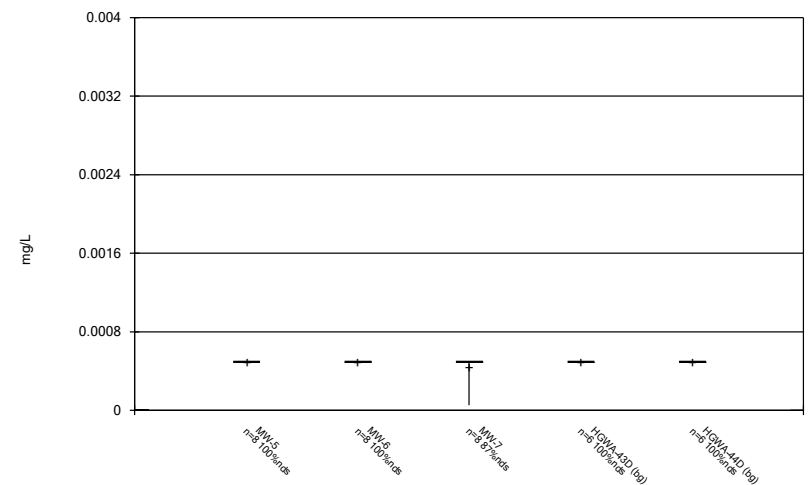
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Box & Whiskers Plot



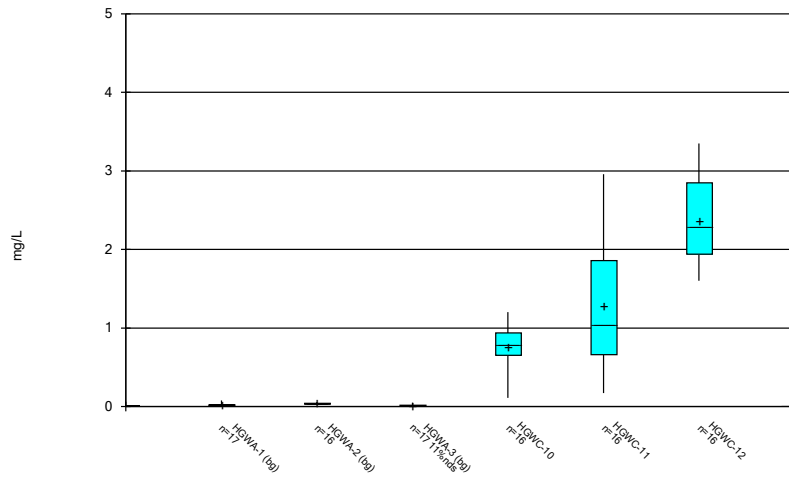
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Box & Whiskers Plot



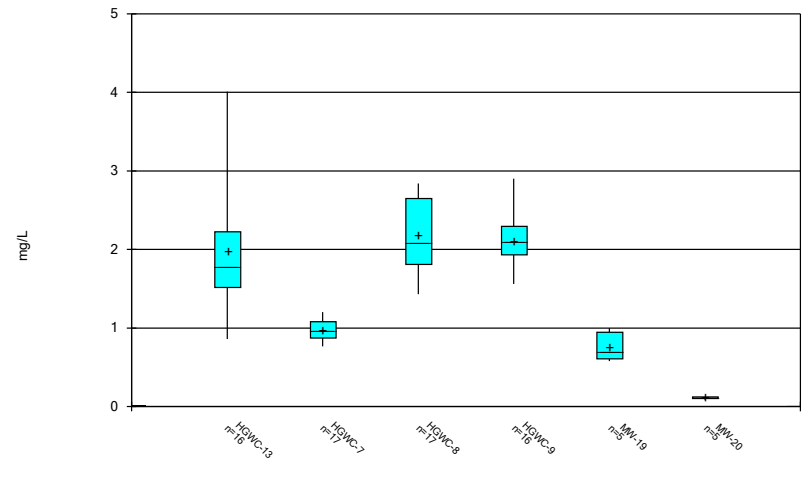
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Box & Whiskers Plot



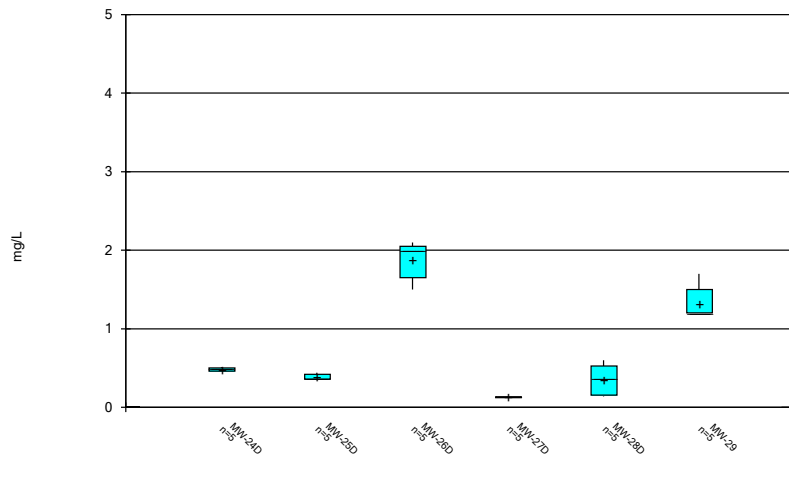
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Box & Whiskers Plot



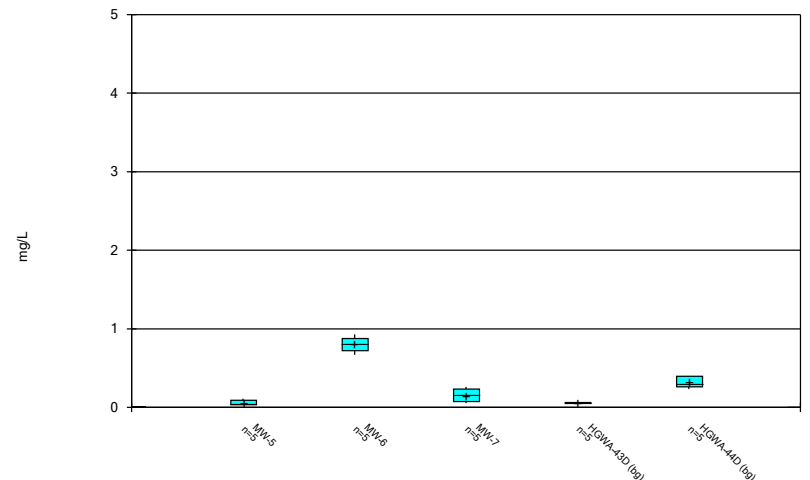
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Box & Whiskers Plot



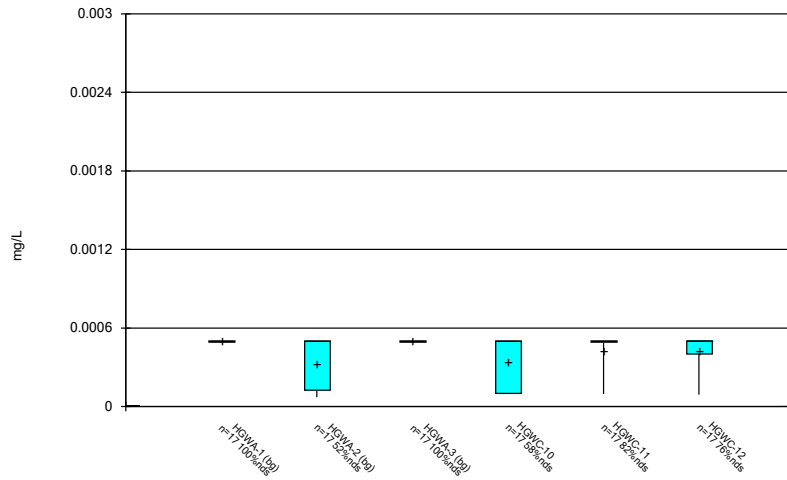
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Box & Whiskers Plot



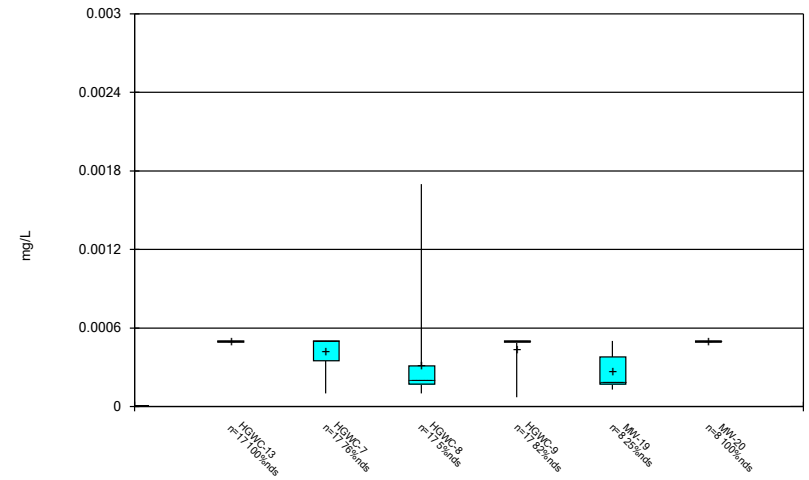
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Box & Whiskers Plot



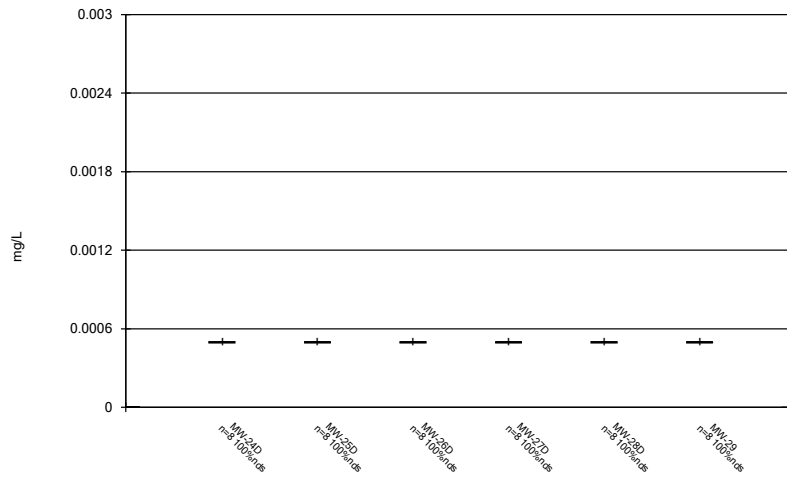
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Box & Whiskers Plot



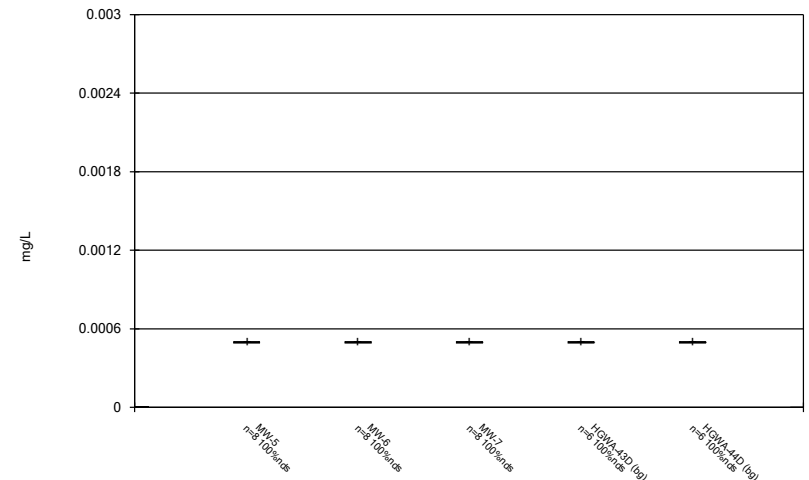
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Box & Whiskers Plot



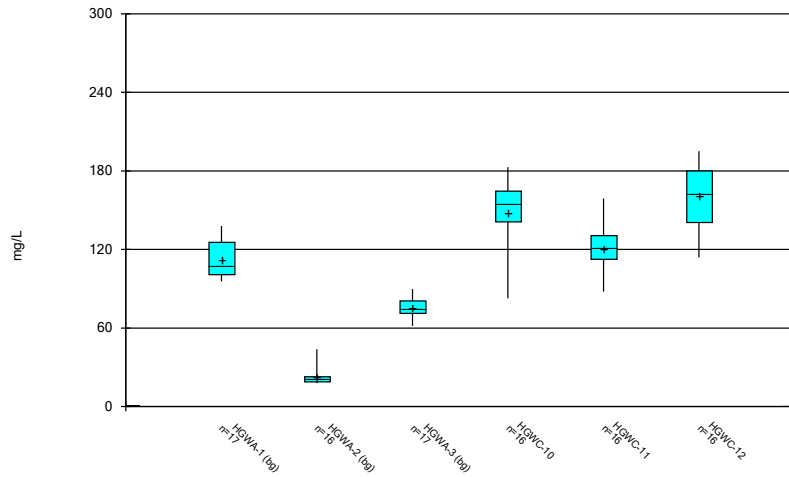
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Box & Whiskers Plot



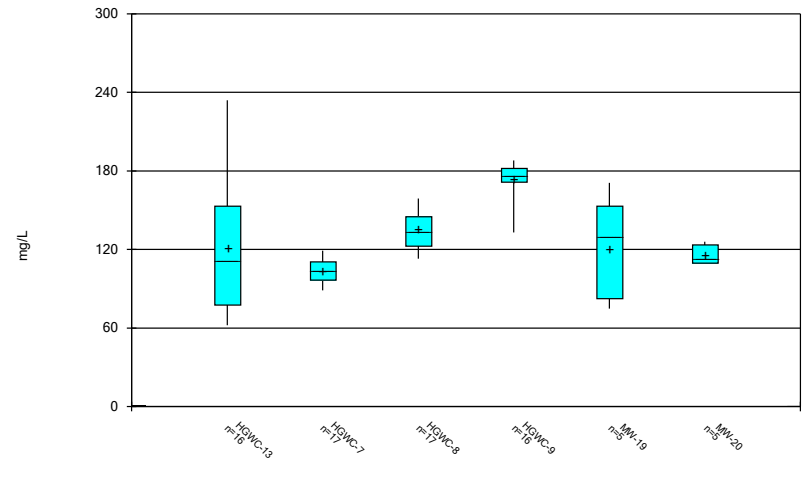
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Box & Whiskers Plot



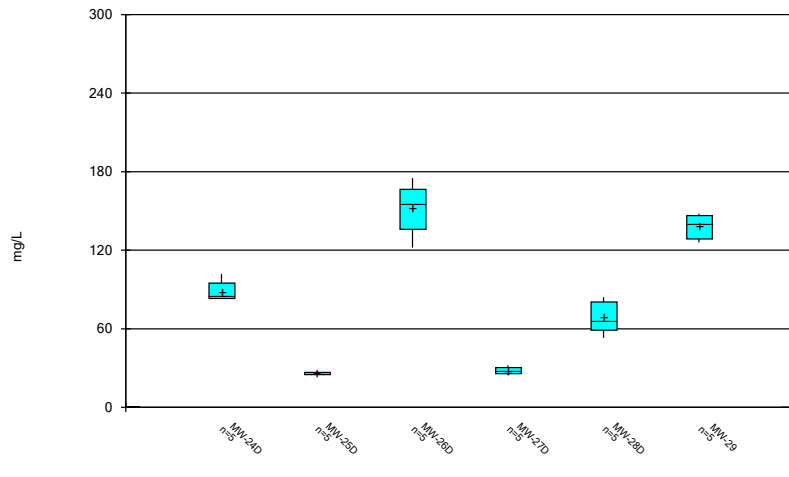
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Box & Whiskers Plot



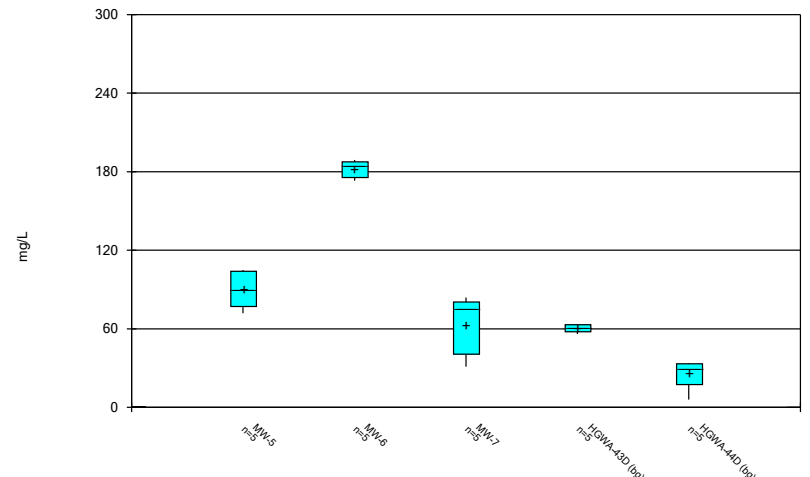
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Box & Whiskers Plot



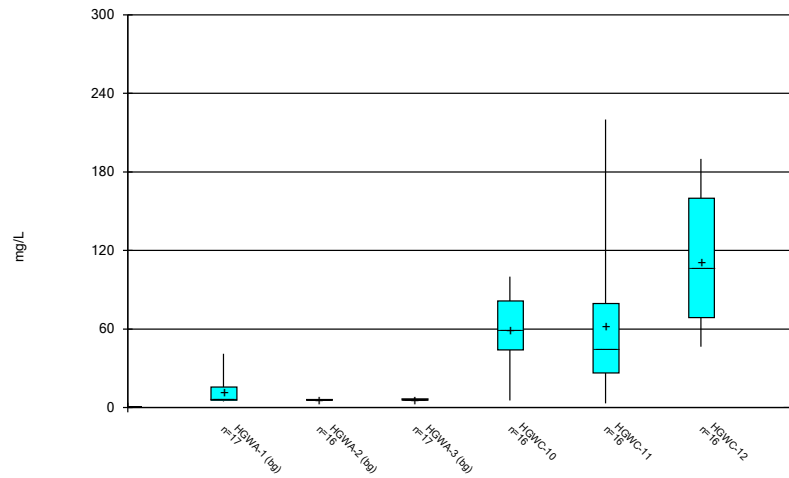
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Box & Whiskers Plot



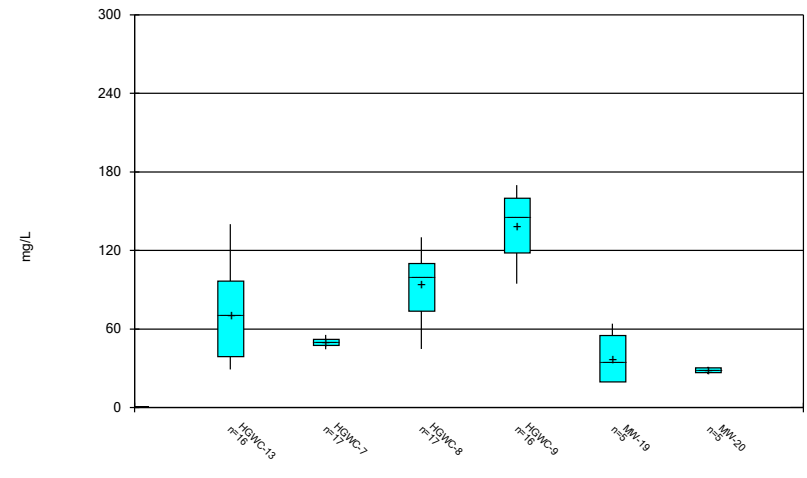
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Box & Whiskers Plot



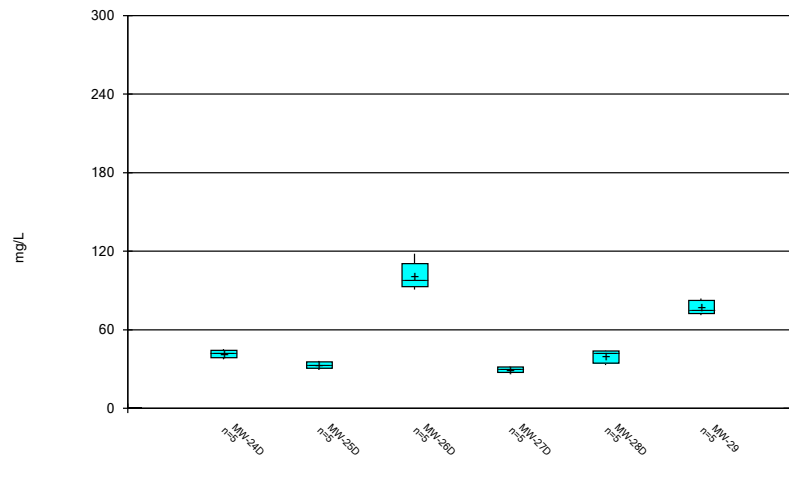
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Box & Whiskers Plot



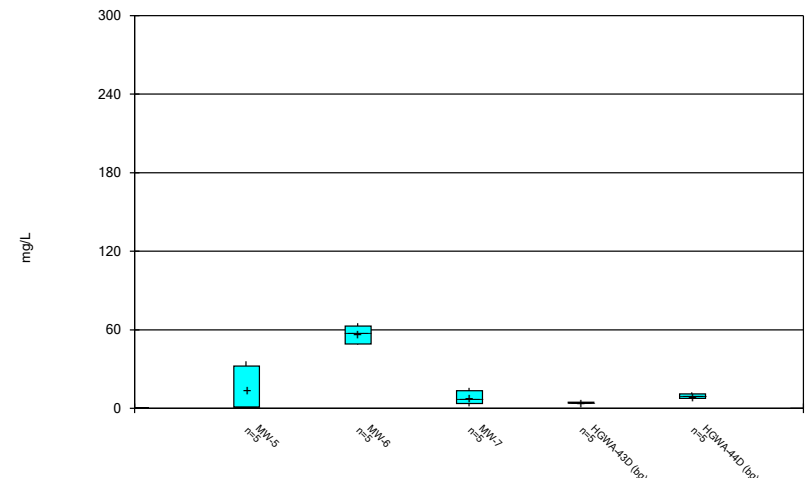
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Box & Whiskers Plot



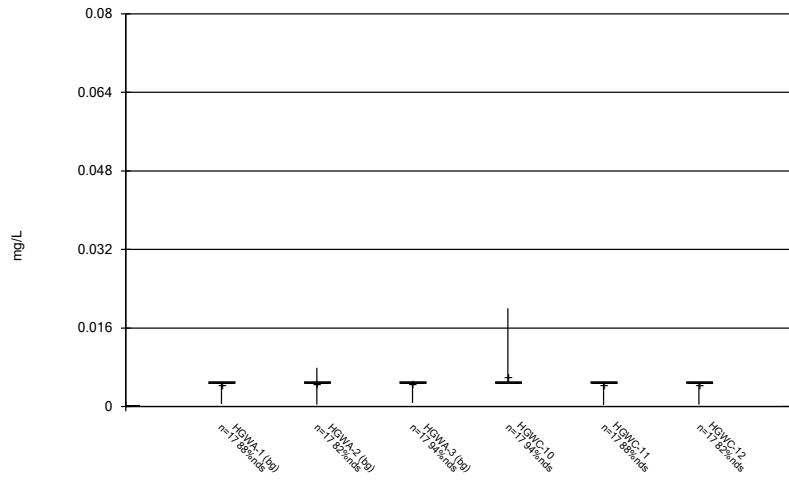
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Box & Whiskers Plot



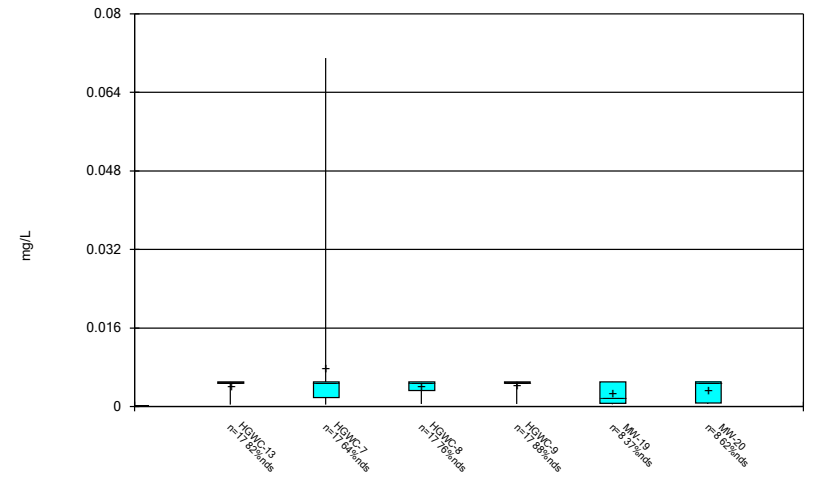
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Box & Whiskers Plot



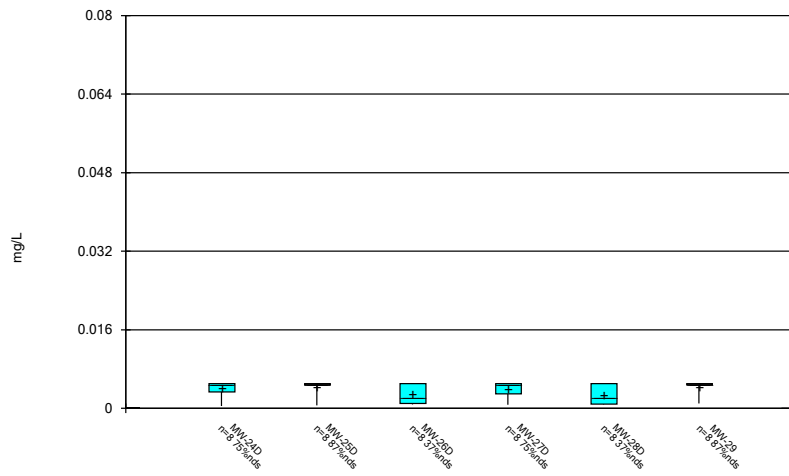
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Box & Whiskers Plot



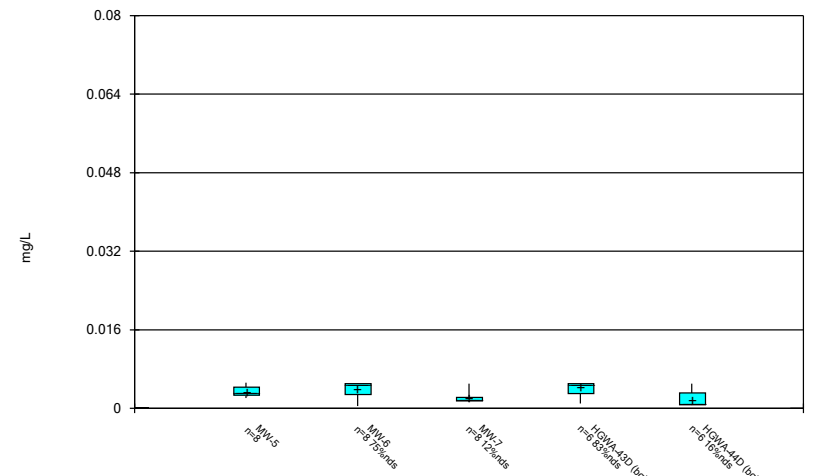
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Box & Whiskers Plot



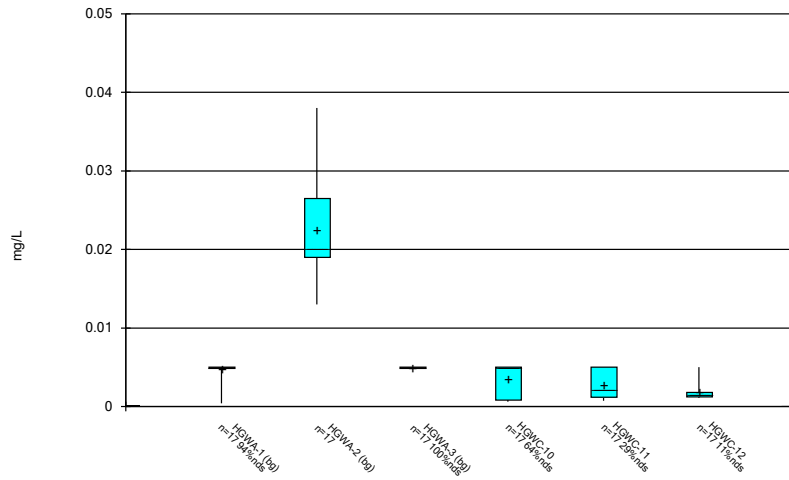
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Box & Whiskers Plot



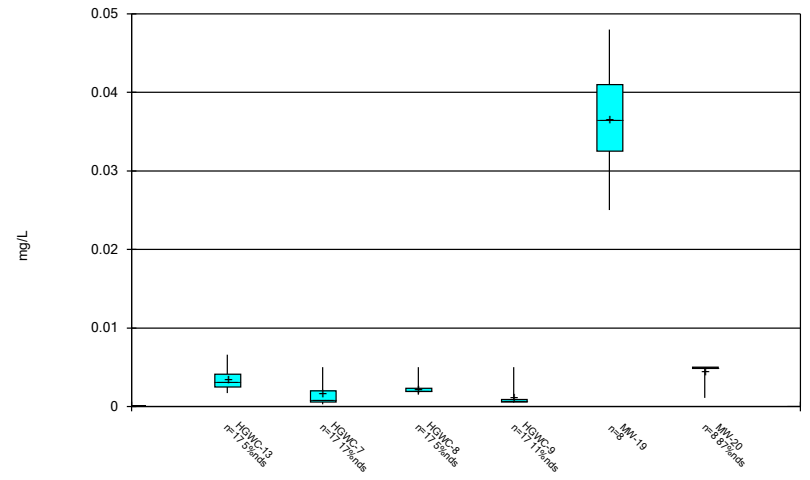
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Box & Whiskers Plot



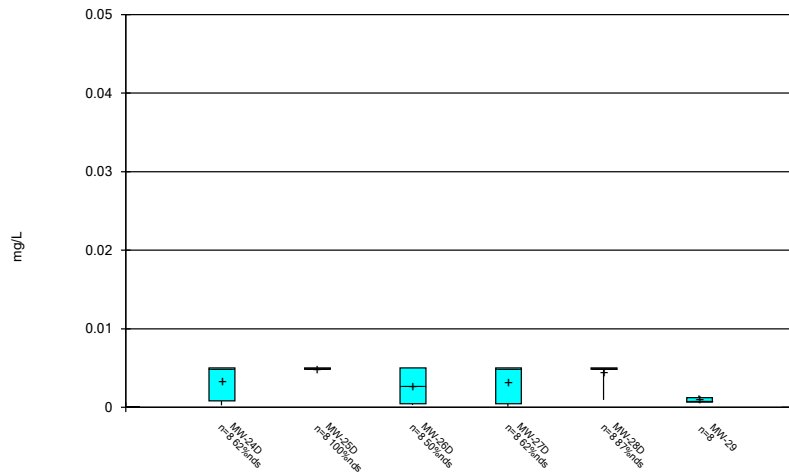
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Box & Whiskers Plot



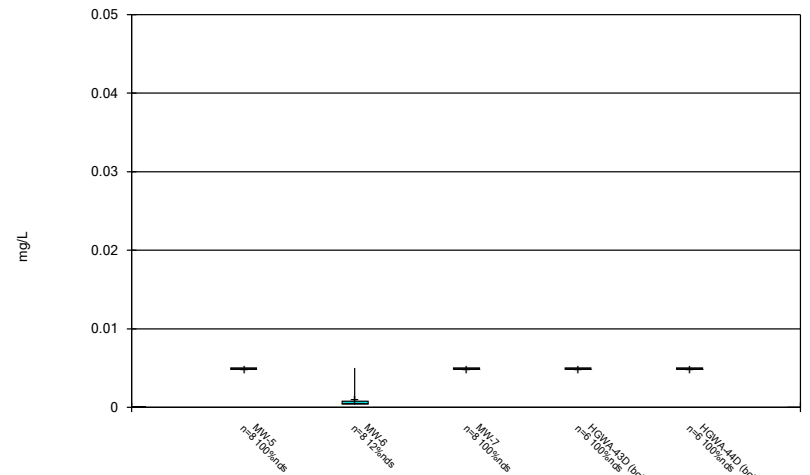
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Box & Whiskers Plot



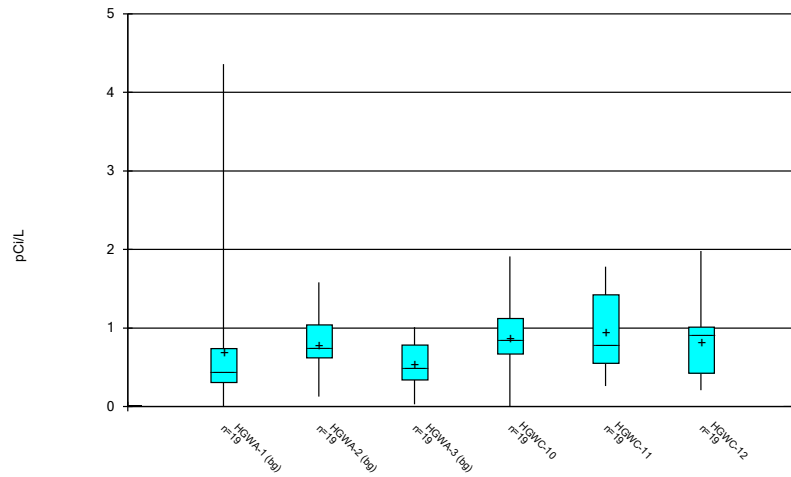
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Box & Whiskers Plot



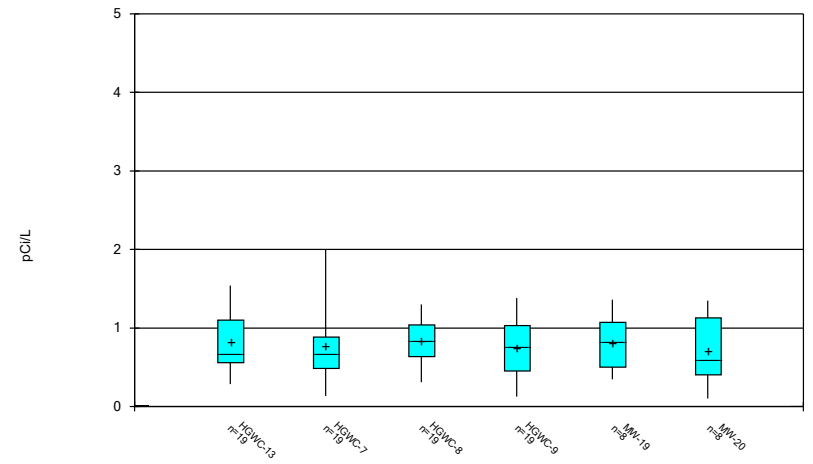
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Box & Whiskers Plot



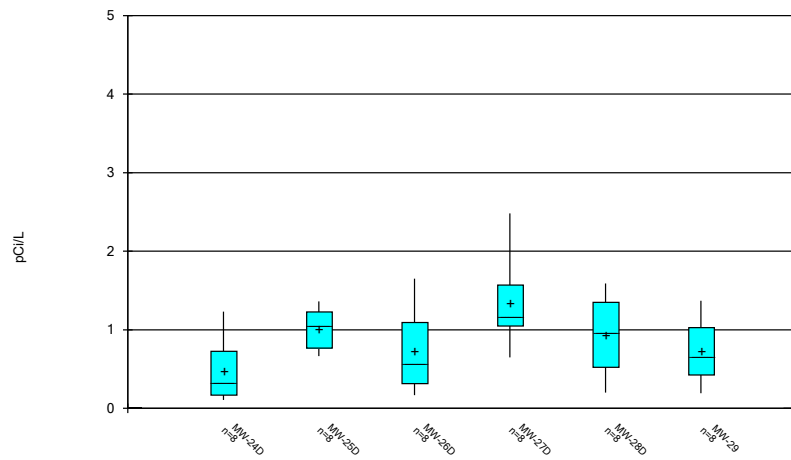
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Box & Whiskers Plot



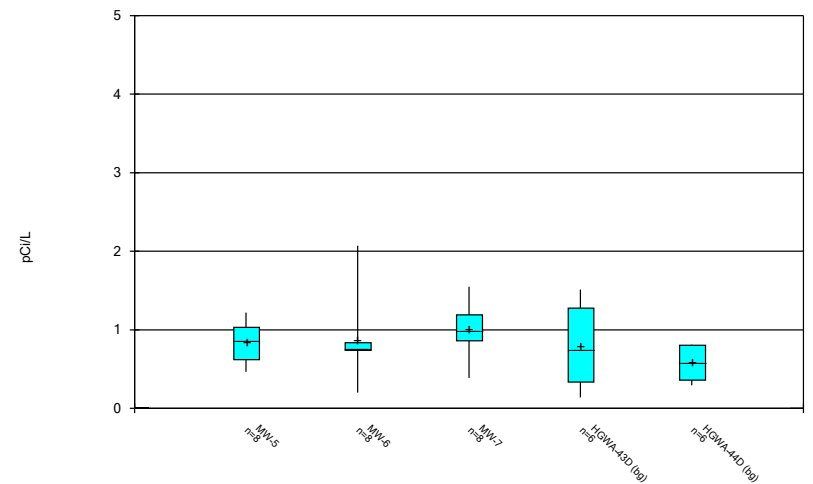
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Box & Whiskers Plot



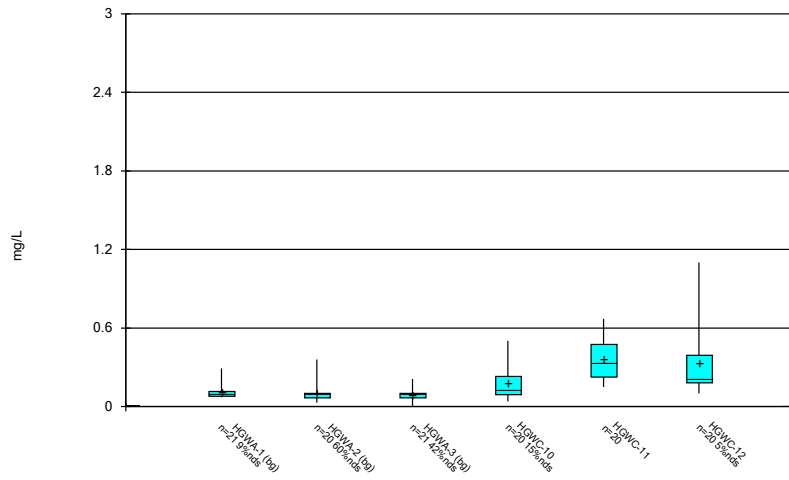
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Box & Whiskers Plot



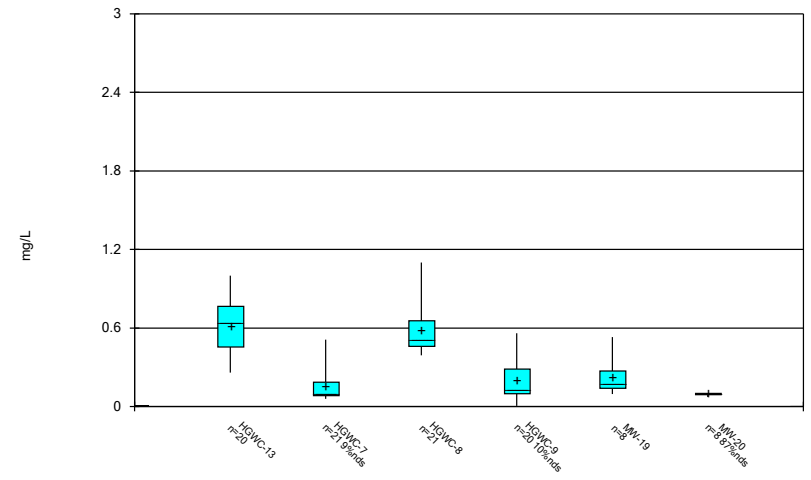
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Box & Whiskers Plot



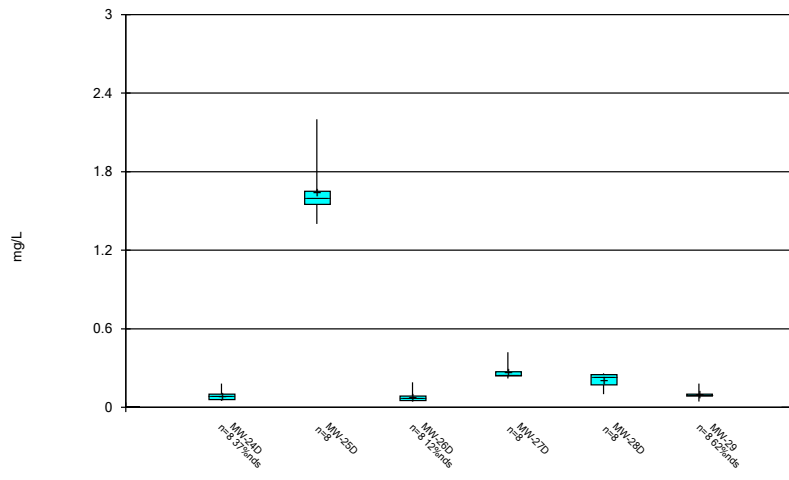
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Box & Whiskers Plot



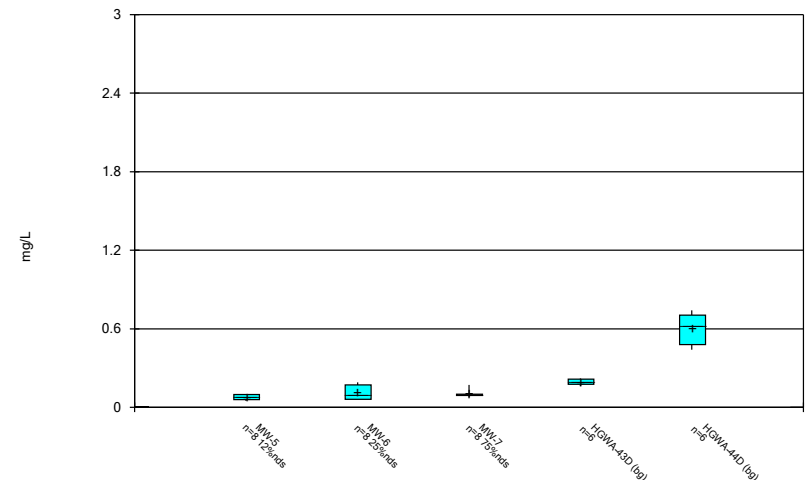
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Box & Whiskers Plot



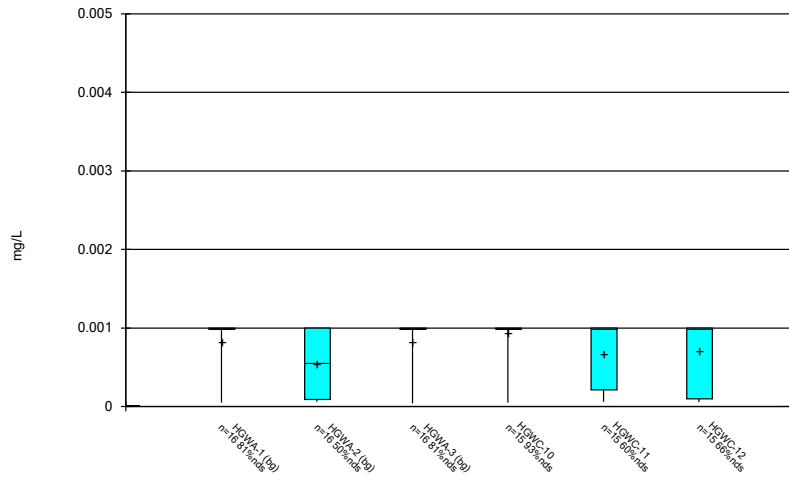
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Box & Whiskers Plot



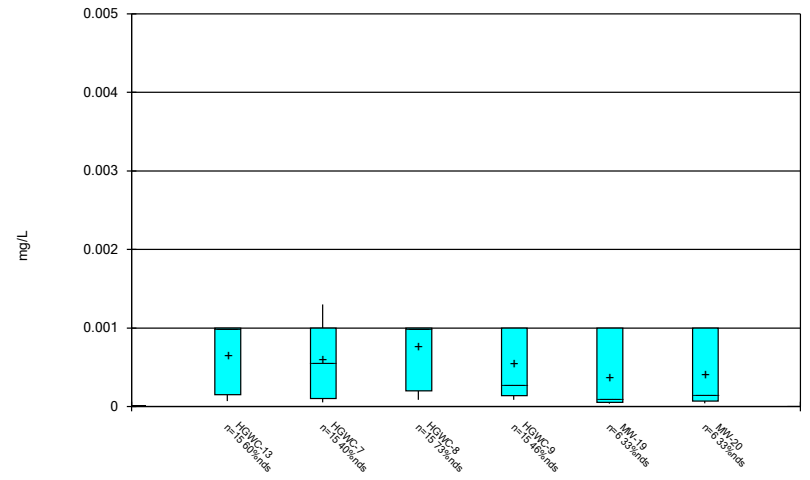
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Box & Whiskers Plot



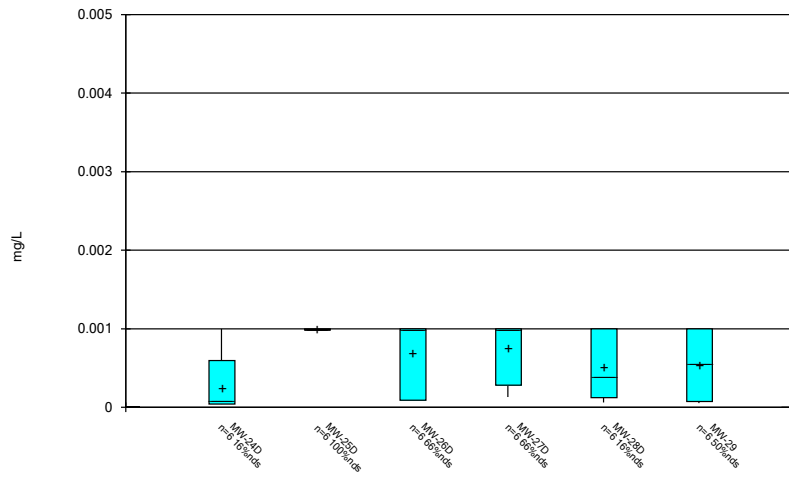
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Box & Whiskers Plot



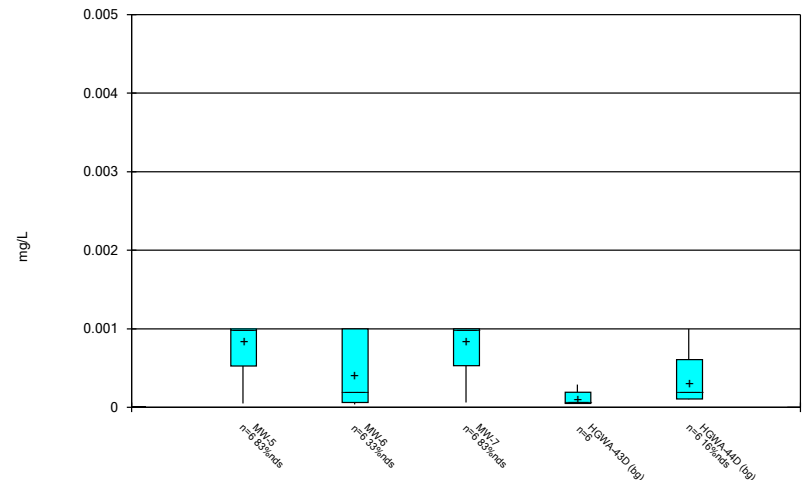
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Box & Whiskers Plot



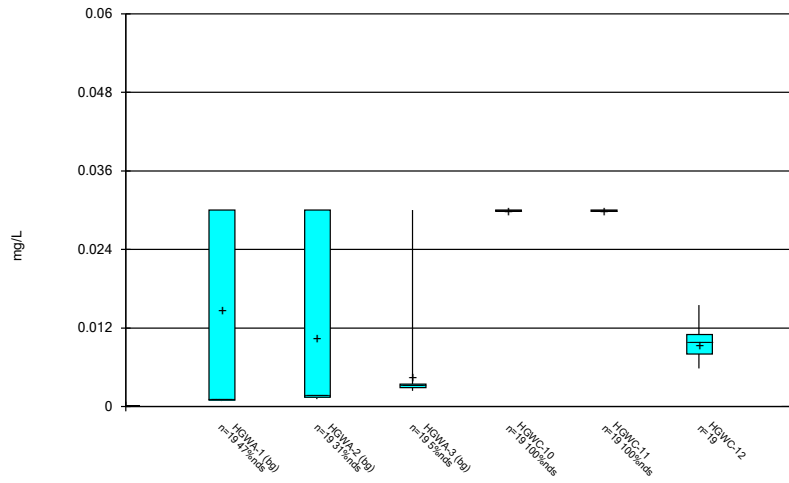
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Box & Whiskers Plot



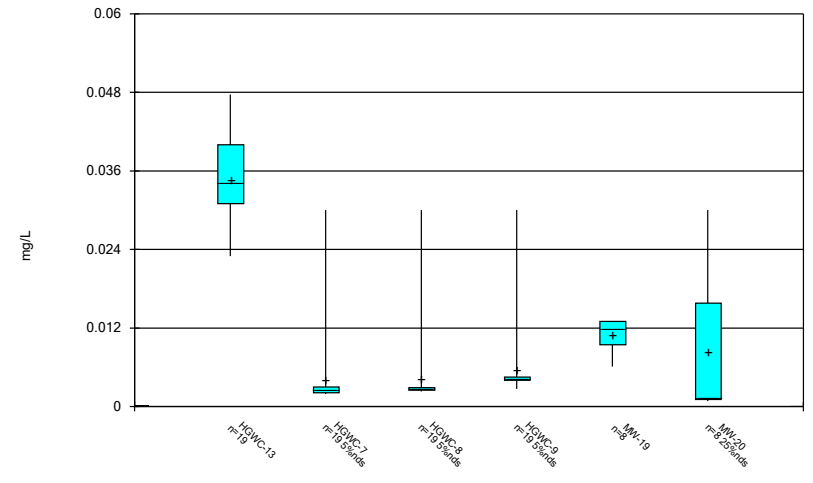
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Box & Whiskers Plot



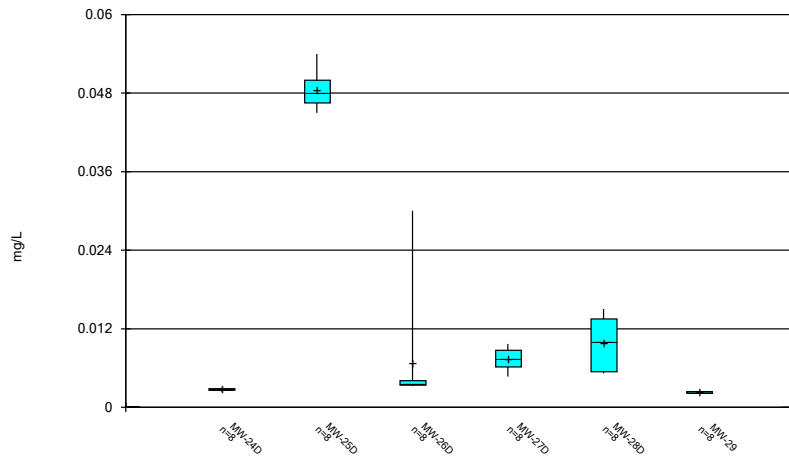
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Box & Whiskers Plot



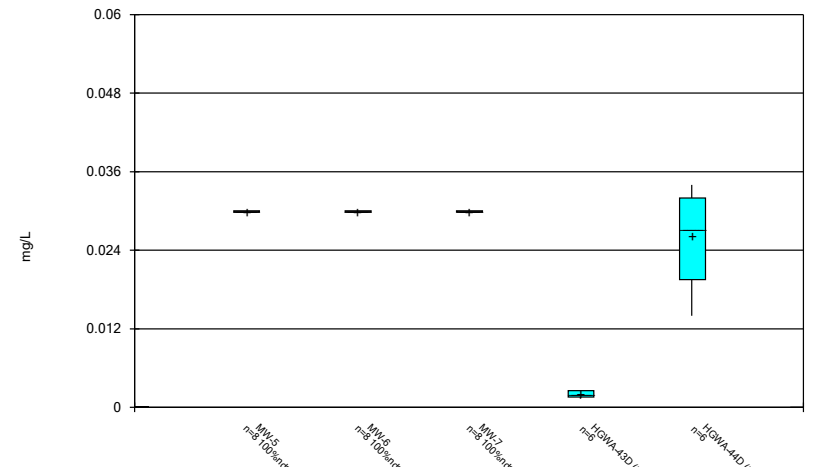
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Box & Whiskers Plot



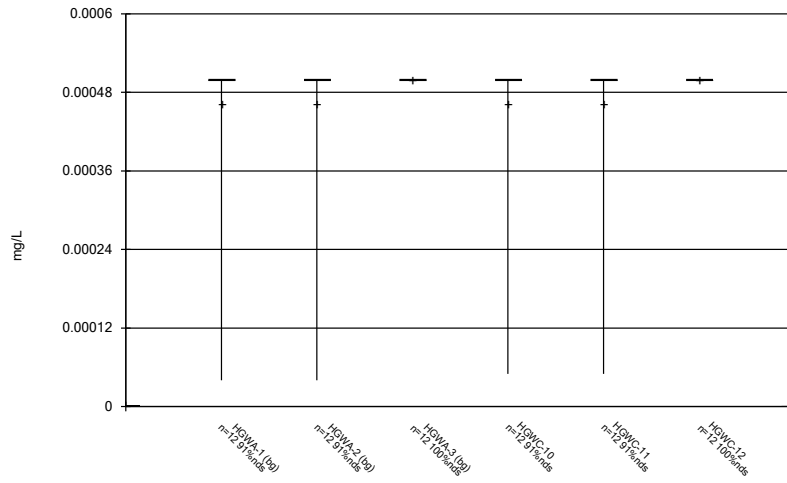
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Box & Whiskers Plot



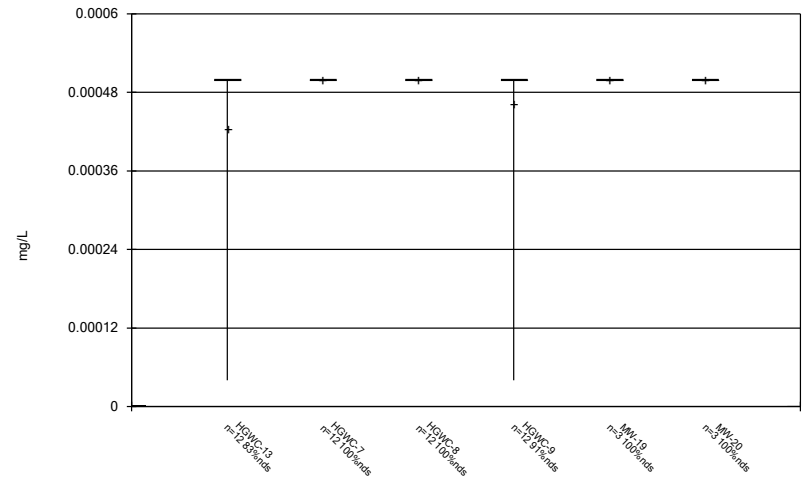
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Box & Whiskers Plot



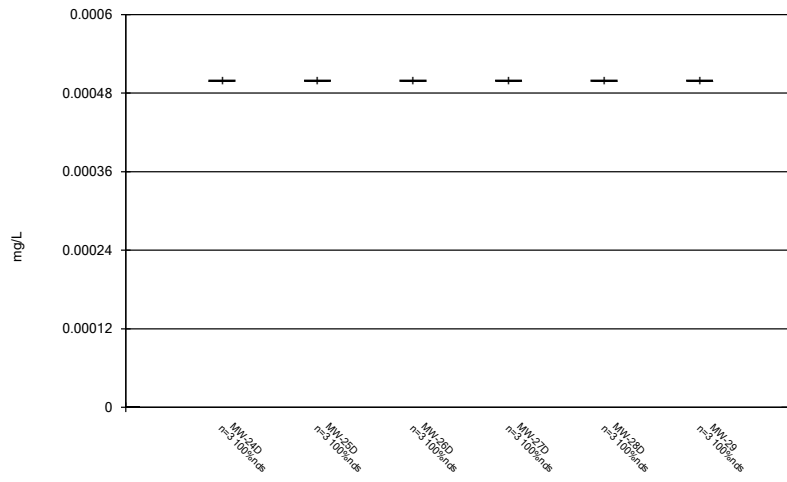
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Box & Whiskers Plot



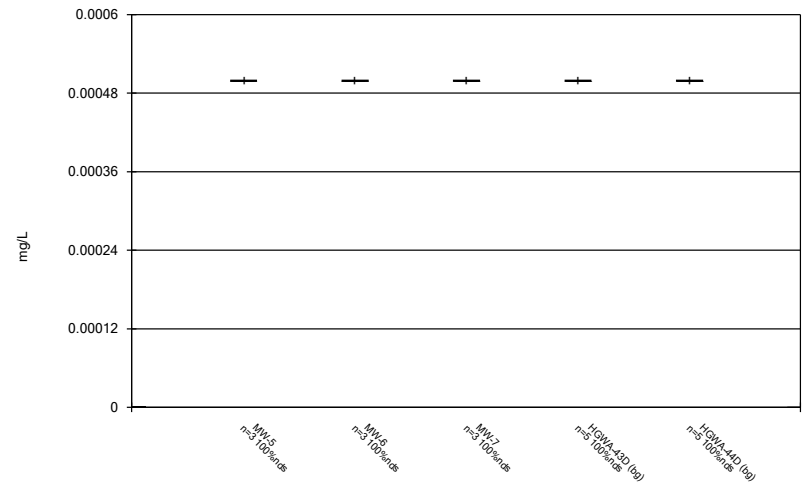
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Box & Whiskers Plot



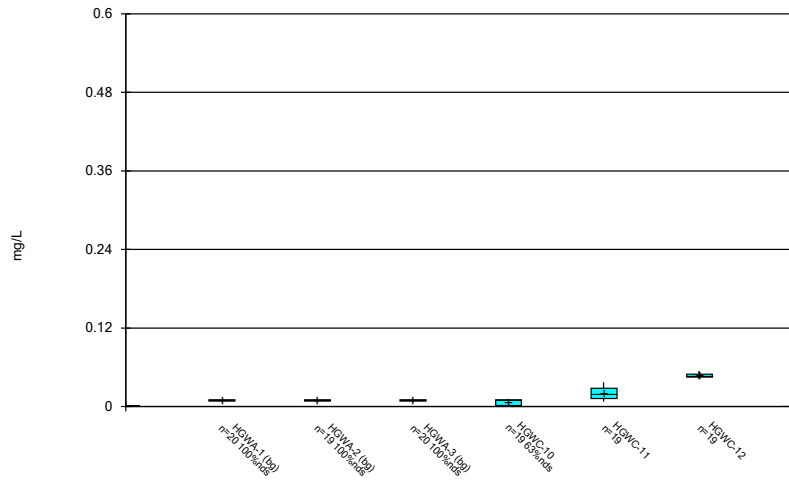
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Box & Whiskers Plot



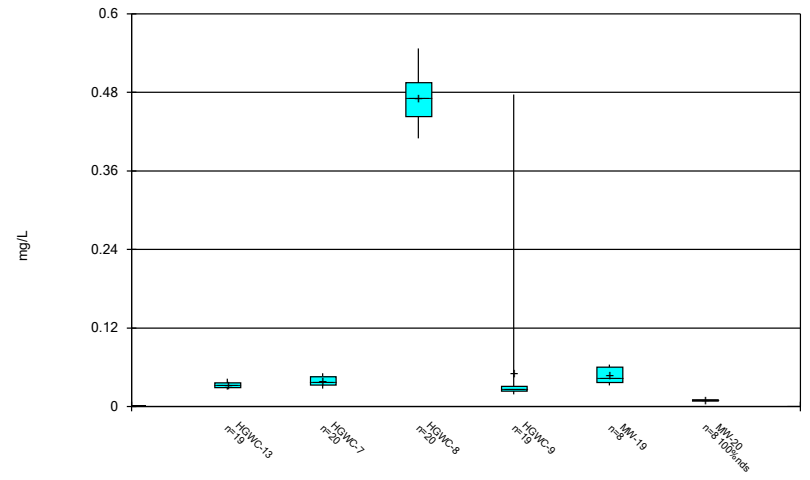
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Box & Whiskers Plot



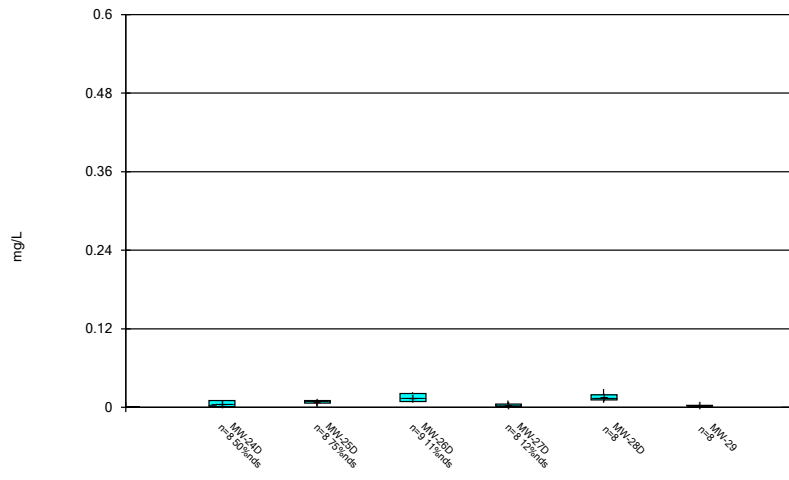
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Box & Whiskers Plot



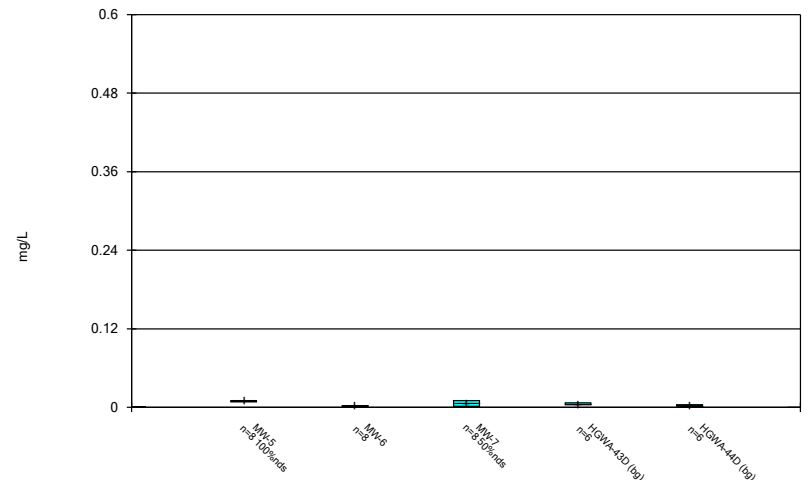
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Box & Whiskers Plot



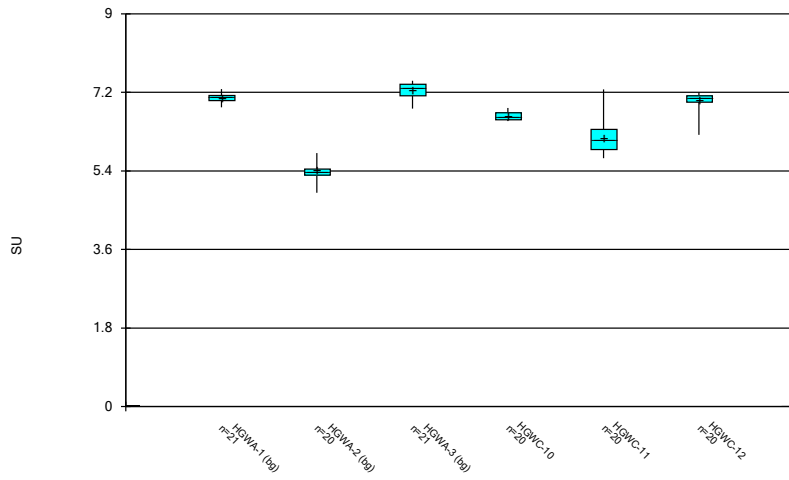
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Box & Whiskers Plot



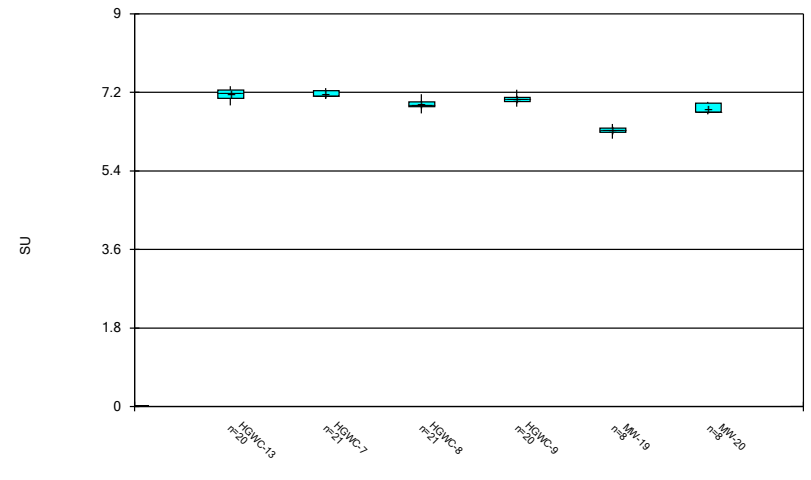
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Box & Whiskers Plot



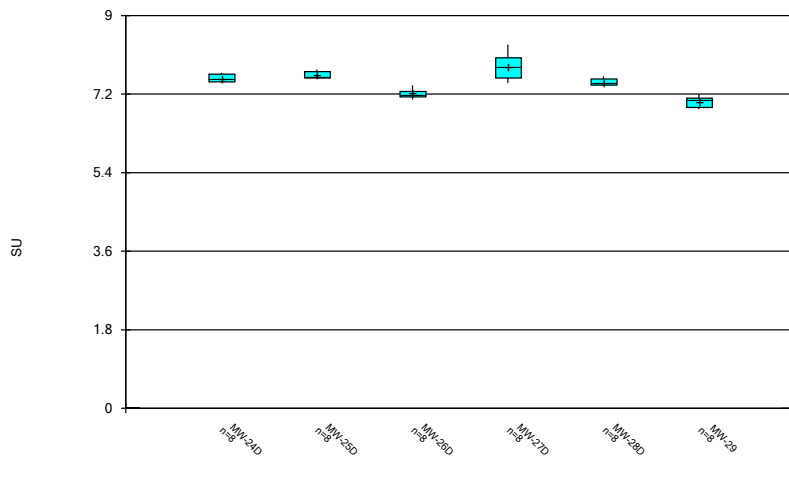
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Box & Whiskers Plot



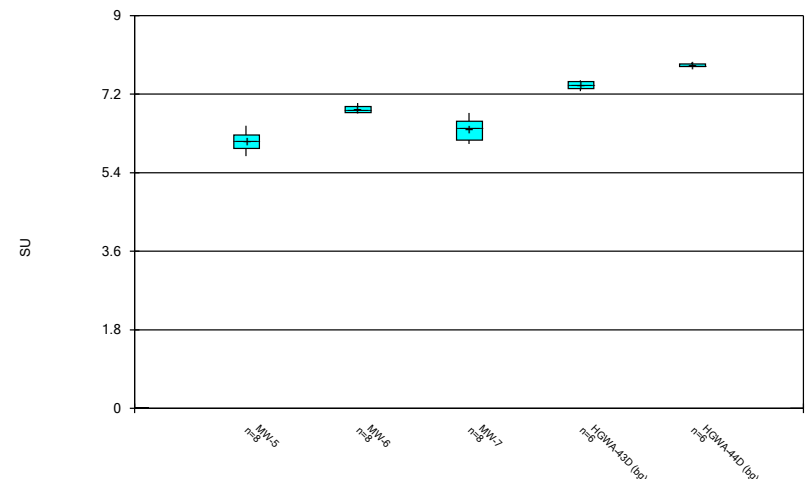
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Box & Whiskers Plot



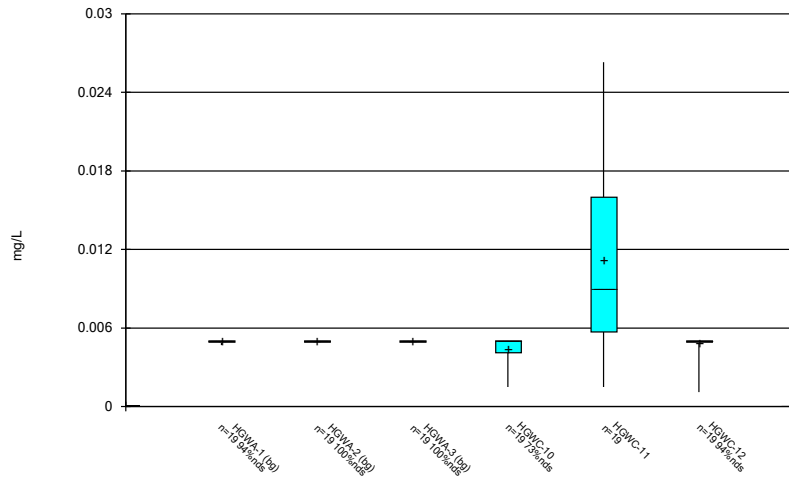
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



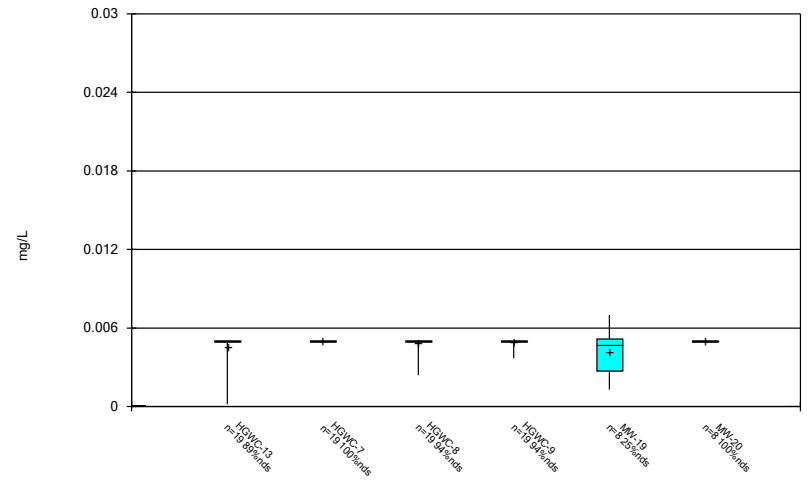
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



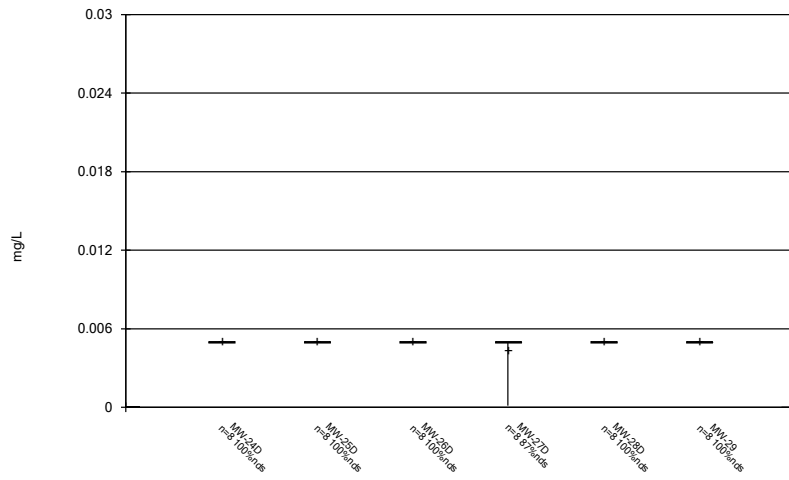
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



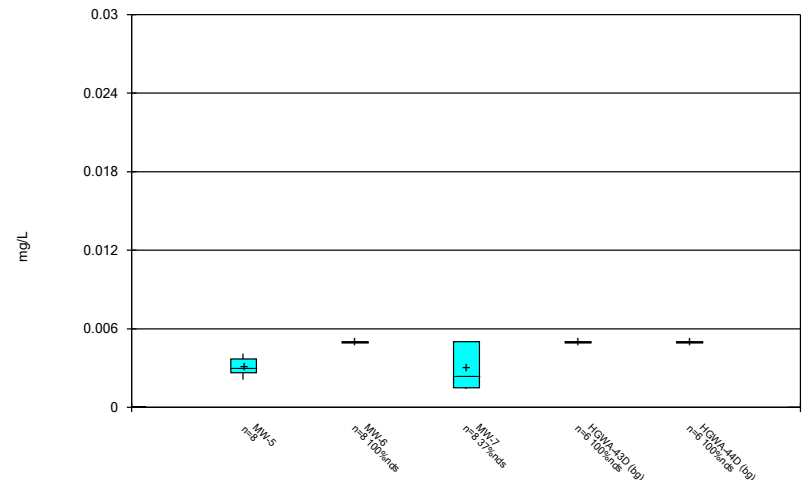
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



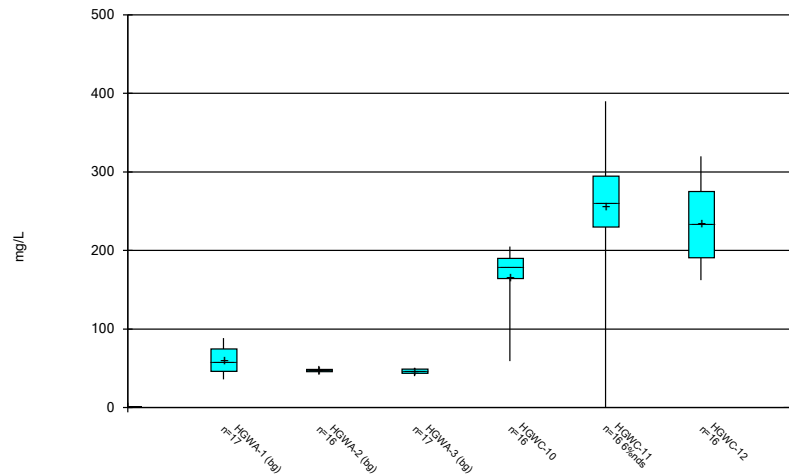
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



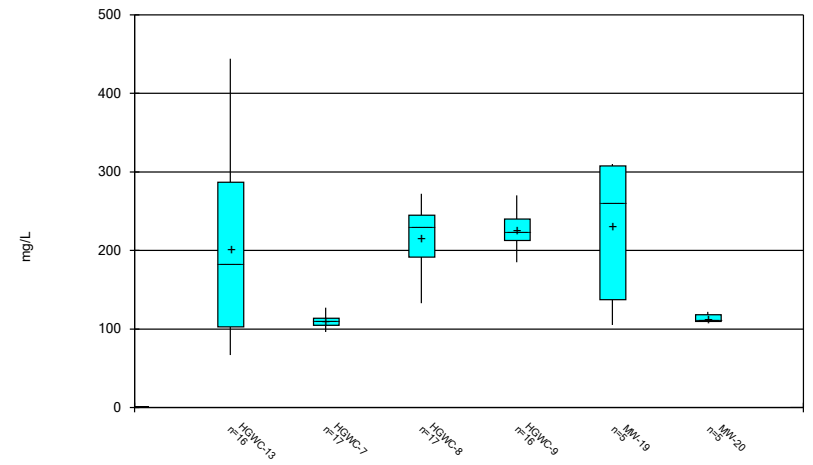
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Box & Whiskers Plot



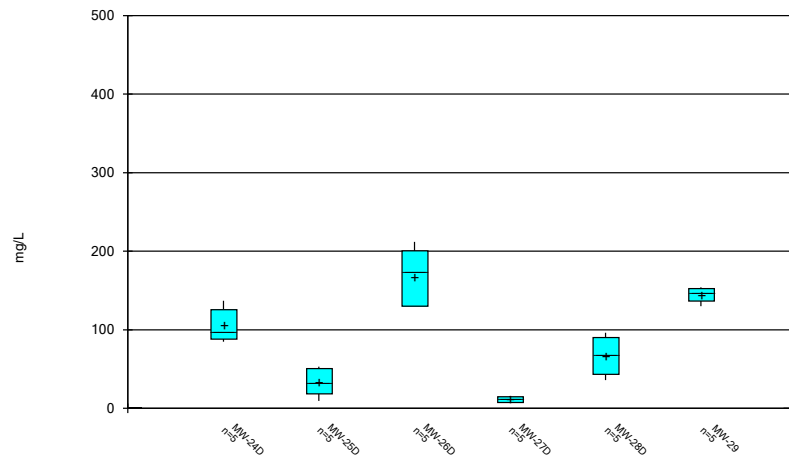
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



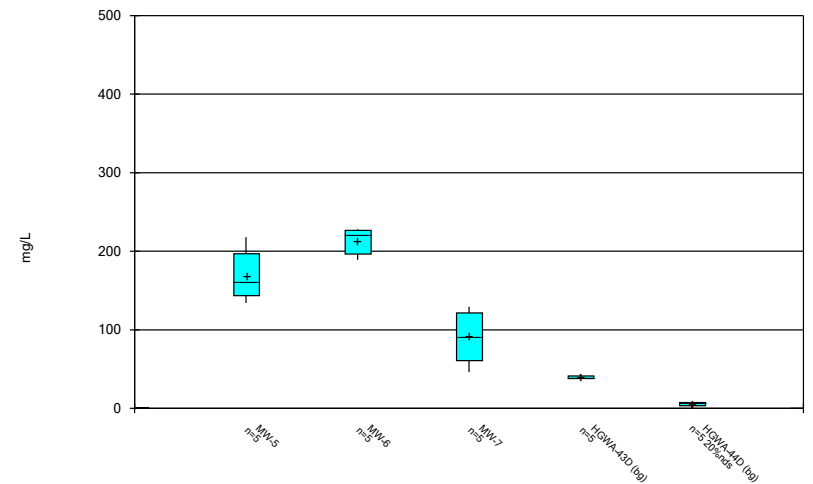
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



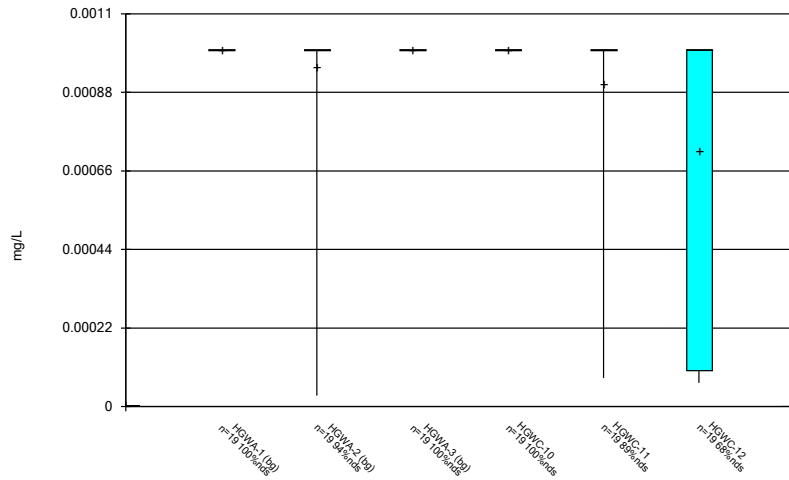
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



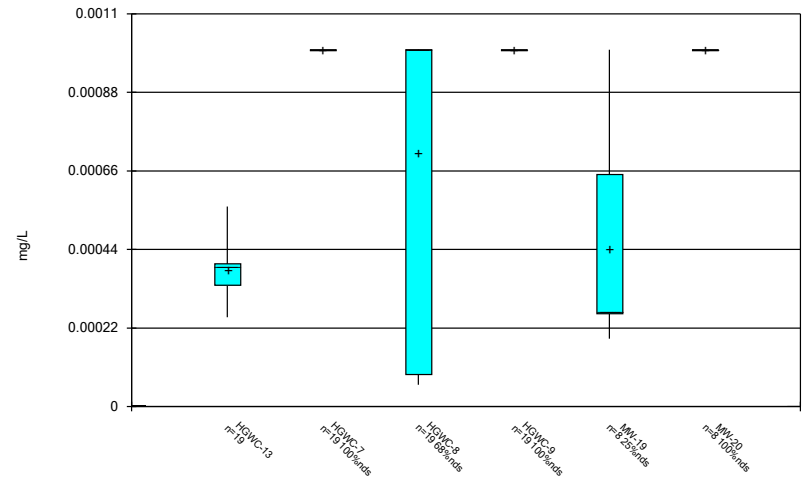
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



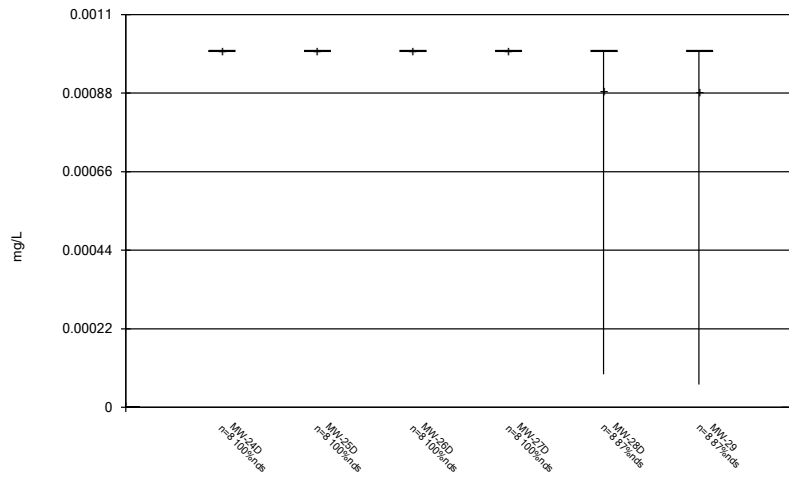
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



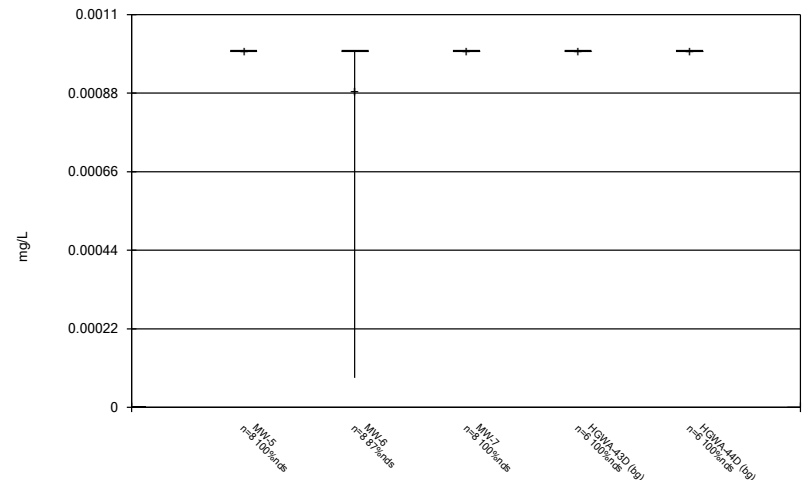
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



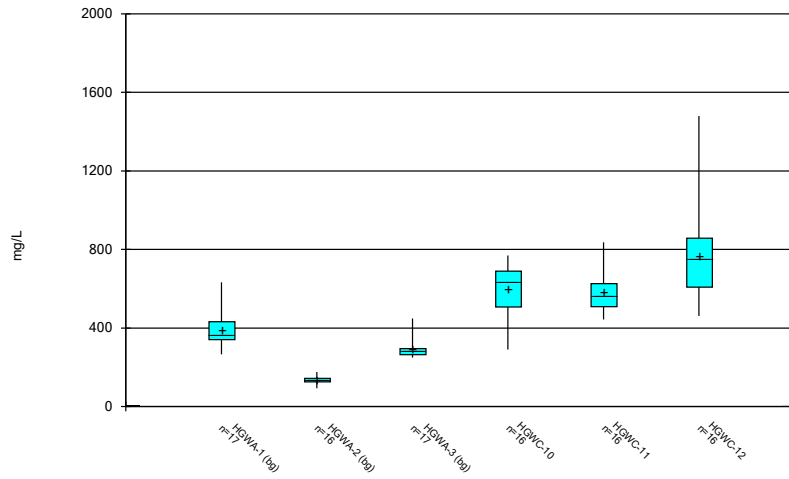
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



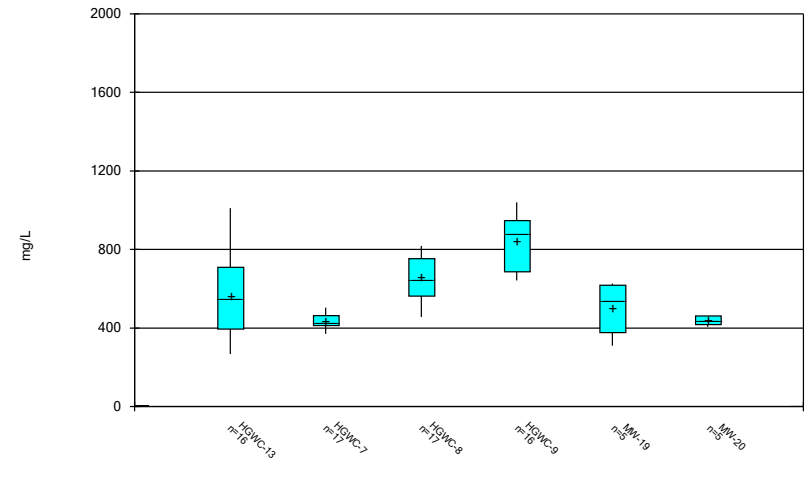
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



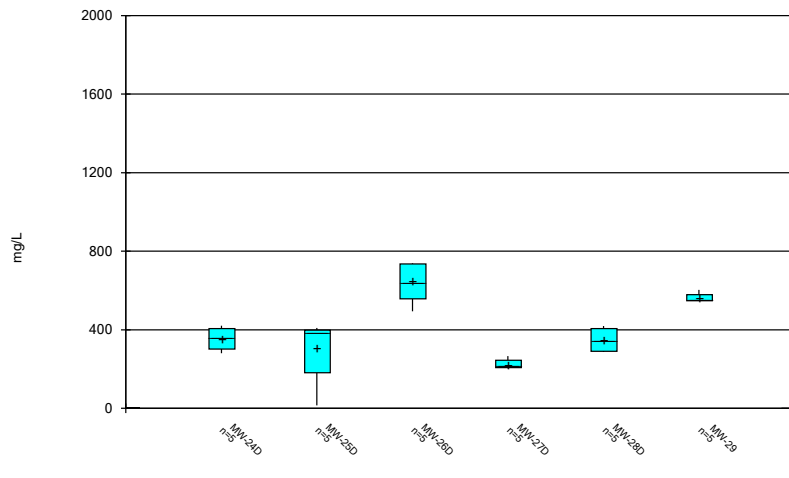
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



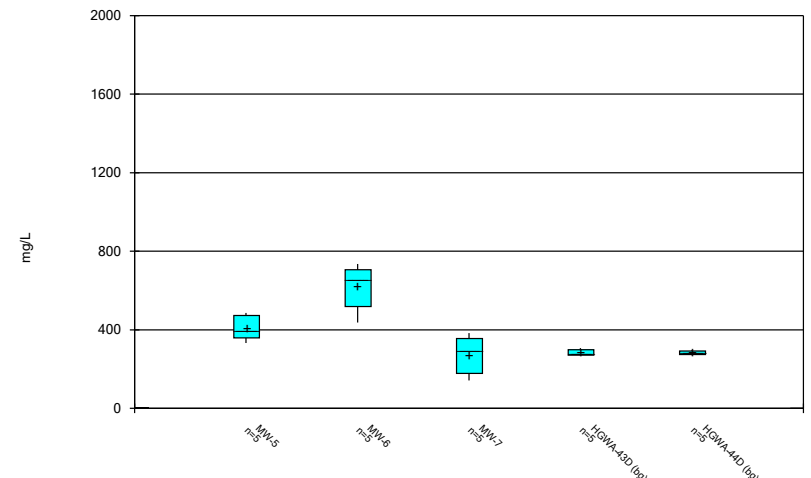
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 5/4/2021 7:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 5/4/2021 7:14 PM
Plant Hammond Client: Southern Company Data: Hammond AP-1

FIGURE C.

Outlier Summary

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 4/13/2021, 2:35 PM

No outliers were flagged.

FIGURE D.

Appendix III Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-10	0.4	n/a	3/12/2021	0.64	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-11	0.4	n/a	3/16/2021	0.53	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-12	0.4	n/a	3/16/2021	1.9	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-13	0.4	n/a	3/17/2021	0.89	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-7	0.4	n/a	3/15/2021	1.1	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-8	0.4	n/a	3/15/2021	1.7	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-9	0.4	n/a	3/16/2021	2.2	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-10	137.2	n/a	3/12/2021	146	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-12	137.2	n/a	3/16/2021	166	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-13	137.2	n/a	3/17/2021	184	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-8	137.2	n/a	3/15/2021	156	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-9	137.2	n/a	3/16/2021	182	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Chloride (mg/L)	HGWC-12	41.1	n/a	3/16/2021	56.8	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-7	41.1	n/a	3/15/2021	44.5	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-8	41.1	n/a	3/15/2021	72.4	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-9	41.1	n/a	3/16/2021	94.7	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-10	88.2	n/a	3/12/2021	120	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-11	88.2	n/a	3/16/2021	291	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-12	88.2	n/a	3/16/2021	248	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-13	88.2	n/a	3/17/2021	384	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-7	88.2	n/a	3/15/2021	107	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-8	88.2	n/a	3/15/2021	272	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-9	88.2	n/a	3/16/2021	211	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-13	632	n/a	3/17/2021	716	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-9	632	n/a	3/16/2021	672	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2

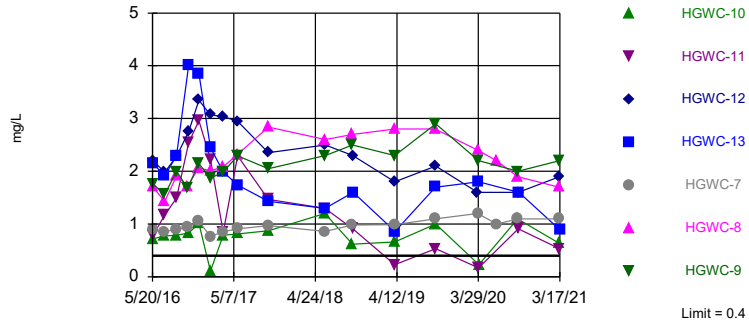
Appendix III Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:20 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-10	0.4	n/a	3/12/2021	0.64	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-11	0.4	n/a	3/16/2021	0.53	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-12	0.4	n/a	3/16/2021	1.9	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-13	0.4	n/a	3/17/2021	0.89	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-7	0.4	n/a	3/15/2021	1.1	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-8	0.4	n/a	3/15/2021	1.7	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-9	0.4	n/a	3/16/2021	2.2	Yes	60	n/a	n/a	3.333	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-10	137.2	n/a	3/12/2021	146	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-11	137.2	n/a	3/16/2021	132	No	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-12	137.2	n/a	3/16/2021	166	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-13	137.2	n/a	3/17/2021	184	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-7	137.2	n/a	3/15/2021	113	No	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-8	137.2	n/a	3/15/2021	156	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Calcium (mg/L)	HGWC-9	137.2	n/a	3/16/2021	182	Yes	60	66.19	37	0	None	No	0.001075	Param Inter 1 of 2
Chloride (mg/L)	HGWC-10	41.1	n/a	3/12/2021	35	No	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-11	41.1	n/a	3/16/2021	11.5	No	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-12	41.1	n/a	3/16/2021	56.8	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-13	41.1	n/a	3/17/2021	31.4	No	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-7	41.1	n/a	3/15/2021	44.5	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-8	41.1	n/a	3/15/2021	72.4	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-9	41.1	n/a	3/16/2021	94.7	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-10	0.74	n/a	3/12/2021	0.054J	No	74	n/a	n/a	31.08	n/a	n/a	0.0003513	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-11	0.74	n/a	3/16/2021	0.21	No	74	n/a	n/a	31.08	n/a	n/a	0.0003513	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-12	0.74	n/a	3/16/2021	0.2	No	74	n/a	n/a	31.08	n/a	n/a	0.0003513	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-13	0.74	n/a	3/17/2021	0.65	No	74	n/a	n/a	31.08	n/a	n/a	0.0003513	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-7	0.74	n/a	3/15/2021	0.086J	No	74	n/a	n/a	31.08	n/a	n/a	0.0003513	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-8	0.74	n/a	3/15/2021	0.51	No	74	n/a	n/a	31.08	n/a	n/a	0.0003513	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-9	0.74	n/a	3/16/2021	0.098J	No	74	n/a	n/a	31.08	n/a	n/a	0.0003513	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-10	7.92	4.9	3/12/2021	6.76	No	74	n/a	n/a	0	n/a	n/a	0.0007026	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-11	7.92	4.9	3/16/2021	5.95	No	74	n/a	n/a	0	n/a	n/a	0.0007026	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-12	7.92	4.9	3/16/2021	7.15	No	74	n/a	n/a	0	n/a	n/a	0.0007026	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-13	7.92	4.9	3/17/2021	7.33	No	74	n/a	n/a	0	n/a	n/a	0.0007026	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-7	7.92	4.9	3/15/2021	7.19	No	74	n/a	n/a	0	n/a	n/a	0.0007026	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-8	7.92	4.9	3/15/2021	7.09	No	74	n/a	n/a	0	n/a	n/a	0.0007026	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-9	7.92	4.9	3/16/2021	7.1	No	74	n/a	n/a	0	n/a	n/a	0.0007026	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-10	88.2	n/a	3/12/2021	120	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-11	88.2	n/a	3/16/2021	291	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-12	88.2	n/a	3/16/2021	248	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-13	88.2	n/a	3/17/2021	384	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-7	88.2	n/a	3/15/2021	107	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-8	88.2	n/a	3/15/2021	272	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-9	88.2	n/a	3/16/2021	211	Yes	60	n/a	n/a	1.667	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-10	632	n/a	3/12/2021	490	No	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-11	632	n/a	3/16/2021	558	No	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-12	632	n/a	3/16/2021	614	No	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-13	632	n/a	3/17/2021	716	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-7	632	n/a	3/15/2021	370	No	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-8	632	n/a	3/15/2021	614	No	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-9	632	n/a	3/16/2021	672	Yes	60	n/a	n/a	0	n/a	n/a	0.0005205	NP Inter (normality) 1 of 2

Exceeds Limit: HGWC-10, HGWC-11, HGWC-12, HGWC-13, HGWC-7, HGWC-8, HGWC-9

Prediction Limit
Interwell Non-parametric

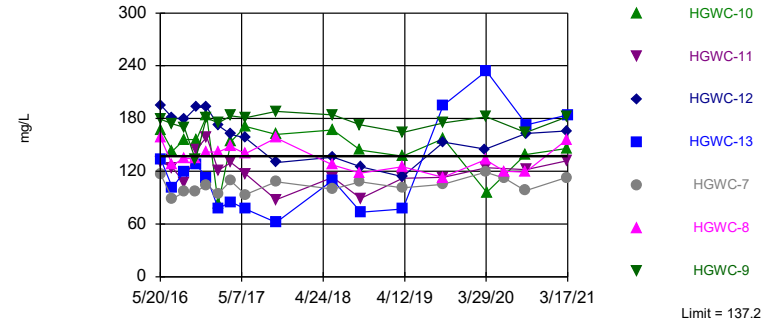


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 60 background values. 3.333% NDs. Annual per-constituent alpha = 0.007263. Individual comparison alpha = 0.0005205 (1 of 2). Comparing 7 points to limit.

Constituent: Boron Analysis Run 5/4/2021 7:17 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

Exceeds Limit: HGWC-10, HGWC-12, HGWC-13, HGWC-8, HGWC-9

Prediction Limit
Interwell Parametric

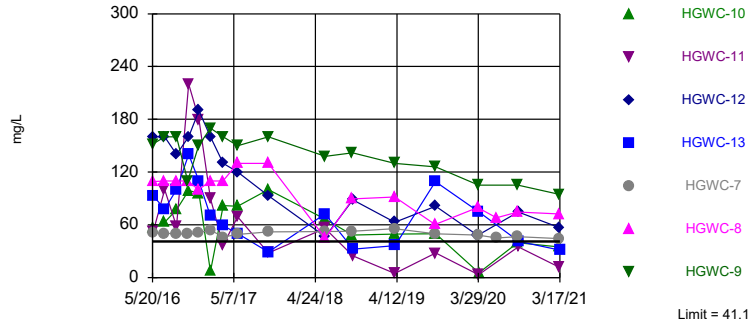


Background Data Summary: Mean=66.19, Std. Dev.=37, n=60. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9484, critical = 0.945. Kappa = 1.919 (c=7, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001075. Comparing 7 points to limit.

Constituent: Calcium Analysis Run 5/4/2021 7:17 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

Exceeds Limit: HGWC-12, HGWC-7, HGWC-8, HGWC-9

Prediction Limit
Interwell Non-parametric

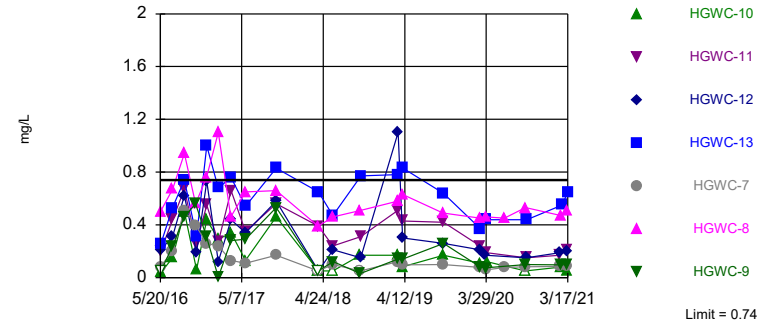


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 60 background values. Annual per-constituent alpha = 0.007263. Individual comparison alpha = 0.0005205 (1 of 2). Comparing 7 points to limit.

Constituent: Chloride Analysis Run 5/4/2021 7:17 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

Hollow symbols indicate censored values.
Within Limit

Prediction Limit
Interwell Non-parametric

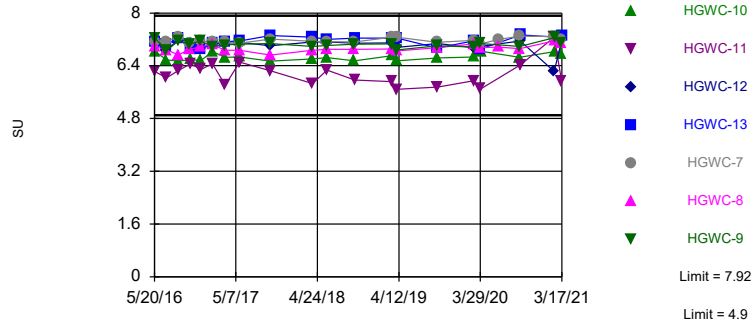


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 74 background values. 31.08% NDs. Annual per-constituent alpha = 0.004907. Individual comparison alpha = 0.0003513 (1 of 2). Comparing 7 points to limit.

Constituent: Fluoride Analysis Run 5/4/2021 7:17 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

Within Limits

Prediction Limit
Interwell Non-parametric

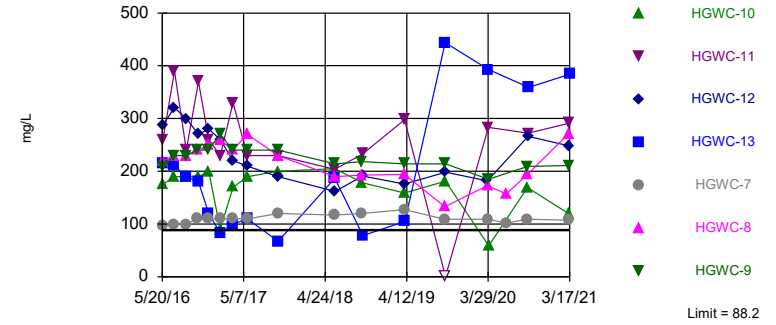


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 74 background values. Annual per-constituent alpha = 0.009813. Individual comparison alpha = 0.0007026 (1 of 2). Comparing 7 points to limit.

Constituent: pH, Field Analysis Run 5/4/2021 7:17 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

Exceeds Limit: HGWC-10, HGWC-11, HGWC-12, HGWC-13, HGWC-7, HGWC-8, HGWC-9

Prediction Limit
Interwell Non-parametric

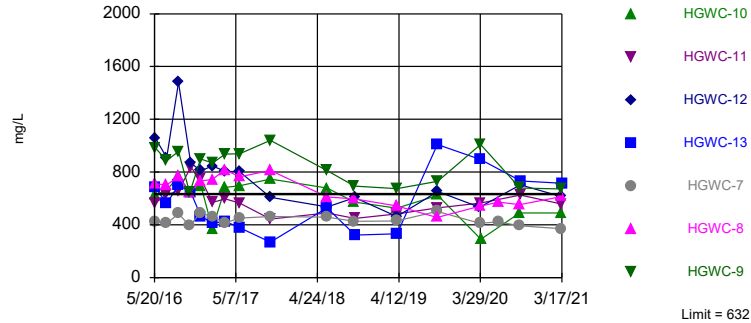


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 60 background values. 1.667% NDs. Annual per-constituent alpha = 0.007263. Individual comparison alpha = 0.0005205 (1 of 2). Comparing 7 points to limit.

Constituent: Sulfate Analysis Run 5/4/2021 7:17 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

Exceeds Limit: HGWC-13, HGWC-9

Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 60 background values. Annual per-constituent alpha = 0.007263. Individual comparison alpha = 0.0005205 (1 of 2). Comparing 7 points to limit.

Constituent: Total Dissolved Solids Analysis Run 5/4/2021 7:17 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWC-8	HGWC-7	HGWC-10	HGWC-13	HGWC-9	HGWC-11
1/19/2021									
3/10/2021	0.015 (J)								
3/11/2021		0.015 (J)	0.056						
3/12/2021						0.64			
3/15/2021				1.7	1.1				
3/16/2021								2.2	0.53
3/17/2021							0.89		

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWA-44D (bg)	HGWA-43D (bg)
5/19/2016			
5/20/2016			
5/23/2016	2.2		
7/11/2016			
7/12/2016	1.98		
8/30/2016			
9/1/2016	2.28		
10/19/2016			
10/20/2016			
10/24/2016	2.75		
12/6/2016			
12/7/2016	3.35		
1/24/2017			
1/25/2017			
1/26/2017	3.07		
3/21/2017			
3/22/2017	3.04		
5/22/2017			
5/23/2017			
5/24/2017	2.95		
10/3/2017	2.35		
6/4/2018			
6/5/2018			
6/6/2018	2.5		
10/1/2018			
10/2/2018			
10/3/2018	2.3		
10/5/2018			
4/1/2019			
4/2/2019			
4/3/2019	1.8		
4/5/2019			
9/23/2019			
9/24/2019			
9/25/2019			
9/26/2019			
9/27/2019	2.1		
3/25/2020			
3/26/2020	1.6		
3/27/2020			
3/30/2020			
3/31/2020			
4/1/2020			
6/16/2020			
6/17/2020			
9/15/2020			
9/16/2020		0.23	0.061 (J)
9/17/2020			
9/18/2020	1.6		
9/21/2020			
11/10/2020		0.29	0.057 (J)
12/15/2020		0.31	0.052 (J)

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWA-44D (bg)	HGWA-43D (bg)
1/19/2021		0.4	0.049 (J)
3/10/2021		0.39	
3/11/2021			0.06
3/12/2021			
3/15/2021			
3/16/2021	1.9		
3/17/2021			

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWC-8	HGWC-7	HGWC-10	HGWC-13	HGWC-9	HGWC-11
1/19/2021									
3/10/2021	111								
3/11/2021		83.8	43.8						
3/12/2021						146 (M1)			
3/15/2021				156	113				
3/16/2021								182	132
3/17/2021							184		

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWA-44D (bg)	HGWA-43D (bg)
5/19/2016			
5/20/2016			
5/23/2016	195		
7/11/2016			
7/12/2016	181		
8/30/2016			
9/1/2016	179		
10/19/2016			
10/20/2016			
10/24/2016	193		
12/6/2016			
12/7/2016	193		
1/24/2017			
1/25/2017			
1/26/2017	172		
3/21/2017			
3/22/2017	162		
5/22/2017			
5/23/2017			
5/24/2017	158		
10/3/2017	130		
6/4/2018			
6/5/2018			
6/6/2018	136		
10/1/2018			
10/2/2018			
10/3/2018	125		
10/5/2018			
4/1/2019			
4/2/2019			
4/3/2019	114		
4/5/2019			
9/23/2019			
9/24/2019			
9/25/2019			
9/26/2019			
9/27/2019	153		
3/25/2020			
3/26/2020	145		
3/27/2020			
3/30/2020			
3/31/2020			
4/1/2020			
6/16/2020			
6/17/2020			
9/15/2020			
9/16/2020		30	56
9/17/2020			
9/18/2020	163		
9/21/2020			
11/10/2020		33.6	63.3
12/15/2020		28.7	62.6

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWA-44D (bg)	HGWA-43D (bg)
1/19/2021		33	60.1
3/10/2021		5.9	
3/11/2021			59.6
3/12/2021			
3/15/2021			
3/16/2021	166		
3/17/2021			

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWC-8	HGWC-7	HGWC-10	HGWC-13	HGWC-9	HGWC-11
1/19/2021									
3/10/2021	7.4								
3/11/2021		5.9	5.1						
3/12/2021						35			
3/15/2021				72.4	44.5				
3/16/2021								94.7	11.5
3/17/2021							31.4		

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWA-44D (bg)	HGWA-43D (bg)
5/19/2016			
5/20/2016			
5/23/2016	160		
7/11/2016			
7/12/2016	160		
8/30/2016			
9/1/2016	140		
10/19/2016			
10/20/2016			
10/24/2016	160		
12/6/2016			
12/7/2016	190		
1/24/2017			
1/25/2017			
1/26/2017	160		
3/21/2017			
3/22/2017	130		
5/22/2017			
5/23/2017			
5/24/2017	120		
10/3/2017	93		
6/4/2018			
6/5/2018			
6/6/2018	46.4		
10/1/2018			
10/2/2018			
10/3/2018	88.4		
10/5/2018			
4/1/2019			
4/2/2019			
4/3/2019	62.8		
4/5/2019			
9/23/2019			
9/24/2019			
9/25/2019			
9/26/2019			
9/27/2019	81		
3/25/2020			
3/26/2020	48		
3/27/2020			
3/30/2020			
3/31/2020			
4/1/2020			
6/16/2020			
6/17/2020			
9/15/2020			
9/16/2020		7.2	4.1
9/17/2020			
9/18/2020	74.6		
9/21/2020			
11/10/2020		7.8	4.4
12/15/2020		9.4	4.7

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWA-44D (bg)	HGWA-43D (bg)
1/19/2021		9.5	4.1
3/10/2021		12.3	
3/11/2021			4.5
3/12/2021			
3/15/2021			
3/16/2021	56.8		
3/17/2021			

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWC-8	HGWC-7	HGWC-10	HGWC-12	HGWC-13	HGWC-9
5/19/2016	0.105 (J)	0.0513 (J)	0.0303 (J)						
5/20/2016				0.499	0.0828 (J)				
5/23/2016						0.0394 (J)	0.212 (J)	0.2587 (J)	<0.1
7/11/2016	0.16 (J)		0.05 (J)						
7/12/2016		0.12 (J)		0.67	0.2 (J)	0.15 (J)	0.31	0.53	0.24 (J)
8/30/2016	0.09 (J)	0.09 (J)	0.06 (J)						
9/1/2016				0.94	0.51	0.5	0.62	0.74	0.46
10/19/2016	0.1 (J)	0.1 (J)	0.04 (J)						
10/20/2016				0.56	0.4				0.56
10/24/2016						0.06 (J)	0.19 (J)	0.31	
12/6/2016	0.11 (J)	0.21 (J)	0.36	0.76	0.26 (J)				0.31
12/7/2016						0.44	0.73	1	
1/24/2017	0.09 (J)	0.06 (J)	<0.1						
1/25/2017				1.1	0.24 (J)				
1/26/2017						0.29 (J)	0.12 (J)	0.68	0.004 (J)
3/21/2017	0.13 (J)	0.005 (J)	<0.1	0.46	0.13 (J)				
3/22/2017						0.34	0.44	0.76	0.28 (J)
5/22/2017	0.12 (J)	0.05 (J)	<0.1						
5/23/2017				0.65	0.11 (J)				0.29 (J)
5/24/2017						0.13 (J)	0.34	0.54	
10/3/2017	0.13 (J)	0.13 (J)	<0.1	0.66	0.17 (J)	0.46	0.58	0.83	0.53
4/2/2018	<0.1		<0.1						
4/3/2018		<0.1		0.39	<0.1				<0.1
4/4/2018						<0.1	<0.1	0.65	
6/4/2018	0.074 (J)	<0.1	<0.1						
6/5/2018					0.099 (J)	<0.1		0.47	
6/6/2018				0.46			0.21 (J)		0.12 (J)
10/1/2018	<0.1	<0.1	<0.1						
10/2/2018				0.51	<0.1	0.17 (J)			0.031 (J)
10/3/2018							0.15 (J)		
10/5/2018								0.77	
3/12/2019	0.29 (J)	0.072 (J)	0.038 (J)	0.58					
3/13/2019					0.12 (J)	0.17 (J)		0.78	0.14 (J)
3/14/2019							1.1		
4/1/2019		0.029 (J)							
4/2/2019	0.1 (J)		0.071 (J)		0.097 (J)				
4/3/2019				0.63		0.082 (J)	0.3 (J)		0.14 (J)
4/5/2019								0.83	
9/23/2019	0.078 (J)	<0.1	<0.1						
9/24/2019				0.49					
9/25/2019					0.1 (J)				
9/26/2019								0.64	
9/27/2019						0.17 (J)	0.26 (J)		0.26 (J)
3/2/2020	0.076 (J)	<0.1	<0.1						
3/3/2020				0.45		0.11 (J)	0.21 (J)		
3/4/2020					0.077 (J)			0.37	0.08 (J)
3/25/2020	0.098 (J)	<0.1	<0.1						
3/26/2020							0.17 (J)		
3/27/2020				0.46	0.059 (J)				
3/30/2020								0.44	
3/31/2020									0.074 (J)
4/1/2020						0.12 (J)			

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWA-44D (bg)	HGWA-43D (bg)
5/19/2016			
5/20/2016			
5/23/2016	0.203 (J)		
7/11/2016			
7/12/2016	0.44		
8/30/2016			
9/1/2016	0.67		
10/19/2016			
10/20/2016			
10/24/2016	0.26 (J)		
12/6/2016			
12/7/2016	0.55		
1/24/2017			
1/25/2017			
1/26/2017	0.27 (J)		
3/21/2017			
3/22/2017	0.66		
5/22/2017			
5/23/2017			
5/24/2017	0.35		
10/3/2017	0.56		
4/2/2018			
4/3/2018			
4/4/2018	0.39		
6/4/2018			
6/5/2018	0.24 (J)		
6/6/2018			
10/1/2018			
10/2/2018			
10/3/2018	0.31		
10/5/2018			
3/12/2019			
3/13/2019	0.51		
3/14/2019			
4/1/2019			
4/2/2019			
4/3/2019	0.43		
4/5/2019			
9/23/2019			
9/24/2019			
9/25/2019			
9/26/2019			
9/27/2019	0.42		
3/2/2020			
3/3/2020	0.24 (J)		
3/4/2020			
3/25/2020			
3/26/2020			
3/27/2020			
3/30/2020			
3/31/2020	0.19 (J)		
4/1/2020			

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWA-44D (bg)	HGWA-43D (bg)
6/16/2020			
6/17/2020			
9/15/2020			
9/16/2020		0.52	0.22
9/17/2020			
9/18/2020	0.15		
9/21/2020			
11/10/2020		0.59	0.19
12/15/2020		0.67	0.21
1/19/2021		0.74	0.16
2/8/2021			
2/9/2021		0.44	0.19
2/10/2021			
2/12/2021	0.17		
2/15/2021			
2/16/2021			
2/22/2021			
3/10/2021		0.65	
3/11/2021			0.2
3/12/2021			
3/15/2021			
3/16/2021	0.21		
3/17/2021			

Prediction Limit

Constituent: pH, Field (SU) Analysis Run 5/4/2021 7:20 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWC-8	HGWC-7	HGWC-10	HGWC-12	HGWC-13	HGWC-9
5/19/2016	7.27	7.45	5.81						
5/20/2016				6.99	7.14				
5/23/2016						6.83	7.15	7.14	7.23
7/11/2016	7.06		5.68						
7/12/2016		7.32		6.88	7.13	6.58	6.87	7.04	6.87
8/30/2016	7.28	7.43	5.63						
9/1/2016				6.73	7.29	6.54	7.2	7.24	7.15
10/19/2016	7.02	7.03	5.46						
10/20/2016				6.9	7.1				7.05
10/24/2016						6.59	7.1	6.9	
12/6/2016	7.09	7.08	5.38	6.98	7.15				7.15
12/7/2016						6.56	6.92	6.91	
1/24/2017	7.2	7.39	5.37						
1/25/2017				7.04	7.11				
1/26/2017						6.83	7.05	7.08	6.99
3/21/2017	7.01	6.83	4.9	6.87	7.12				
3/22/2017						6.66	7.08	7.13	7.03
5/22/2017	7.11	7.02	5.2						
5/23/2017				6.87	7.08				7.05
5/24/2017						6.67	7.11	7.15	
10/3/2017	7.21	7.47	5.3	6.72	7.21	6.54	7.01	7.32	7.07
4/2/2018	7.1		5.4						
4/3/2018		7.38		6.87	7.14				6.99
4/4/2018						6.61	7.12	7.27	
6/4/2018	7.06	7.38	5.27						
6/5/2018					7.13	6.65		7.2	
6/6/2018				6.9			7.12		7.02
10/1/2018	7.09	7.13	5.31						
10/2/2018				6.9	7.12	6.55			7.05
10/3/2018							7.08		
10/5/2018								7.24	
3/12/2019	7.03	7.29	5.42	6.91					
3/13/2019					7.27	6.7		7.24	7.06
3/14/2019							7.09		
4/1/2019		7.16							
4/2/2019	6.86		5.41		7.27				
4/3/2019				6.85		6.55	6.96		6.88
4/5/2019								7.24	
9/23/2019	7.02	7.3	5.33						
9/24/2019				6.95					
9/25/2019					7.11				
9/26/2019								6.94	
9/27/2019						6.64	7.07		7.01
3/2/2020	7.1	7.12	5.43						
3/3/2020				7.06		6.67	6.95		
3/4/2020					7.17			7.16	6.97
3/25/2020	6.95	7.4	5.36						
3/26/2020							6.99		
3/27/2020				6.95	7.05				
3/30/2020								6.91	
3/31/2020									7.07
4/1/2020						6.84			

Prediction Limit

Constituent: pH, Field (SU) Analysis Run 5/4/2021 7:20 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWA-44D (bg)	HGWA-43D (bg)
5/19/2016			
5/20/2016			
5/23/2016	6.22		
7/11/2016			
7/12/2016	6.04		
8/30/2016			
9/1/2016	6.26		
10/19/2016			
10/20/2016			
10/24/2016	6.46		
12/6/2016			
12/7/2016	6.29		
1/24/2017			
1/25/2017			
1/26/2017	6.46		
3/21/2017			
3/22/2017	5.81		
5/22/2017			
5/23/2017			
5/24/2017	6.51		
10/3/2017	6.25		
4/2/2018			
4/3/2018			
4/4/2018	5.86		
6/4/2018			
6/5/2018	6.27		
6/6/2018			
10/1/2018			
10/2/2018			
10/3/2018	5.97		
10/5/2018			
3/12/2019			
3/13/2019	5.92		
3/14/2019			
4/1/2019			
4/2/2019			
4/3/2019	5.69		
4/5/2019			
9/23/2019			
9/24/2019			
9/25/2019			
9/26/2019			
9/27/2019	5.75		
3/2/2020			
3/3/2020	5.95		
3/4/2020			
3/25/2020			
3/26/2020			
3/27/2020			
3/30/2020			
3/31/2020	5.7		
4/1/2020			

Prediction Limit

Constituent: pH, Field (SU) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWA-44D (bg)	HGWA-43D (bg)
6/16/2020			
6/17/2020			
9/15/2020			
9/16/2020		7.83	7.52
9/17/2020			
9/18/2020	6.42		
9/21/2020			
11/10/2020		7.84	7.27
12/15/2020		7.87	7.39
1/19/2021		7.86	7.39
2/8/2021			
2/9/2021		7.84	7.44
2/10/2021			
2/12/2021	7.27		
2/15/2021			
2/16/2021			
2/22/2021			
3/10/2021		7.92	
3/11/2021			7.46
3/12/2021			
3/15/2021			
3/16/2021	5.95		
3/17/2021			

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWC-8	HGWC-7	HGWC-10	HGWC-13	HGWC-9	HGWC-11
1/19/2021									
3/10/2021	49.6								
3/11/2021		50.4	52.9						
3/12/2021						120			
3/15/2021				272	107				
3/16/2021								211	291
3/17/2021							384		

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWA-44D (bg)	HGWA-43D (bg)
5/19/2016			
5/20/2016			
5/23/2016	288		
7/11/2016			
7/12/2016	320		
8/30/2016			
9/1/2016	300		
10/19/2016			
10/20/2016			
10/24/2016	270		
12/6/2016			
12/7/2016	280		
1/24/2017			
1/25/2017			
1/26/2017	260		
3/21/2017			
3/22/2017	220		
5/22/2017			
5/23/2017			
5/24/2017	210		
10/3/2017	190		
6/4/2018			
6/5/2018			
6/6/2018	162		
10/1/2018			
10/2/2018			
10/3/2018	191		
10/5/2018			
4/1/2019			
4/2/2019			
4/3/2019	176		
4/5/2019			
9/23/2019			
9/24/2019			
9/25/2019			
9/26/2019			
9/27/2019	198		
3/25/2020			
3/26/2020	182		
3/27/2020			
3/30/2020			
3/31/2020			
4/1/2020			
6/16/2020			
6/17/2020			
9/15/2020			
9/16/2020		6.9	43
9/17/2020			
9/18/2020	266		
9/21/2020			
11/10/2020		6.3	39
12/15/2020		6.7	38.8

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWA-44D (bg)	HGWA-43D (bg)
1/19/2021		7.4	37.3
3/10/2021		<1	
3/11/2021			38.6
3/12/2021			
3/15/2021			
3/16/2021	248		
3/17/2021			

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWC-8	HGWC-7	HGWC-10	HGWC-13	HGWC-9	HGWC-11
1/19/2021									
3/10/2021	348								
3/11/2021		267	169						
3/12/2021						490 (H1)			
3/15/2021				614	370				
3/16/2021								672	558
3/17/2021							716		

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWA-44D (bg)	HGWA-43D (bg)
5/19/2016			
5/20/2016			
5/23/2016	1060		
7/11/2016			
7/12/2016	909		
8/30/2016			
9/1/2016	1480		
10/19/2016			
10/20/2016			
10/24/2016	868		
12/6/2016			
12/7/2016	811		
1/24/2017			
1/25/2017			
1/26/2017	846		
3/21/2017			
3/22/2017	804		
5/22/2017			
5/23/2017			
5/24/2017	803		
10/3/2017	608		
6/4/2018			
6/5/2018			
6/6/2018	535		
10/1/2018			
10/2/2018			
10/3/2018	607		
10/5/2018			
4/1/2019			
4/2/2019			
4/3/2019	462		
4/5/2019			
9/23/2019			
9/24/2019			
9/25/2019			
9/26/2019			
9/27/2019	653		
3/25/2020			
3/26/2020	533		
3/27/2020			
3/30/2020			
3/31/2020			
4/1/2020			
6/16/2020			
6/17/2020			
9/15/2020			
9/16/2020		270	272
9/17/2020			
9/18/2020	704		
9/21/2020			
11/10/2020		287	307
12/15/2020		295	289

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 5/4/2021 7:20 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-12	HGWA-44D (bg)	HGWA-43D (bg)
1/19/2021		278	270
3/10/2021		289	
3/11/2021			279
3/12/2021			
3/15/2021			
3/16/2021	614		
3/17/2021			

FIGURE E.

Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/5/2021, 11:47 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-2 (bg)	0.00257	72	58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-13	-0.2856	-63	-58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-7	0.04974	80	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-9	0.1581	61	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-12	-13.85	-59	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-12	-27.06	-82	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-9	-11.82	-70	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.382	64	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-3 (bg)	1.515	77	63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-12	-29.88	-62	-58	Yes	16	0	n/a	n/a	0.01	NP

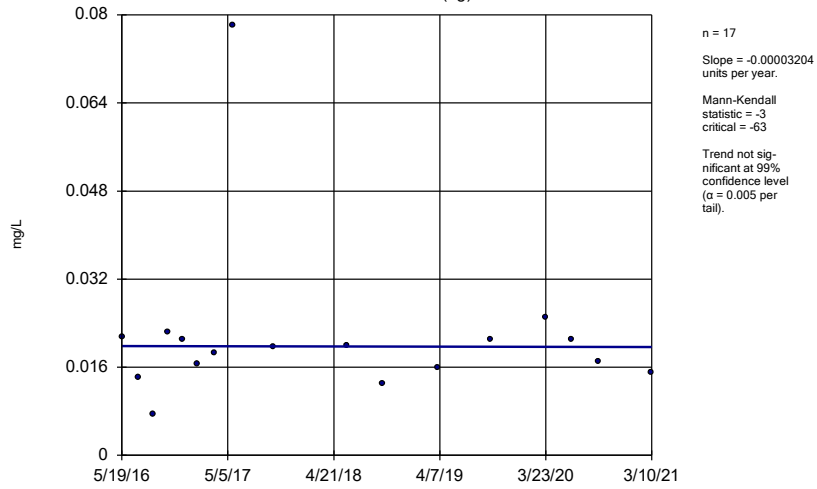
Trend Tests - Prediction Limit Exceedances - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/5/2021, 11:47 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-1 (bg)	-0.00003204	-3	-63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-2 (bg)	0.00257	72	58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-3 (bg)	-0.0002616	-15	-63	No	17	11.76	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-10	0.03846	10	58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-11	-0.2774	-48	-58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-12	-0.2012	-47	-58	No	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-13	-0.2856	-63	-58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-7	0.04974	80	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-8	0.1969	43	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-9	0.1581	61	58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-43D (bg)	-0.02892	-4	-12	No	5	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-44D (bg)	0.3386	8	12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-1 (bg)	4.579	52	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-2 (bg)	0.3424	16	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	2.895	58	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-10	-4.329	-28	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-12	-13.85	-59	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-13	9.634	7	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-8	-3.956	-40	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-9	0.3307	12	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-43D (bg)	-5.439	-2	-12	No	5	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-44D (bg)	-27.77	-4	-12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-1 (bg)	1.507	45	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-2 (bg)	-0.2299	-53	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-3 (bg)	-0.1011	-40	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-12	-27.06	-82	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-7	-0.8457	-32	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-8	-8.438	-55	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-9	-11.82	-70	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-43D (bg)	0.5656	3	12	No	5	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-44D (bg)	9.78	10	12	No	5	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-1 (bg)	4.851	51	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.382	64	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-3 (bg)	1.515	77	63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-10	-5.5	-31	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-11	-14.95	-18	-58	No	16	6.25	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-12	-29.88	-62	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-13	10.64	6	58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-7	0.9989	19	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-8	-13.34	-29	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-9	-5.2	-42	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-43D (bg)	-8.995	-8	-12	No	5	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-44D (bg)	-2.396	-2	-12	No	5	20	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	10.91	22	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-2 (bg)	-1.42	-11	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-3 (bg)	0.6748	7	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-13	-7.676	0	58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-9	-50.47	-36	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-43D (bg)	-24.14	-2	-12	No	5	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-44D (bg)	31.49	4	12	No	5	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

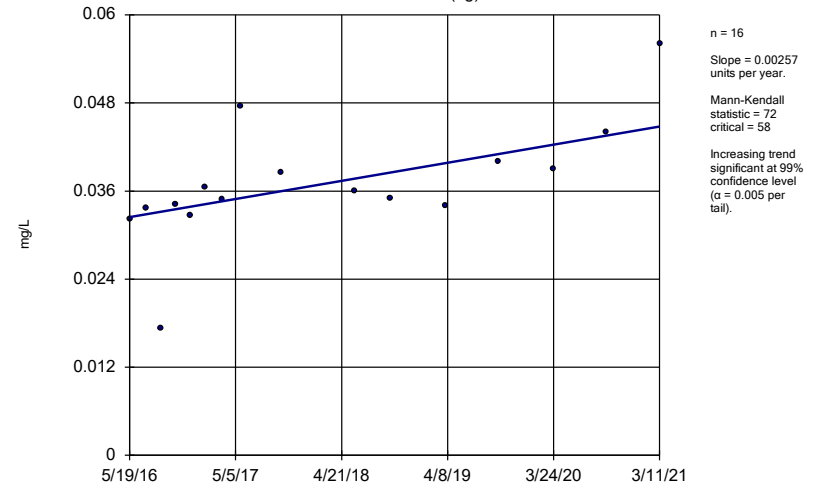
HGWA-1 (bg)



Constituent: Boron Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

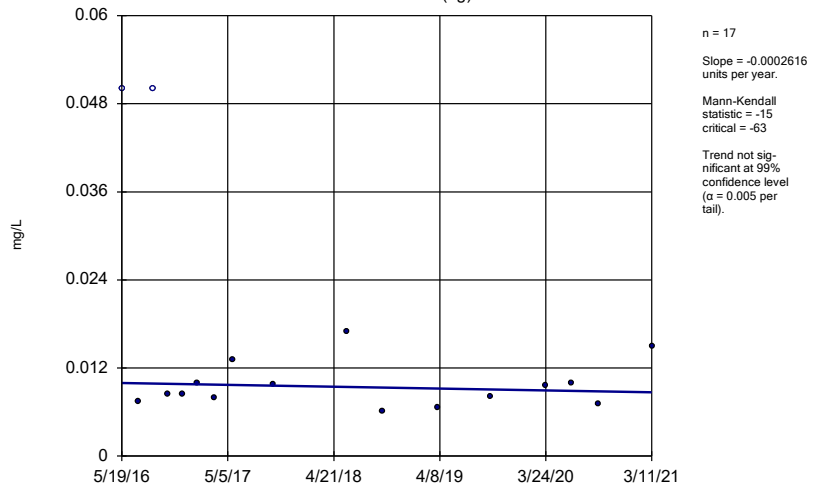
HGWA-2 (bg)



Constituent: Boron Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

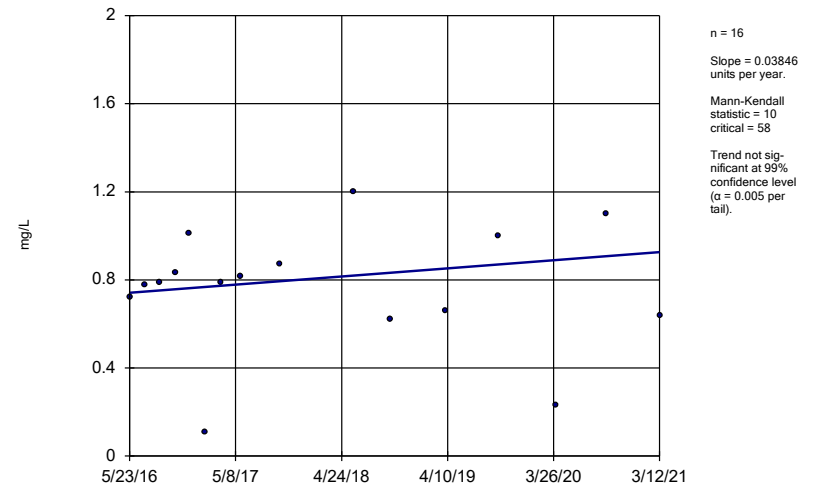
HGWA-3 (bg)



Constituent: Boron Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-1

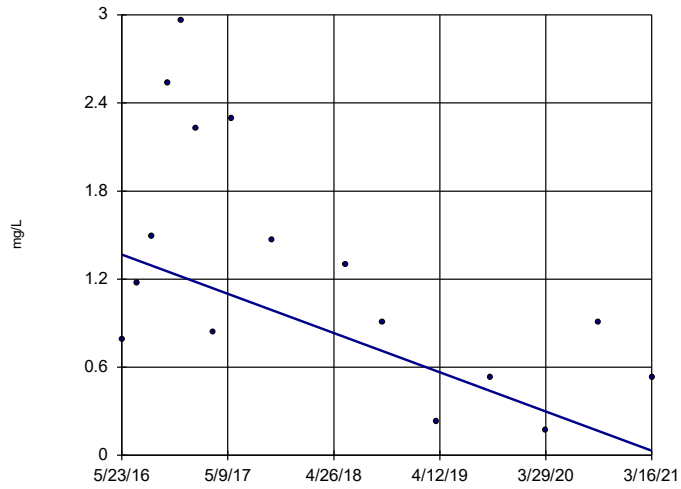
Sen's Slope Estimator

HGWC-10



Constituent: Boron Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-1

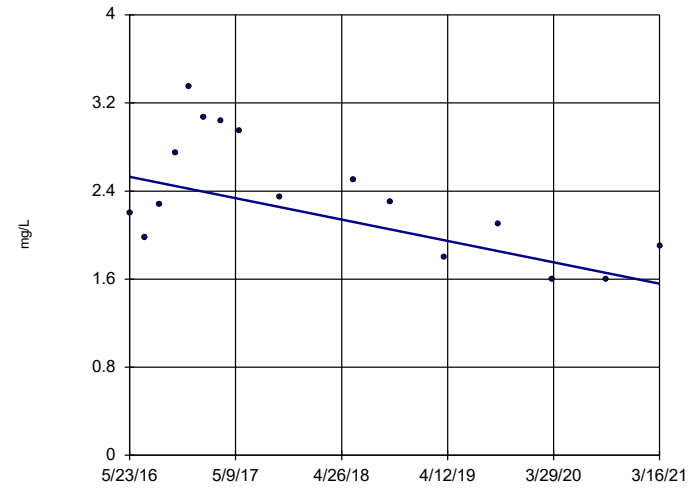
Sen's Slope Estimator
HGWC-11



n = 16
Slope = -0.2774
units per year.
Mann-Kendall
statistic = -48
critical = -58
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

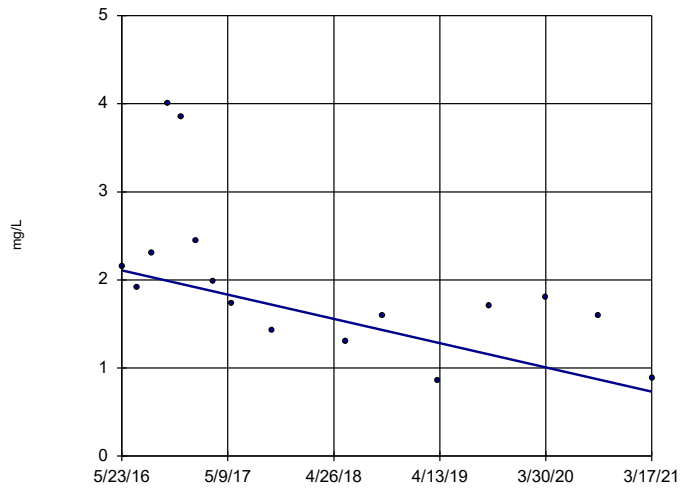
Sen's Slope Estimator
HGWC-12



n = 16
Slope = -0.2012
units per year.
Mann-Kendall
statistic = -47
critical = -58
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

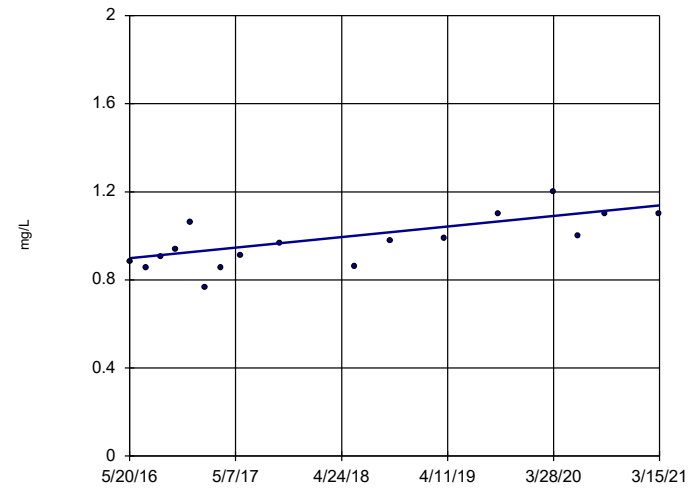
Sen's Slope Estimator
HGWC-13



n = 16
Slope = -0.2856
units per year.
Mann-Kendall
statistic = -63
critical = -58
Decreasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

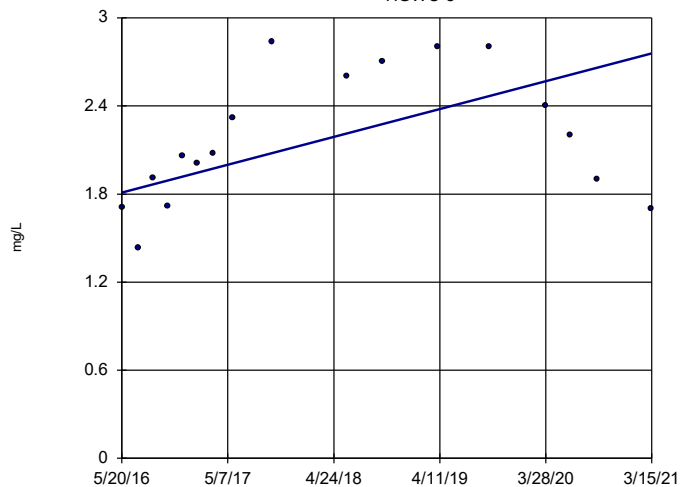
Sen's Slope Estimator
HGWC-7



n = 17
Slope = 0.04974
units per year.
Mann-Kendall
statistic = 80
critical = 63
Increasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

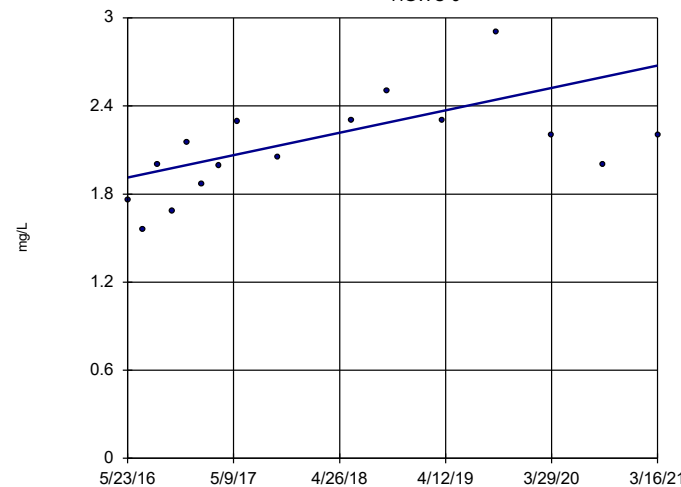
Sen's Slope Estimator HGWC-8



n = 17
Slope = 0.1969 units per year.
Mann-Kendall statistic = 43 critical = 63
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

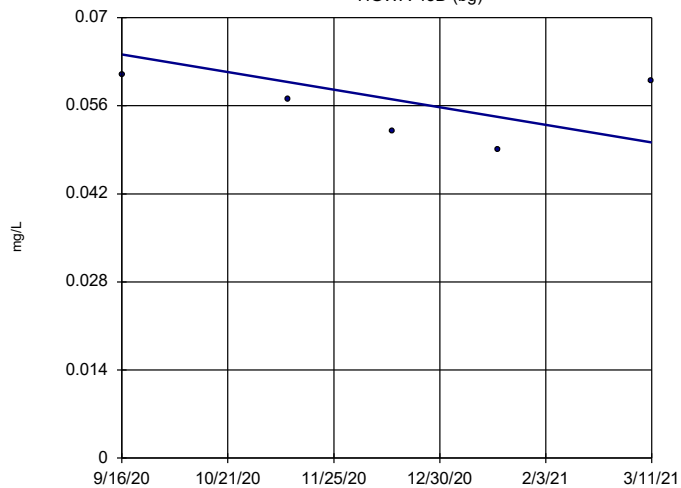
Sen's Slope Estimator HGWC-9



n = 16
Slope = 0.1581 units per year.
Mann-Kendall statistic = 61 critical = 58
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

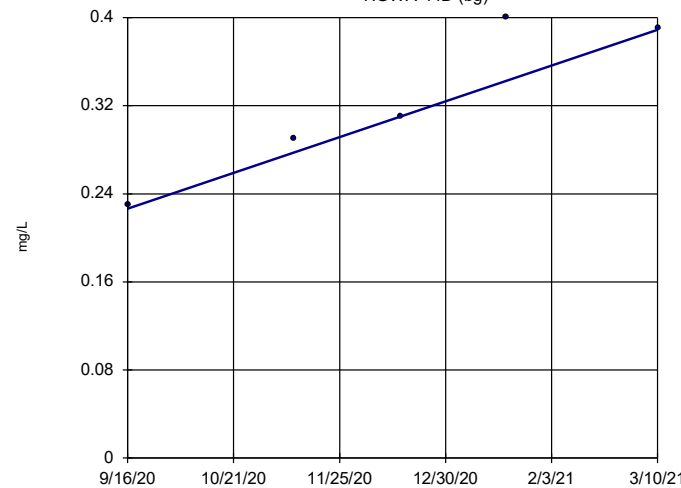
Sen's Slope Estimator HGWA-43D (bg)



n = 5
Slope = -0.02892 units per year.
Mann-Kendall statistic = -4 critical = -12
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWA-44D (bg)

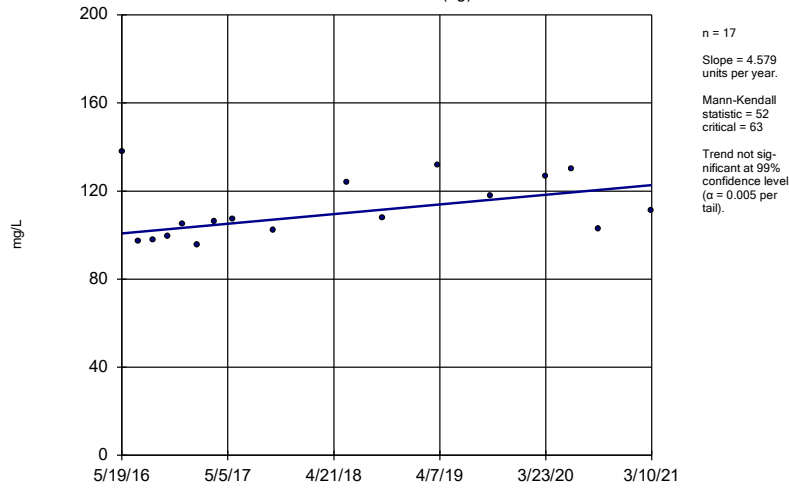


n = 5
Slope = 0.3386 units per year.
Mann-Kendall statistic = 8 critical = 12
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

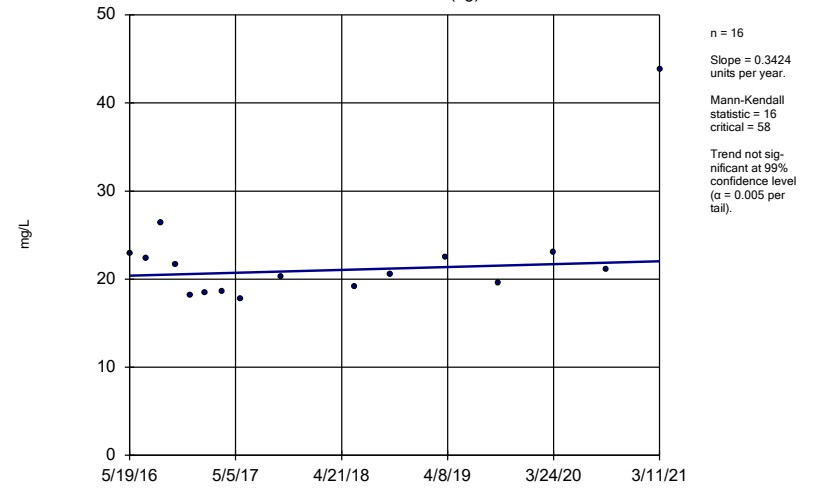
HGWA-1 (bg)



Constituent: Calcium Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

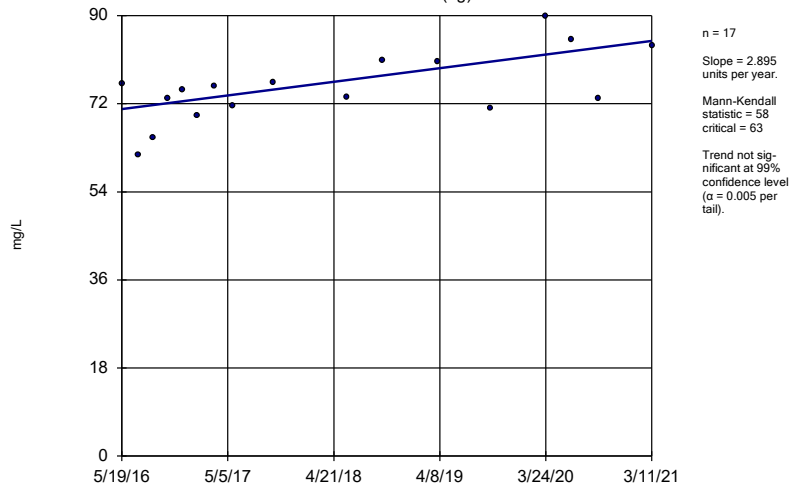
HGWA-2 (bg)



Constituent: Calcium Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

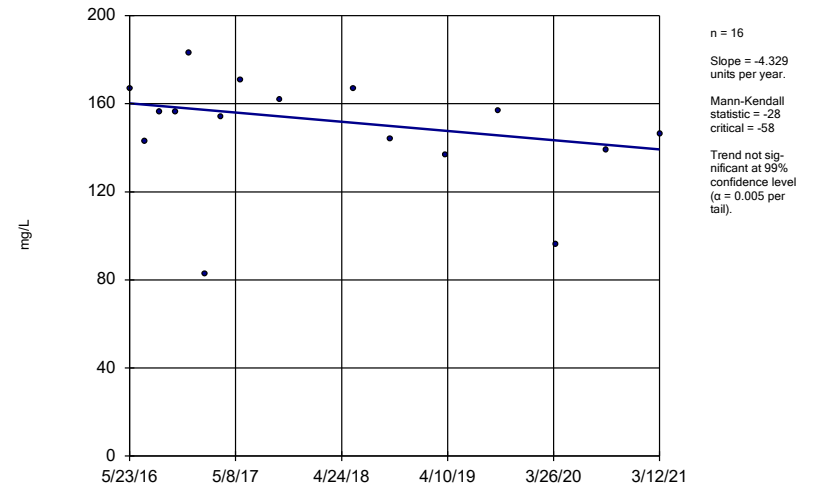
HGWA-3 (bg)



Constituent: Calcium Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

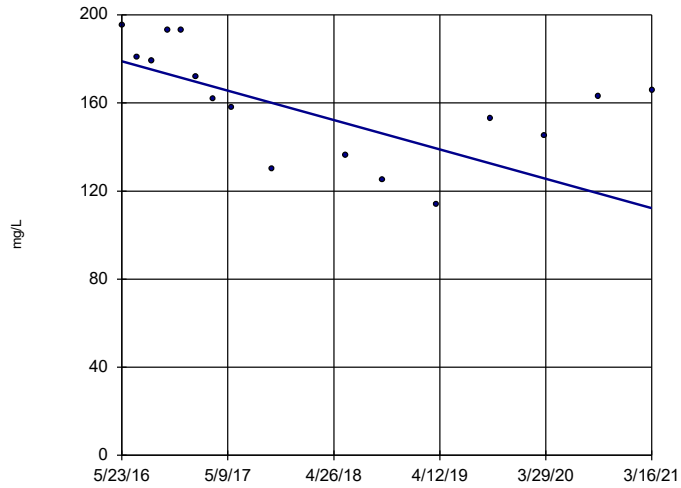
HGWC-10



Constituent: Calcium Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWC-12

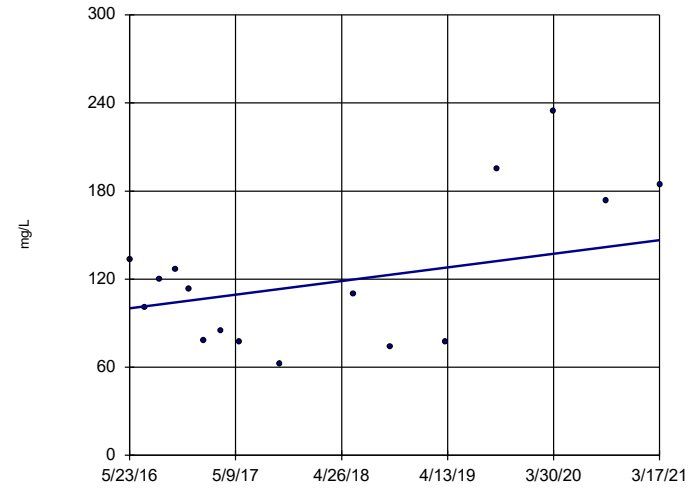


n = 16
 Slope = -13.85
 units per year.
 Mann-Kendall
 statistic = -59
 critical = -58
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWC-13

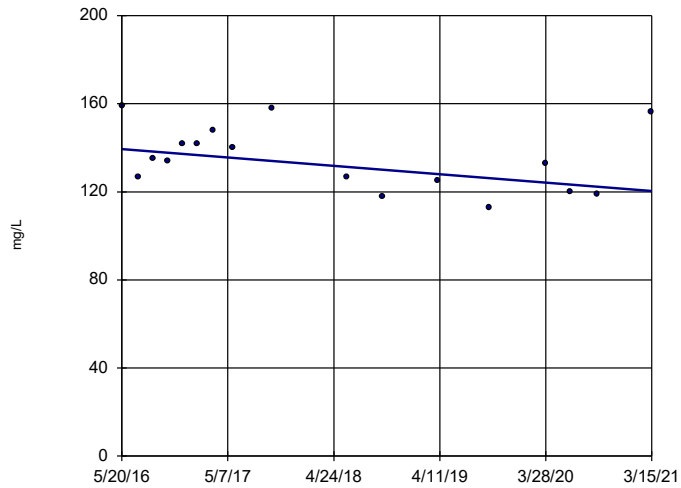


n = 16
 Slope = 9.634
 units per year.
 Mann-Kendall
 statistic = 7
 critical = 58
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWC-8

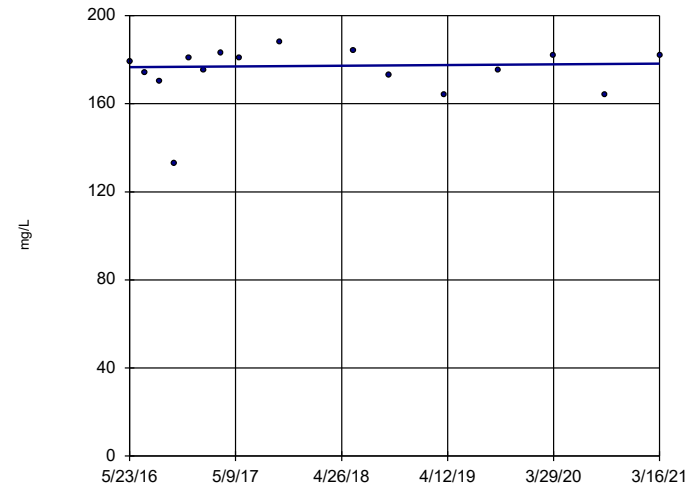


n = 17
 Slope = -3.956
 units per year.
 Mann-Kendall
 statistic = -40
 critical = -63
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Calcium Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-1

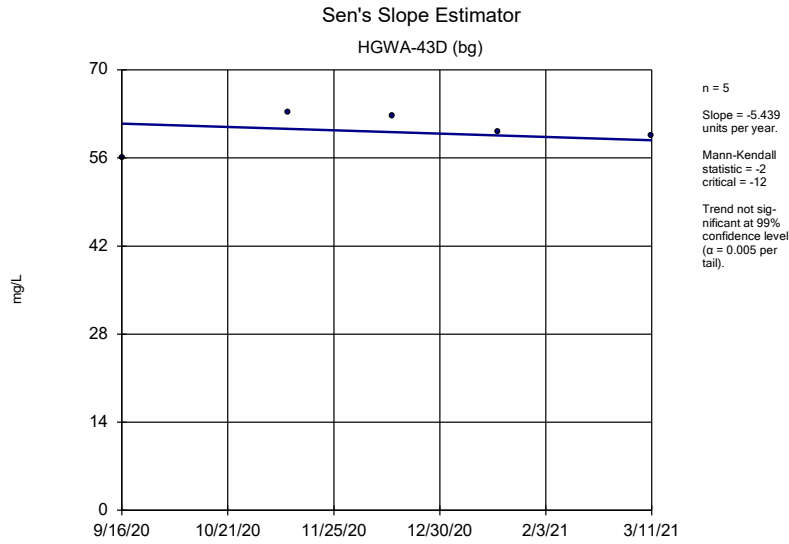
Sen's Slope Estimator

HGWC-9

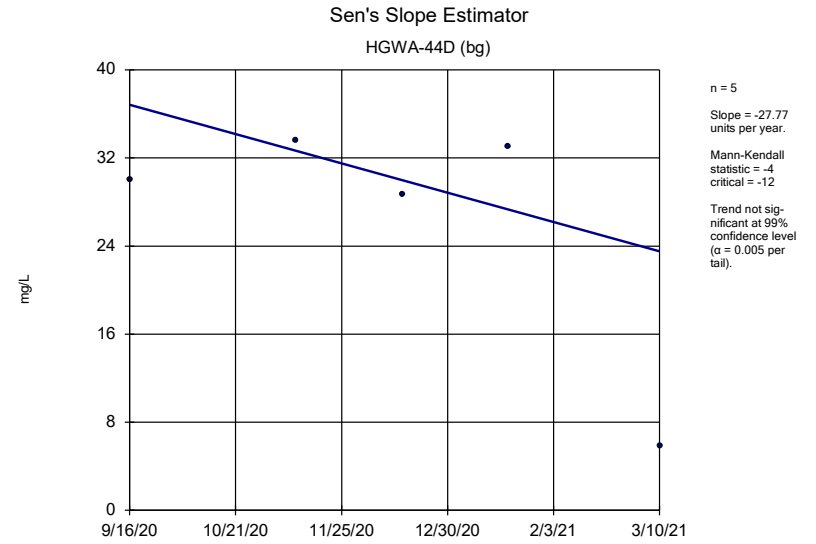


n = 16
 Slope = 0.3307
 units per year.
 Mann-Kendall
 statistic = 12
 critical = 58
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

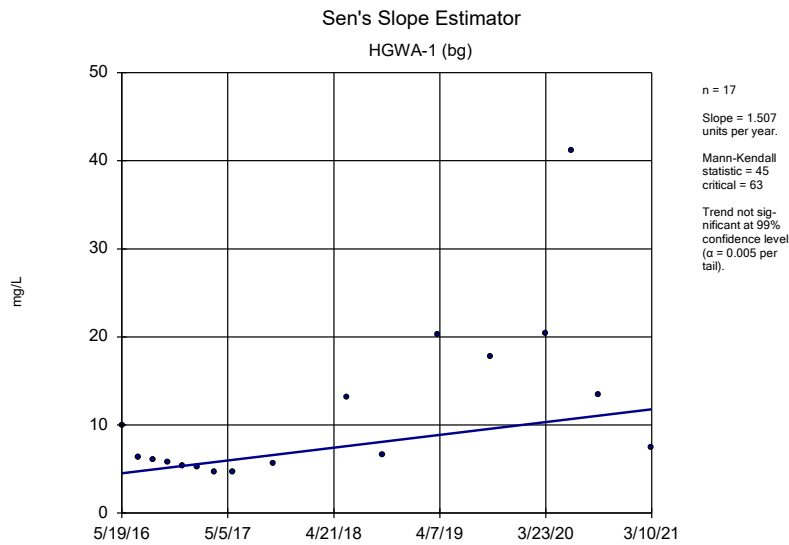
Constituent: Calcium Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-1



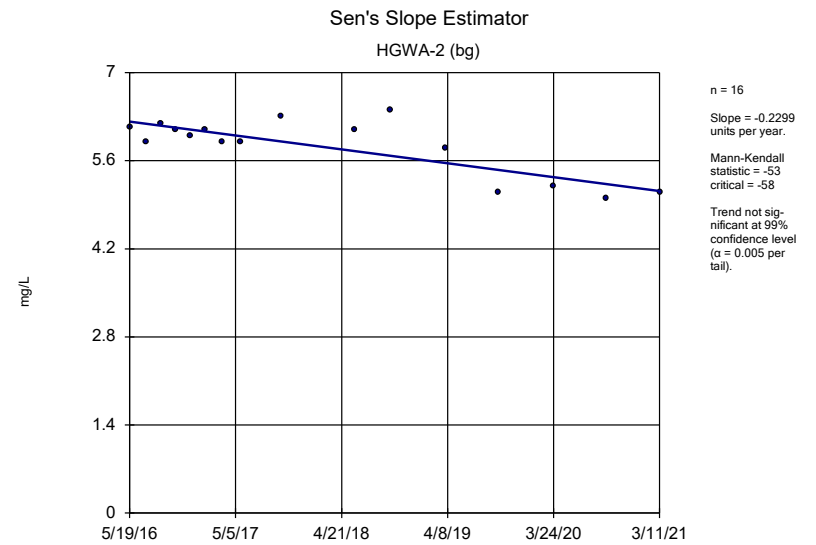
Constituent: Calcium Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1



Constituent: Calcium Analysis Run 5/5/2021 11:44 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

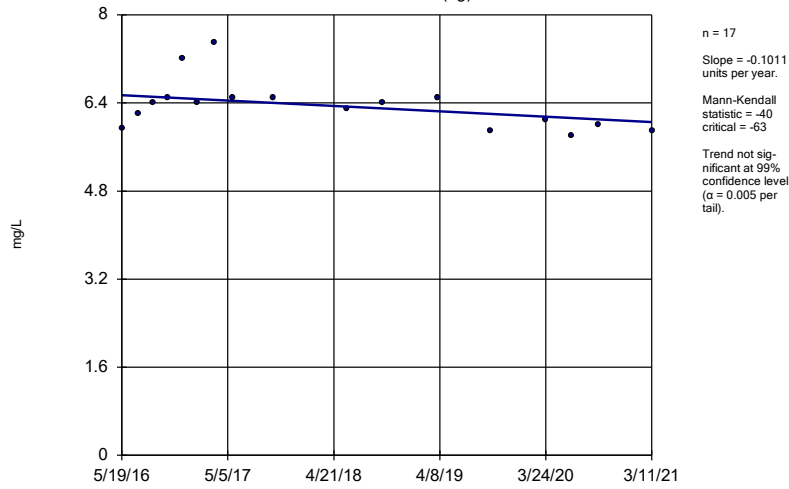


Constituent: Chloride Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1



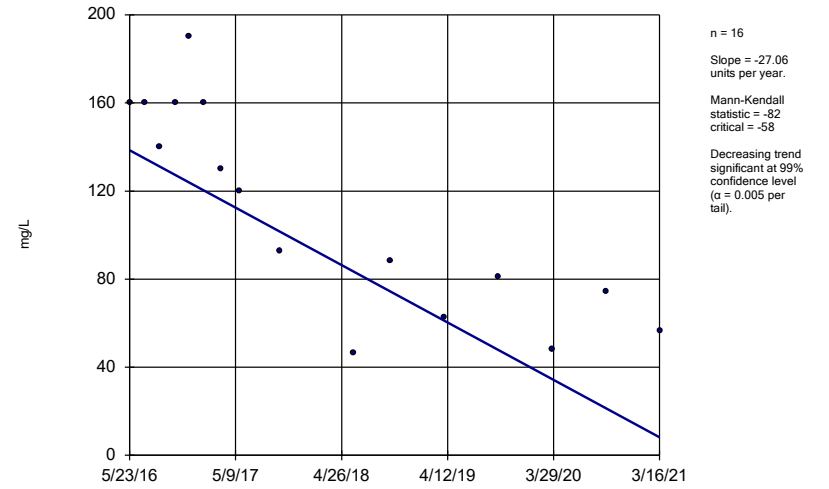
Constituent: Chloride Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWA-3 (bg)



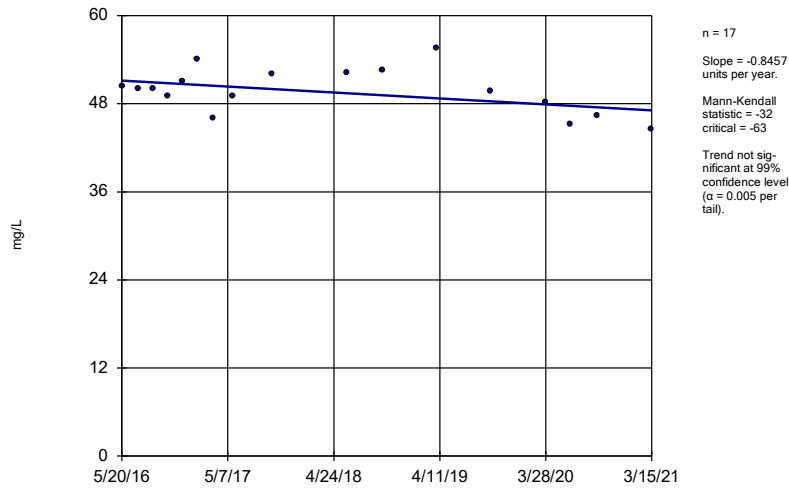
Constituent: Chloride Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWC-12



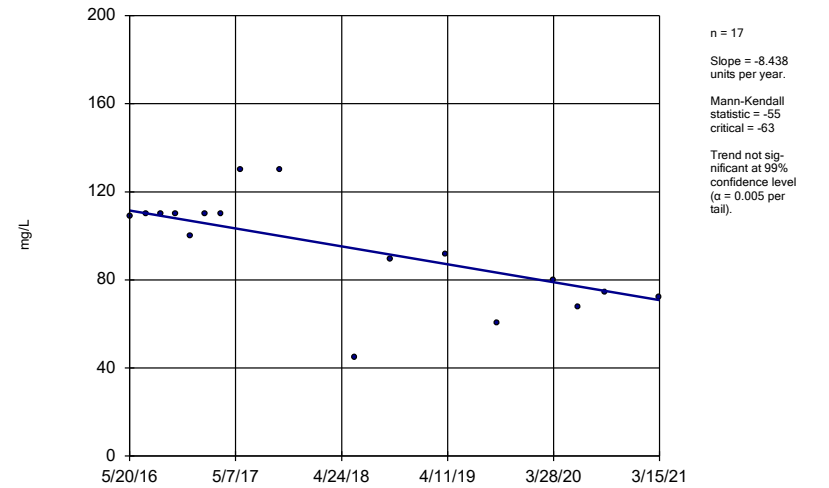
Constituent: Chloride Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWC-7



Constituent: Chloride Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

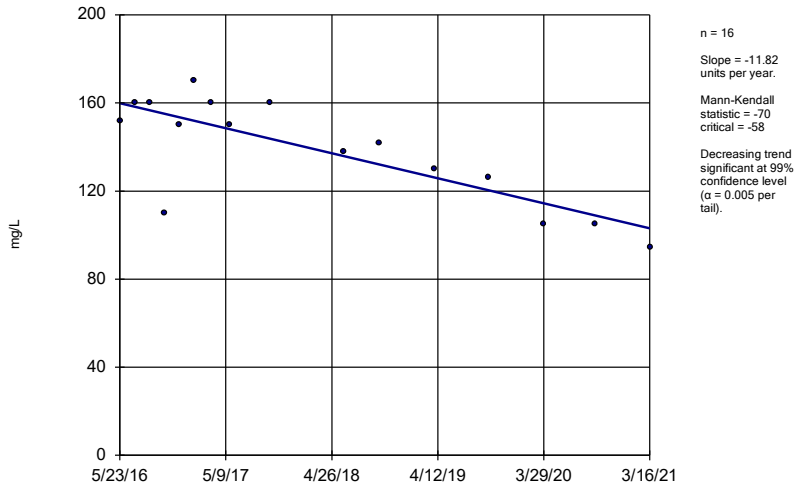
Sen's Slope Estimator HGWC-8



Constituent: Chloride Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

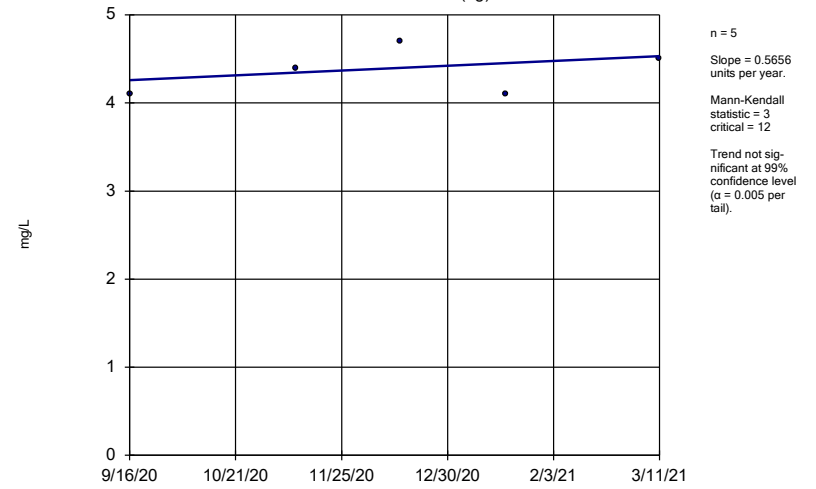
HGWC-9



Constituent: Chloride Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

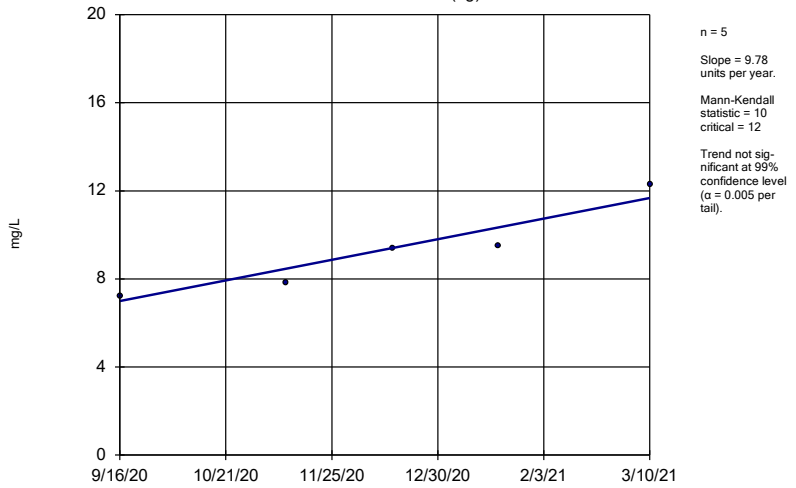
HGWA-43D (bg)



Constituent: Chloride Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

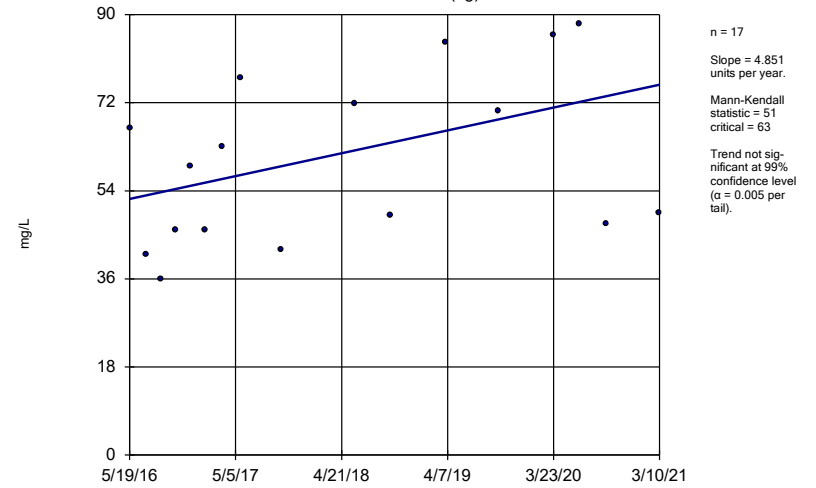
HGWA-44D (bg)



Constituent: Chloride Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

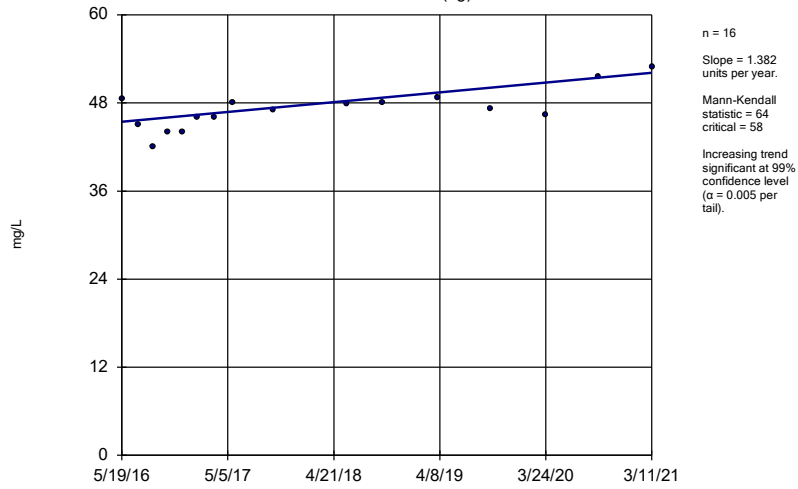
Sen's Slope Estimator

HGWA-1 (bg)



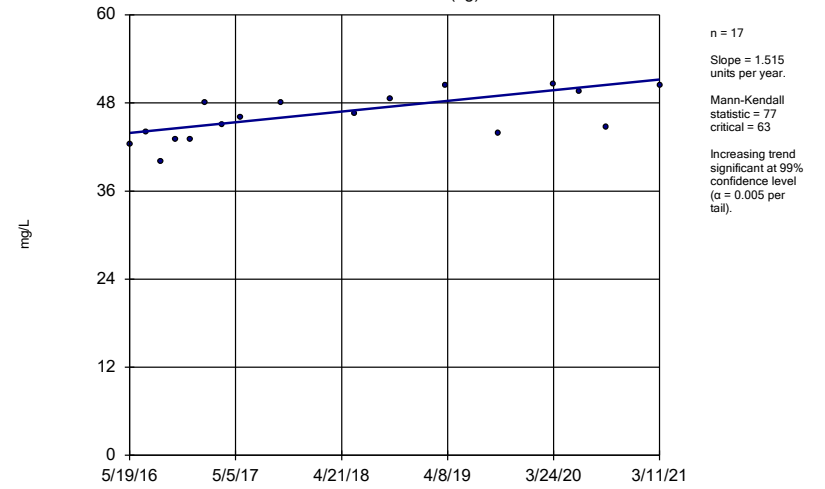
Constituent: Sulfate Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWA-2 (bg)



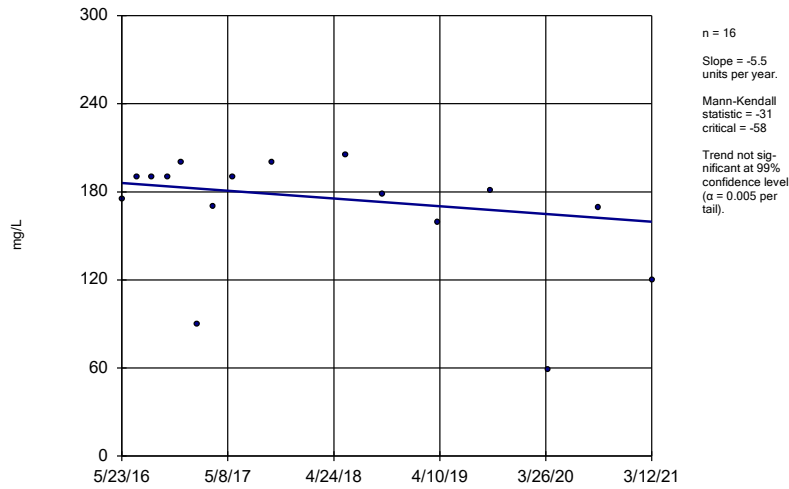
Constituent: Sulfate Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWA-3 (bg)



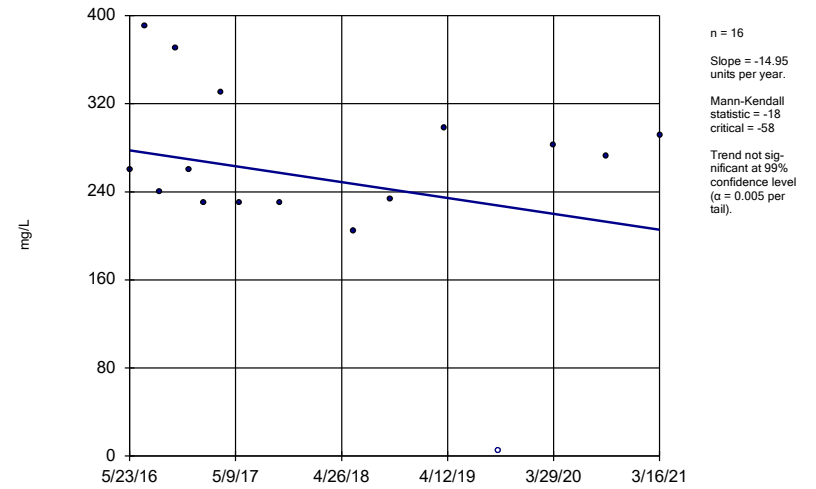
Constituent: Sulfate Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWC-10



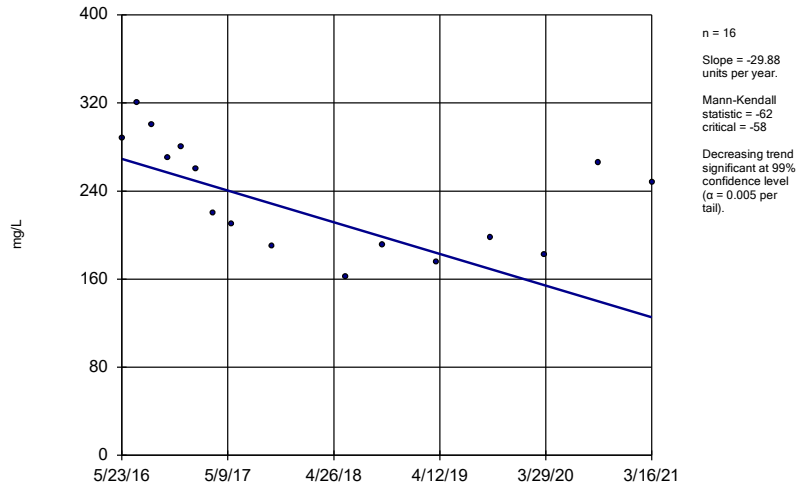
Constituent: Sulfate Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWC-11



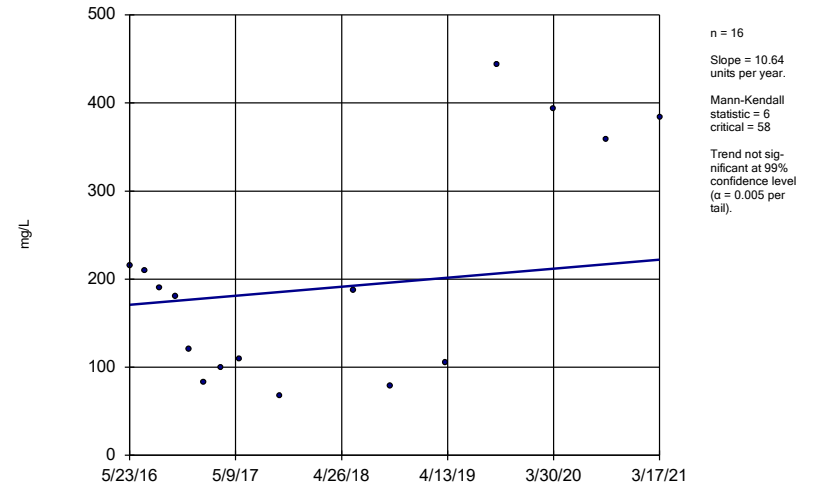
Constituent: Sulfate Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWC-12



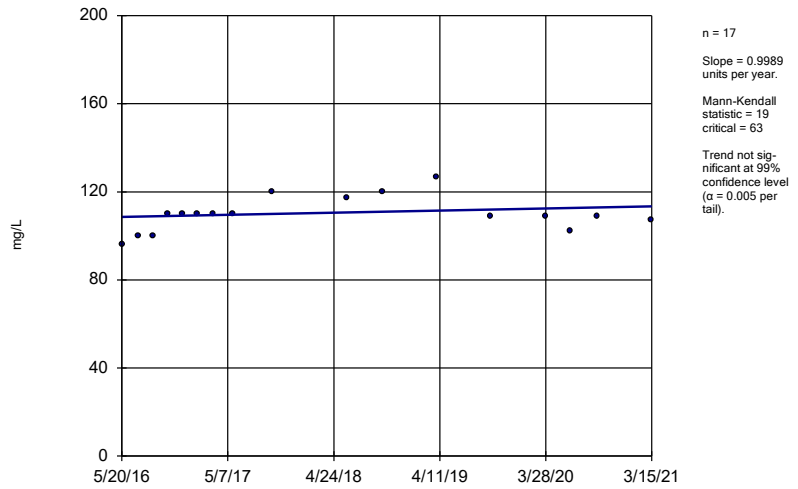
Constituent: Sulfate Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWC-13



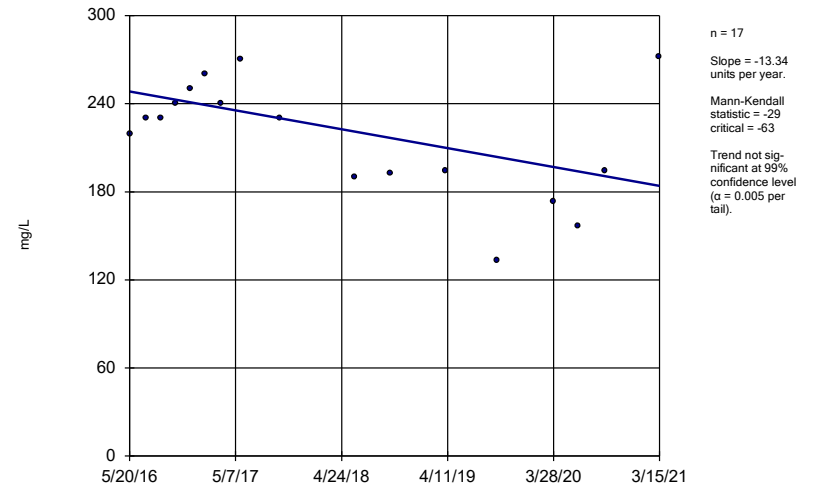
Constituent: Sulfate Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWC-7



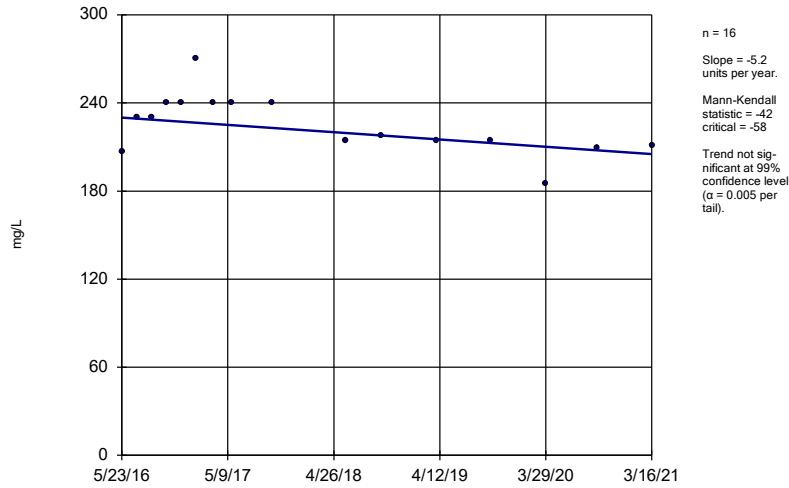
Constituent: Sulfate Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWC-8

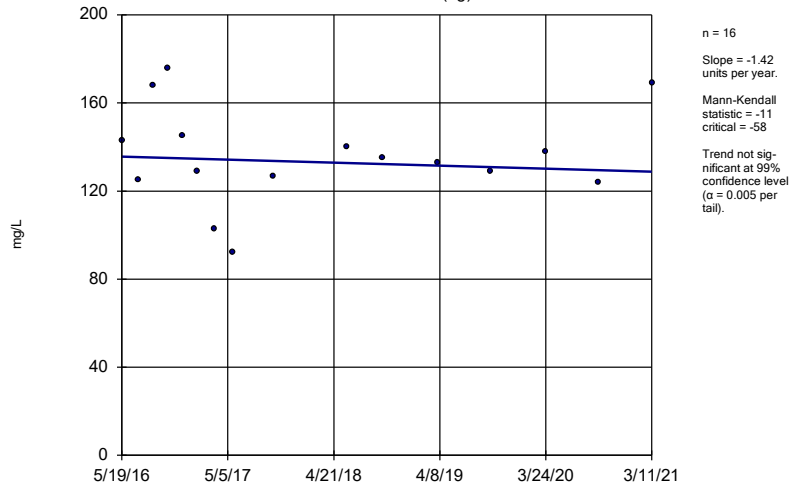


Constituent: Sulfate Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWC-9

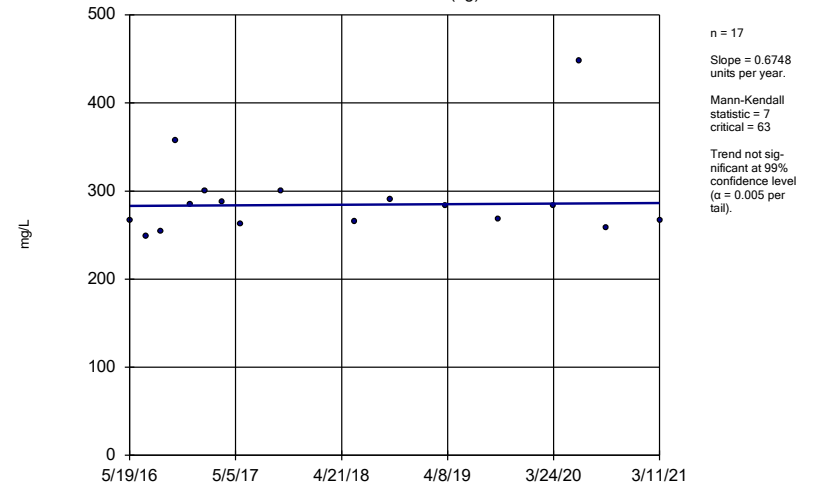


Sen's Slope Estimator
HGWA-2 (bg)



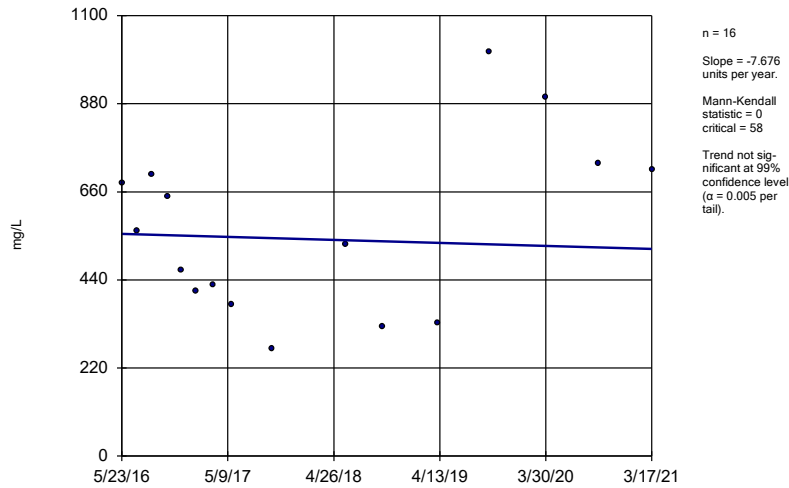
Constituent: Total Dissolved Solids Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-3 (bg)



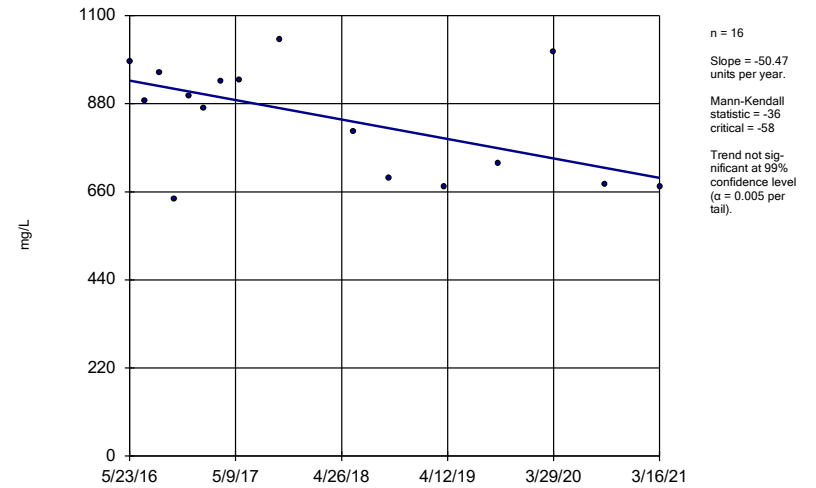
Constituent: Total Dissolved Solids Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWC-13



Constituent: Total Dissolved Solids Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

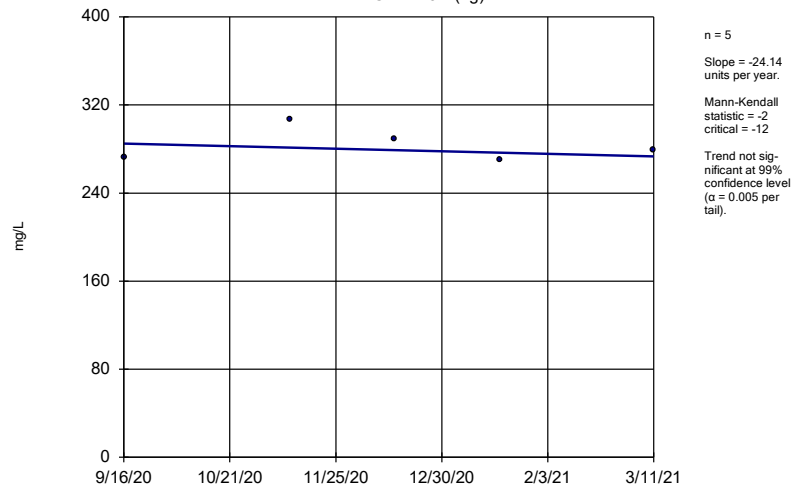
Sen's Slope Estimator
HGWC-9



Constituent: Total Dissolved Solids Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

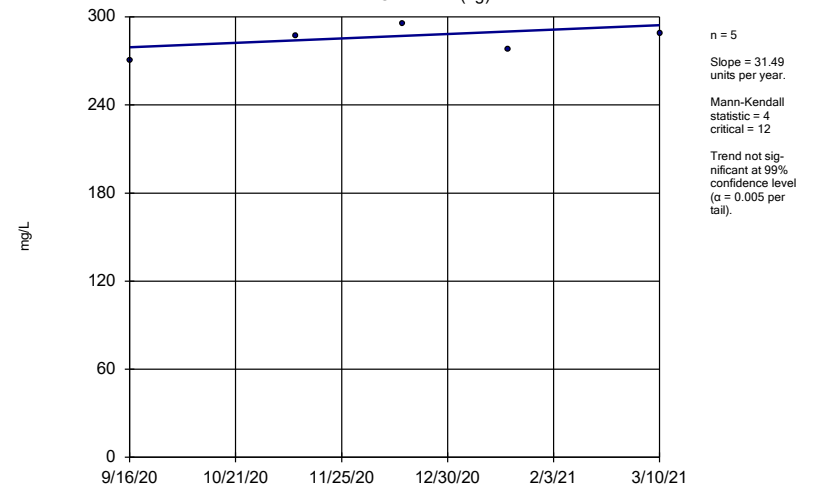
HGWA-43D (bg)



Constituent: Total Dissolved Solids Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWA-44D (bg)



Constituent: Total Dissolved Solids Analysis Run 5/5/2021 11:45 AM View: Appendix III - Trend Tests
 Plant Hammond Client: Southern Company Data: Hammond AP-1

FIGURE F.

Upper Tolerance Limits Summary Table

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:25 PM

Constituent	Upper Lim.	Lower Lim.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	0.003	n/a	n/a	63	n/a	n/a	76.19	n/a	n/a	0.0395	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	n/a	69	n/a	n/a	66.67	n/a	n/a	0.02904	NP Inter(NDs)
Barium (mg/L)	0.46	n/a	n/a	69	n/a	n/a	0	n/a	n/a	0.02904	NP Inter(normality)
Beryllium (mg/L)	0.0005	n/a	n/a	63	n/a	n/a	77.78	n/a	n/a	0.0395	NP Inter(NDs)
Cadmium (mg/L)	0.0005	n/a	n/a	63	n/a	n/a	87.3	n/a	n/a	0.0395	NP Inter(NDs)
Chromium (mg/L)	0.0079	n/a	n/a	63	n/a	n/a	80.95	n/a	n/a	0.0395	NP Inter(NDs)
Cobalt (mg/L)	0.038	n/a	n/a	63	n/a	n/a	71.43	n/a	n/a	0.0395	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	4.36	n/a	n/a	69	n/a	n/a	0	n/a	n/a	0.02904	NP Inter(normality)
Fluoride (mg/L)	0.74	n/a	n/a	74	n/a	n/a	31.08	n/a	n/a	0.02247	NP Inter(normality)
Lead (mg/L)	0.001	n/a	n/a	60	n/a	n/a	58.33	n/a	n/a	0.04607	NP Inter(NDs)
Lithium (mg/L)	0.034	n/a	n/a	69	n/a	n/a	23.19	n/a	n/a	0.02904	NP Inter(normality)
Mercury (mg/L)	0.0005	n/a	n/a	46	n/a	n/a	95.65	n/a	n/a	0.09447	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	71	n/a	n/a	83.1	n/a	n/a	0.0262	NP Inter(NDs)
Selenium (mg/L)	0.005	n/a	n/a	69	n/a	n/a	98.55	n/a	n/a	0.02904	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	69	n/a	n/a	98.55	n/a	n/a	0.02904	NP Inter(NDs)

FIGURE G.

PLANT HAMMOND AP-1 GWPS (State)				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	State GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.46	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0079	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.74	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.001
Lithium, Total (mg/L)	n/a	0.04	0.034	0.034
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.01
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**Grey cell indicates background is higher than MCL or CCR-Rule*

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

FIGURE H.

PLANT HAMMOND AP-1 GWPS (Federal)				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	Federal GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.46	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0079	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.74	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.015
Lithium, Total (mg/L)	n/a	0.04	0.034	0.04
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**Grey cell indicates background is higher than MCL or CCR-Rule*

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

FIGURE I.

State Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:37 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	HGWC-13	0.4313	0.3592	0.01	Yes	19	0.3953	0.06154	0	None	No	0.01	Param.
Lithium (mg/L)	MW-25D	0.05155	0.04545	0.034	Yes	8	0.0485	0.002878	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-11	0.02514	0.01508	0.01	Yes	19	0.02011	0.00859	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-12	0.04978	0.0457	0.01	Yes	19	0.04774	0.003483	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-13	0.03593	0.0301	0.01	Yes	19	0.03302	0.004974	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-7	0.04274	0.03437	0.01	Yes	20	0.03856	0.007368	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-8	0.4928	0.4503	0.01	Yes	20	0.4716	0.03743	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-9	0.033	0.0234	0.01	Yes	19	0.05098	0.1033	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	MW-19	0.06073	0.03377	0.01	Yes	8	0.04725	0.01271	0	None	No	0.01	Param.

State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:37 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-10	0.003	0.00065	0.006	No	17	0.002862	0.00057	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-11	0.003	0.00038	0.006	No	17	0.002846	0.0006354	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-13	0.003	0.00036	0.006	No	17	0.001925	0.001327	58.82	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-7	0.003	0.00034	0.006	No	17	0.002844	0.0006451	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-8	0.003	0.00064	0.006	No	17	0.002861	0.0005724	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-9	0.003	0.00043	0.006	No	17	0.002539	0.001026	82.35	None	No	0.01	NP (NDs)
Antimony (mg/L)	MW-24D	0.003	0.0017	0.006	No	8	0.002838	0.0004596	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-26D	0.003	0.0013	0.006	No	8	0.002663	0.0006523	75	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-27D	0.003	0.00016	0.006	No	8	0.0009775	0.00125	25	None	No	0.004	NP (normality)
Antimony (mg/L)	MW-28D	0.003	0.0019	0.006	No	8	0.002863	0.0003889	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-29	0.003	0.00094	0.006	No	8	0.002743	0.0007283	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-6	0.003	0.0014	0.006	No	8	0.0028	0.0005657	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-7	0.003	0.00051	0.006	No	8	0.002096	0.001065	50	None	No	0.004	NP (normality)
Arsenic (mg/L)	HGWC-11	0.005	0.0015	0.01	No	19	0.003266	0.001768	42.11	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-12	0.004589	0.003137	0.01	No	19	0.003863	0.00124	10.53	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-13	0.4313	0.3592	0.01	Yes	19	0.3953	0.06154	0	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-7	0.005	0.0019	0.01	No	19	0.004837	0.0007112	94.74	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-9	0.005	0.0008	0.01	No	19	0.004312	0.001635	84.21	None	No	0.01	NP (NDs)
Arsenic (mg/L)	MW-19	0.005	0.00045	0.01	No	8	0.004431	0.001609	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-20	0.005	0.00038	0.01	No	8	0.003577	0.002033	62.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-25D	0.005	0.00075	0.01	No	8	0.003094	0.002064	50	None	No	0.004	NP (normality)
Arsenic (mg/L)	MW-26D	0.005	0.0006	0.01	No	8	0.003925	0.001991	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-27D	0.005	0.0002	0.01	No	8	0.003361	0.002272	62.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-28D	0.005	0.0011	0.01	No	8	0.004512	0.001379	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-29	0.005	0.00037	0.01	No	8	0.004421	0.001637	87.5	None	No	0.004	NP (NDs)
Barium (mg/L)	HGWC-10	0.08901	0.06608	2	No	19	0.07754	0.01958	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-11	0.05343	0.03154	2	No	19	0.04375	0.02072	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	HGWC-12	0.13	0.084	2	No	19	0.1029	0.02097	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-13	0.09256	0.06961	2	No	19	0.08108	0.0196	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-7	0.07536	0.06864	2	No	19	0.072	0.005743	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-8	0.0829	0.06	2	No	19	0.06984	0.01122	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-9	0.1226	0.1065	2	No	19	0.1146	0.01374	0	None	No	0.01	Param.
Barium (mg/L)	MW-19	0.0677	0.0498	2	No	8	0.05875	0.008447	0	None	No	0.01	Param.
Barium (mg/L)	MW-20	0.098	0.08425	2	No	8	0.09113	0.00649	0	None	No	0.01	Param.
Barium (mg/L)	MW-24D	0.08729	0.04433	2	No	8	0.06538	0.02462	0	None	ln(x)	0.01	Param.
Barium (mg/L)	MW-25D	0.4797	0.3928	2	No	8	0.4363	0.04104	0	None	No	0.01	Param.
Barium (mg/L)	MW-26D	0.17	0.093	2	No	8	0.1131	0.02538	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-27D	1.5	0.95	2	No	8	1.088	0.1866	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-28D	0.7327	0.1773	2	No	8	0.455	0.262	0	None	No	0.01	Param.
Barium (mg/L)	MW-29	0.08638	0.07637	2	No	8	0.08138	0.004719	0	None	No	0.01	Param.
Barium (mg/L)	MW-5	0.05227	0.04398	2	No	8	0.04813	0.003907	0	None	No	0.01	Param.
Barium (mg/L)	MW-6	0.09421	0.08179	2	No	8	0.088	0.005855	0	None	No	0.01	Param.
Barium (mg/L)	MW-7	0.06481	0.04669	2	No	8	0.05575	0.008548	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-11	0.0005	0.0001	0.004	No	17	0.000341	0.000197	58.82	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-13	0.0005	0.000097	0.004	No	17	0.000333	0.000206	58.82	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-7	0.0005	0.00019	0.004	No	17	0.0004322	0.0001526	82.35	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-8	0.0005	0.0001	0.004	No	17	0.0004014	0.0001834	76.47	None	No	0.01	NP (NDs)
Beryllium (mg/L)	MW-28D	0.0005	0.000048	0.004	No	8	0.0003428	0.0002188	62.5	None	No	0.004	NP (NDs)
Beryllium (mg/L)	MW-7	0.0005	0.000051	0.004	No	8	0.0004439	0.0001587	87.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	HGWC-10	0.0005	0.0001	0.005	No	17	0.0003421	0.0001959	58.82	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-11	0.0005	0.0001	0.005	No	17	0.0004292	0.0001577	82.35	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-12	0.0005	0.0003	0.005	No	17	0.0004259	0.000143	76.47	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-7	0.0005	0.0002	0.005	No	17	0.0004235	0.0001437	76.47	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-8	0.00032	0.00014	0.005	No	17	0.0003141	0.0003708	5.882	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-9	0.0005	0.0002	0.005	No	17	0.0004335	0.00015	82.35	None	No	0.01	NP (NDs)

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Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:37 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cadmium (mg/L)	MW-19	0.0002284	0.0001459	0.005	No	8	0.000265	0.0001497	25	Kaplan-Meier	ln(x)	0.01	Param.
Chromium (mg/L)	HGWC-10	0.02	0.005	0.1	No	17	0.005882	0.003638	94.12	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-11	0.005	0.00061	0.1	No	17	0.004465	0.00151	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-12	0.005	0.0025	0.1	No	17	0.004342	0.001516	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-13	0.005	0.00059	0.1	No	17	0.004209	0.001762	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-7	0.071	0.0016	0.1	No	17	0.007779	0.01639	64.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-8	0.005	0.0015	0.1	No	17	0.004031	0.001811	76.47	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-9	0.005	0.00067	0.1	No	17	0.004482	0.001463	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-19	0.005	0.00047	0.1	No	8	0.00254	0.002111	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	MW-20	0.005	0.00051	0.1	No	8	0.003362	0.002261	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-24D	0.005	0.00042	0.1	No	8	0.004015	0.001856	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-25D	0.005	0.00061	0.1	No	8	0.004451	0.001552	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-26D	0.005	0.00076	0.1	No	8	0.002757	0.001958	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	MW-27D	0.005	0.0007	0.1	No	8	0.00394	0.001963	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-28D	0.005	0.00078	0.1	No	8	0.002692	0.002009	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	MW-29	0.005	0.001	0.1	No	8	0.0045	0.001414	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-5	0.004565	0.00231	0.1	No	8	0.003438	0.001064	0	None	No	0.01	Param.
Chromium (mg/L)	MW-6	0.005	0.00044	0.1	No	8	0.003879	0.002077	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-7	0.005	0.0013	0.1	No	8	0.00215	0.001198	12.5	None	No	0.004	NP (normality)
Cobalt (mg/L)	HGWC-10	0.005	0.0007	0.038	No	17	0.003506	0.00209	64.71	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-11	0.00192	0.0009744	0.038	No	17	0.002656	0.001712	29.41	Kaplan-Meier	ln(x)	0.01	Param.
Cobalt (mg/L)	HGWC-12	0.0021	0.0012	0.038	No	17	0.001871	0.001212	11.76	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-13	0.004247	0.002671	0.038	No	17	0.003459	0.001258	5.882	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-7	0.0026	0.0005	0.038	No	17	0.001598	0.001703	17.65	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-8	0.0023	0.0019	0.038	No	17	0.002204	0.0007606	5.882	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-9	0.0011	0.00057	0.038	No	17	0.001238	0.001459	11.76	None	No	0.01	NP (normality)
Cobalt (mg/L)	MW-19	0.04433	0.02892	0.038	No	8	0.03663	0.007269	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-20	0.005	0.0011	0.038	No	8	0.004512	0.001379	87.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-24D	0.005	0.00025	0.038	No	8	0.003364	0.00227	62.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-26D	0.005	0.0003	0.038	No	8	0.002715	0.002444	50	None	No	0.004	NP (normality)
Cobalt (mg/L)	MW-27D	0.005	0.000091	0.038	No	8	0.003243	0.002428	62.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-28D	0.005	0.00093	0.038	No	8	0.004491	0.001439	87.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-29	0.001302	0.0005925	0.038	No	8	0.0009475	0.0003349	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-6	0.005	0.00036	0.038	No	8	0.00109	0.00159	12.5	None	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	HGWC-10	1.137	0.597	5	No	19	0.8671	0.4612	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-11	1.226	0.6603	5	No	19	0.9432	0.4832	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-12	1.1	0.548	5	No	19	0.8239	0.4713	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-13	1.052	0.5958	5	No	19	0.824	0.3897	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-7	0.9855	0.4718	5	No	19	0.7699	0.4916	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-8	0.9892	0.6793	5	No	19	0.8343	0.2646	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-9	0.959	0.541	5	No	19	0.75	0.3569	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-19	1.183	0.4412	5	No	8	0.8119	0.3497	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-20	1.185	0.2405	5	No	8	0.713	0.4458	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-24D	0.8936	0.0469	5	No	8	0.4703	0.3994	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-25D	1.296	0.7346	5	No	8	1.015	0.2647	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-26D	1.275	0.1638	5	No	8	0.7193	0.524	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-27D	1.938	0.7381	5	No	8	1.338	0.5659	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-28D	1.449	0.4152	5	No	8	0.9321	0.4877	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-29	1.144	0.2969	5	No	8	0.7203	0.3994	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-5	1.116	0.5638	5	No	8	0.8399	0.2604	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-6	2.07	0.198	5	No	8	0.8654	0.5289	0	None	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-7	1.363	0.6459	5	No	8	1.004	0.3382	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-10	0.2311	0.08652	4	No	20	0.1758	0.1484	15	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-11	0.4538	0.2685	4	No	20	0.3612	0.1632	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-12	0.4227	0.1819	4	No	20	0.3266	0.2544	5	None	sqrt(x)	0.01	Param.

State Confidence Intervals - All Results

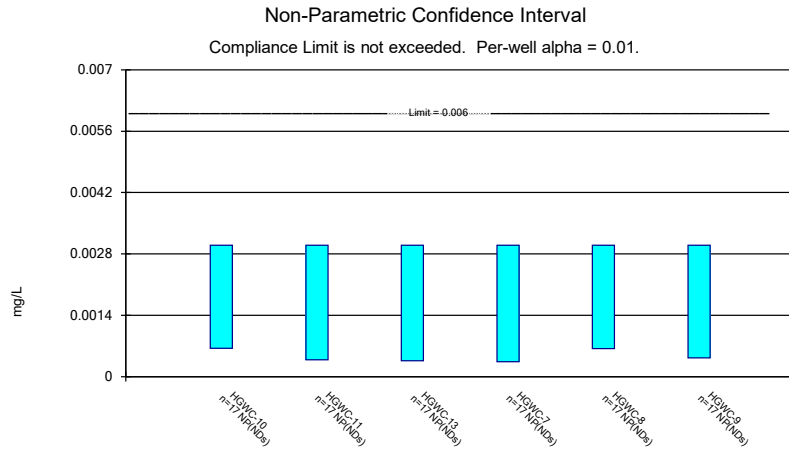
Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:37 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	HGWC-13	0.7221	0.5018	4	No	20	0.6119	0.194	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-7	0.1671	0.08288	4	No	21	0.1468	0.1188	9.524	None	ln(x)	0.01	Param.
Fluoride (mg/L)	HGWC-8	0.6486	0.4876	4	No	21	0.5823	0.1742	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	HGWC-9	0.2594	0.08768	4	No	20	0.1957	0.1662	10	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-19	0.3621	0.09633	4	No	8	0.2245	0.1448	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-20	0.072	0.05	4	No	8	0.05275	0.007778	87.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-24D	0.18	0.048	4	No	8	0.07088	0.04503	37.5	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-25D	2.2	1.4	4	No	8	1.65	0.239	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-26D	0.19	0.044	4	No	8	0.075	0.0477	12.5	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-27D	0.42	0.22	4	No	8	0.27	0.06302	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-28D	0.2674	0.1476	4	No	8	0.2075	0.05651	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-29	0.18	0.045	4	No	8	0.06813	0.04582	62.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-5	0.09236	0.04939	4	No	8	0.07088	0.02027	12.5	None	No	0.01	Param.
Fluoride (mg/L)	MW-6	0.19	0.05	4	No	8	0.1014	0.06371	25	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-7	0.17	0.05	4	No	8	0.06738	0.042	75	None	No	0.004	NP (NDs)
Lead (mg/L)	HGWC-10	0.001	0.00005	0.001	No	15	0.0009367	0.0002453	93.33	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-11	0.001	0.000099	0.001	No	15	0.0006706	0.0004226	60	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-12	0.001	0.000089	0.001	No	15	0.0007159	0.0004245	66.67	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-13	0.001	0.00014	0.001	No	15	0.0006527	0.000441	60	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-7	0.001	0.00009	0.001	No	15	0.0005996	0.0004589	40	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-8	0.001	0.00013	0.001	No	15	0.0007684	0.0003982	73.33	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-9	0.001	0.0001	0.001	No	15	0.0005543	0.0004342	46.67	None	No	0.01	NP (normality)
Lead (mg/L)	MW-19	0.0001214	0.00004136	0.001	No	6	0.000384	0.0004777	33.33	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	MW-20	0.0001907	0.00004523	0.001	No	6	0.0004065	0.0004617	33.33	Kaplan-Meier	x^(1/3)	0.01	Param.
Lead (mg/L)	MW-24D	0.0001737	0.0000328	0.001	No	6	0.0002427	0.0003754	16.67	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	MW-26D	0.001	0.00008	0.001	No	6	0.0006967	0.00047	66.67	Kaplan-Meier	No	0.0155	NP (NDs)
Lead (mg/L)	MW-27D	0.001	0.00013	0.001	No	6	0.00076	0.0003837	66.67	Kaplan-Meier	No	0.0155	NP (NDs)
Lead (mg/L)	MW-28D	0.0008507	-0.0000419	0.001	No	6	0.0005037	0.0004058	16.67	Kaplan-Meier	No	0.01	Param.
Lead (mg/L)	MW-29	0.001	0.000052	0.001	No	6	0.000542	0.0005021	50	None	No	0.0155	NP (normality)
Lead (mg/L)	MW-5	0.001	0.000047	0.001	No	6	0.0008412	0.0003891	83.33	None	No	0.0155	NP (NDs)
Lead (mg/L)	MW-6	0.0002477	0.00003146	0.001	No	6	0.0004183	0.0004567	33.33	Kaplan-Meier	sqrt(x)	0.01	Param.
Lead (mg/L)	MW-7	0.001	0.000062	0.001	No	6	0.0008437	0.0003829	83.33	Kaplan-Meier	No	0.0155	NP (NDs)
Lithium (mg/L)	HGWC-12	0.01088	0.008093	0.034	No	19	0.009484	0.002375	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-13	0.03828	0.0309	0.034	No	19	0.03459	0.006309	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-7	0.0032	0.0021	0.034	No	19	0.003195	0.002903	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-8	0.0029	0.0025	0.034	No	19	0.003342	0.002837	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-9	0.0046	0.004	0.034	No	19	0.004779	0.002518	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	MW-19	0.01336	0.008619	0.034	No	8	0.011	0.002491	0	None	x^2	0.01	Param.
Lithium (mg/L)	MW-20	0.015	0.00082	0.034	No	8	0.004652	0.006392	25	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-24D	0.002919	0.002531	0.034	No	8	0.002725	0.0001832	0	None	No	0.01	Param.
Lithium (mg/L)	MW-25D	0.05155	0.04545	0.034	Yes	8	0.0485	0.002878	0	None	No	0.01	Param.
Lithium (mg/L)	MW-26D	0.03	0.0032	0.034	No	8	0.006925	0.009329	0	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-27D	0.009164	0.005536	0.034	No	8	0.00735	0.001711	0	None	No	0.01	Param.
Lithium (mg/L)	MW-28D	0.0141	0.005449	0.034	No	8	0.009775	0.004082	0	None	No	0.01	Param.
Lithium (mg/L)	MW-29	0.002433	0.002117	0.034	No	8	0.002275	0.0001488	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-10	0.005	0.0014	0.01	No	19	0.003663	0.001814	63.16	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	HGWC-11	0.02514	0.01508	0.01	Yes	19	0.02011	0.00859	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-12	0.04978	0.0457	0.01	Yes	19	0.04774	0.003483	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-13	0.03593	0.0301	0.01	Yes	19	0.03302	0.004974	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-7	0.04274	0.03437	0.01	Yes	20	0.03856	0.007368	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-8	0.4928	0.4503	0.01	Yes	20	0.4716	0.03743	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-9	0.033	0.0234	0.01	Yes	19	0.05098	0.1033	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	MW-19	0.06073	0.03377	0.01	Yes	8	0.04725	0.01271	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-24D	0.005	0.00027	0.01	No	8	0.002902	0.002254	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	MW-25D	0.005	0.00094	0.01	No	8	0.004142	0.001623	75	None	No	0.004	NP (NDs)

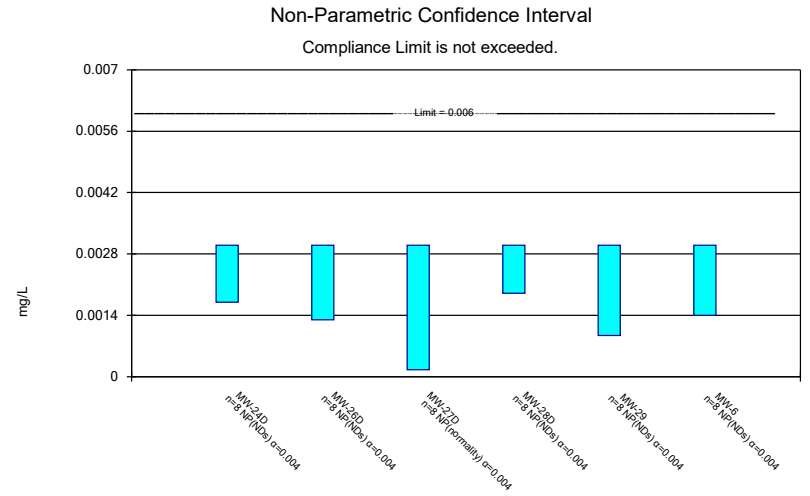
State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:37 PM

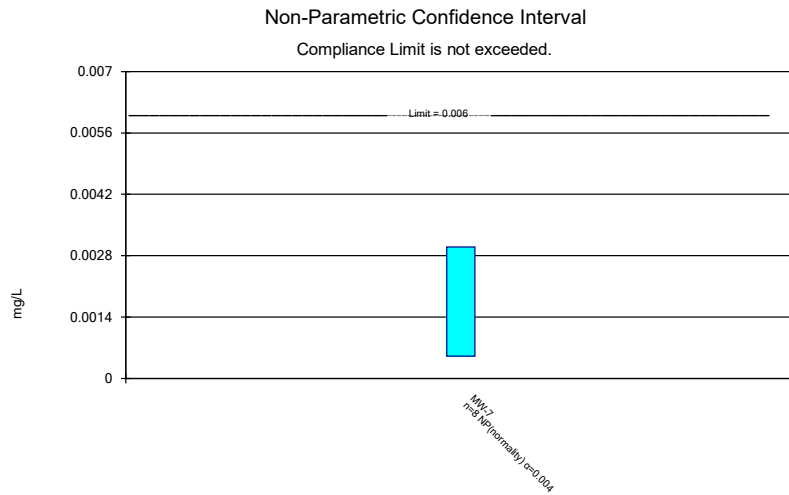
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	MW-26D	0.02056	0.007442	0.01	No	9	0.014	0.006793	11.11	None	No	0.01	Param.
Molybdenum (mg/L)	MW-27D	0.004925	0.00115	0.01	No	8	0.003037	0.001781	12.5	None	No	0.01	Param.
Molybdenum (mg/L)	MW-28D	0.02271	0.008486	0.01	No	8	0.0156	0.006712	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-29	0.003366	0.002184	0.01	No	8	0.002775	0.0005574	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-6	0.002589	0.002136	0.01	No	8	0.002363	0.0002134	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-7	0.005	0.0015	0.01	No	8	0.003475	0.001733	50	None	No	0.004	NP (normality)
Selenium (mg/L)	HGWC-10	0.005	0.0028	0.05	No	19	0.004353	0.001207	73.68	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-11	0.01552	0.006815	0.05	No	19	0.01117	0.007435	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-12	0.005	0.0011	0.05	No	19	0.004795	0.0008947	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-13	0.005	0.0016	0.05	No	19	0.004567	0.001317	89.47	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-8	0.005	0.0024	0.05	No	19	0.004863	0.0005965	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-9	0.005	0.0037	0.05	No	19	0.004932	0.0002982	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	MW-19	0.005561	0.001677	0.05	No	8	0.004175	0.001851	25	Kaplan-Meier	No	0.01	Param.
Selenium (mg/L)	MW-27D	0.005	0.00012	0.05	No	8	0.00439	0.001725	87.5	Kaplan-Meier	No	0.004	NP (NDs)
Selenium (mg/L)	MW-5	0.003857	0.002393	0.05	No	8	0.003125	0.0006902	0	None	No	0.01	Param.
Selenium (mg/L)	MW-7	0.005	0.0014	0.05	No	8	0.003012	0.001692	37.5	None	No	0.004	NP (normality)
Thallium (mg/L)	HGWC-11	0.001	0.00008	0.002	No	19	0.0009032	0.0002901	89.47	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-12	0.001	0.00009	0.002	No	19	0.0007171	0.0004287	68.42	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-13	0.0004261	0.000341	0.002	No	19	0.0003836	0.00007267	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-8	0.001	0.00008	0.002	No	19	0.0007099	0.0004388	68.42	None	No	0.01	NP (NDs)
Thallium (mg/L)	MW-19	0.001	0.00019	0.002	No	8	0.0004425	0.0003455	25	None	No	0.004	NP (normality)
Thallium (mg/L)	MW-28D	0.001	0.000092	0.002	No	8	0.0008865	0.000321	87.5	None	No	0.004	NP (NDs)
Thallium (mg/L)	MW-29	0.001	0.000064	0.002	No	8	0.000883	0.0003309	87.5	None	No	0.004	NP (NDs)
Thallium (mg/L)	MW-6	0.001	0.000082	0.002	No	8	0.0008853	0.0003246	87.5	None	No	0.004	NP (NDs)



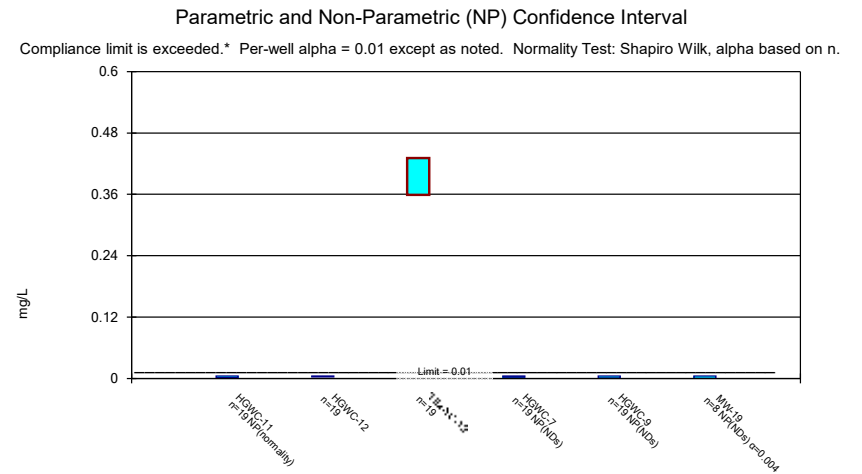
Constituent: Antimony Analysis Run 5/4/2021 7:35 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1



Constituent: Antimony Analysis Run 5/4/2021 7:35 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1



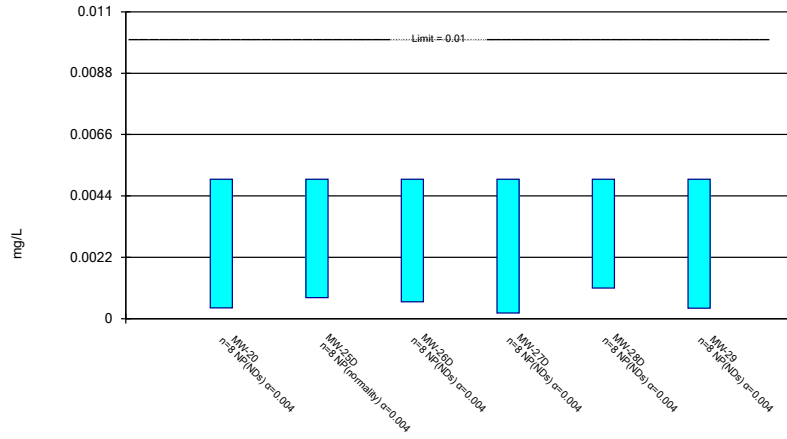
Constituent: Antimony Analysis Run 5/4/2021 7:35 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1



Constituent: Arsenic Analysis Run 5/4/2021 7:35 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

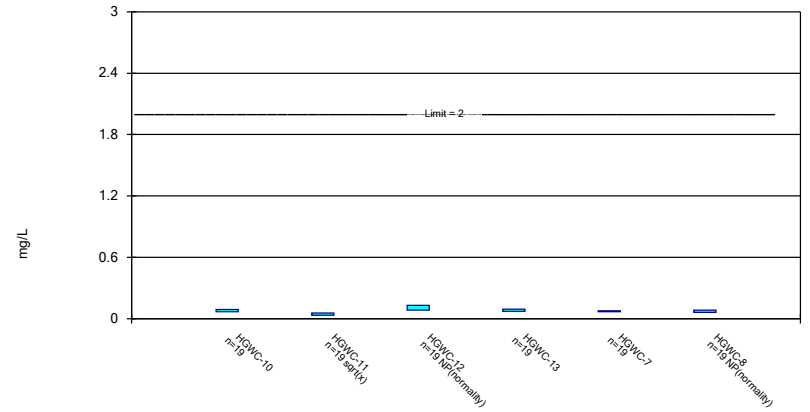
Compliance Limit is not exceeded.



Constituent: Arsenic Analysis Run 5/4/2021 7:35 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

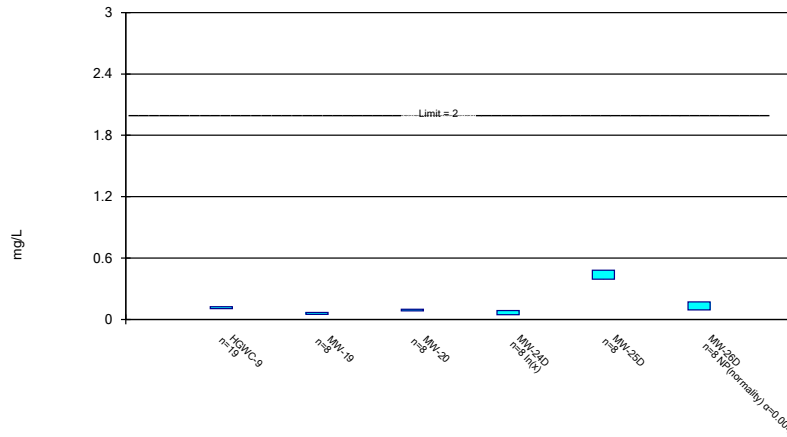
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/4/2021 7:35 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

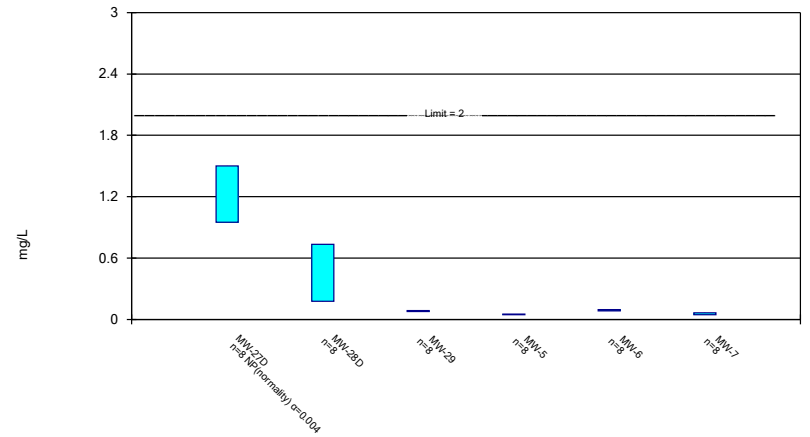
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/4/2021 7:35 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

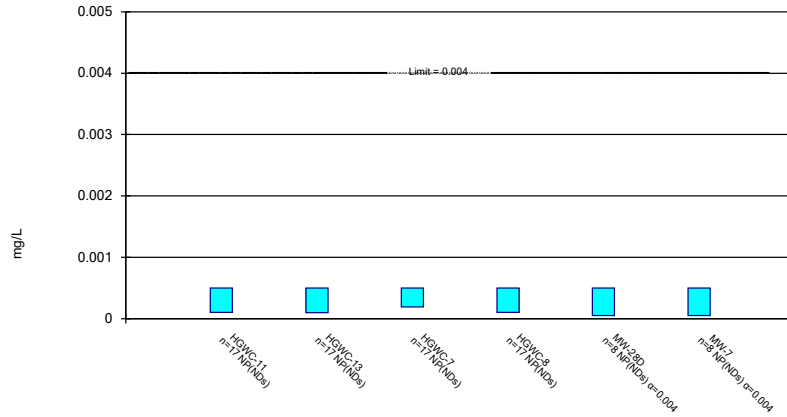
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/4/2021 7:35 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

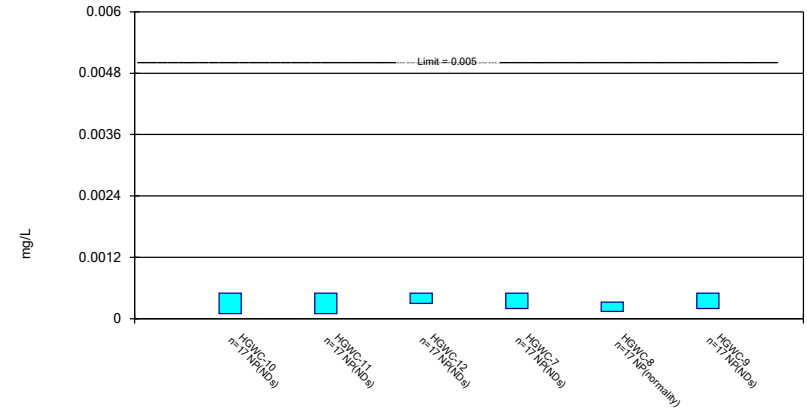
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Beryllium Analysis Run 5/4/2021 7:35 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

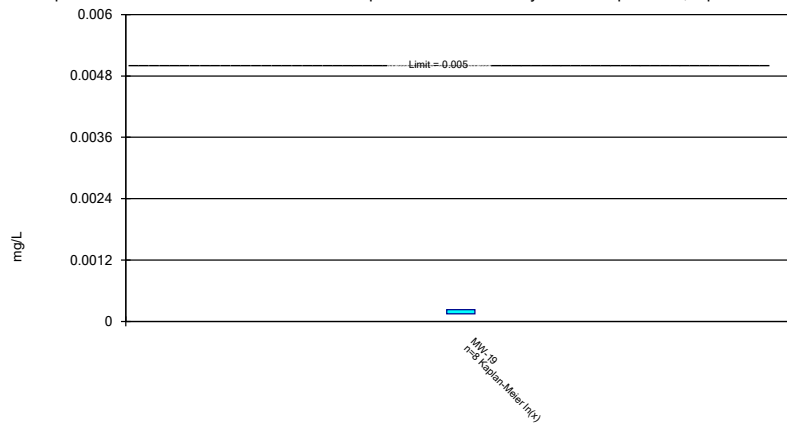
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Cadmium Analysis Run 5/4/2021 7:35 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

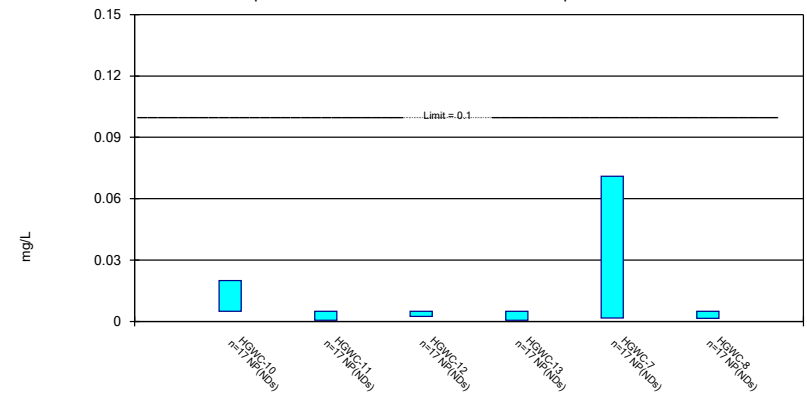
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 5/4/2021 7:35 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

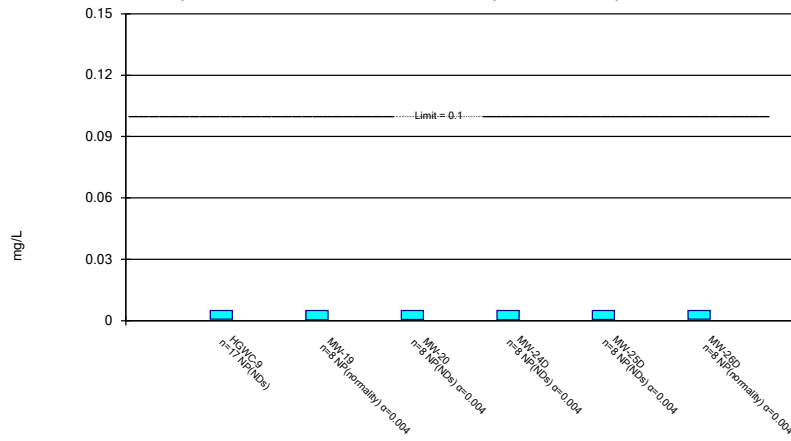
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

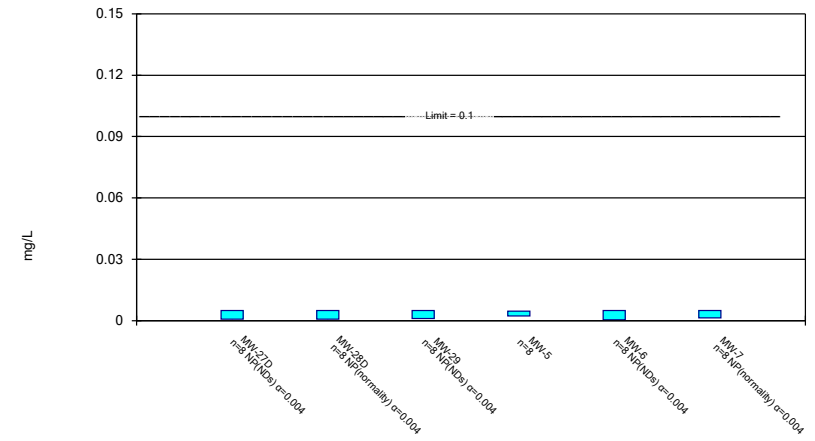
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

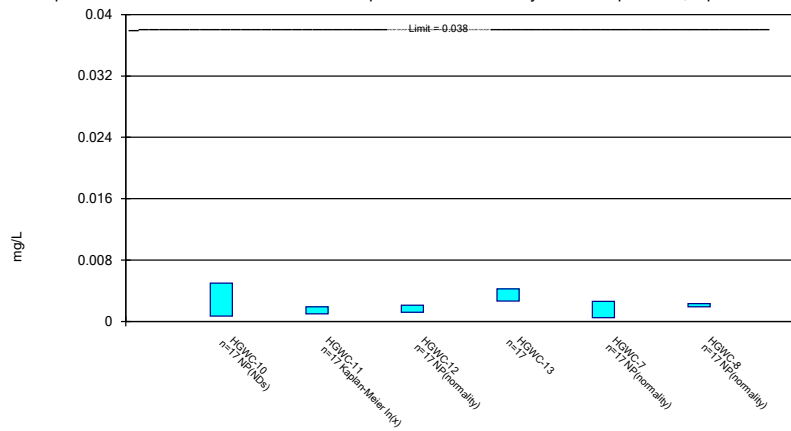
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

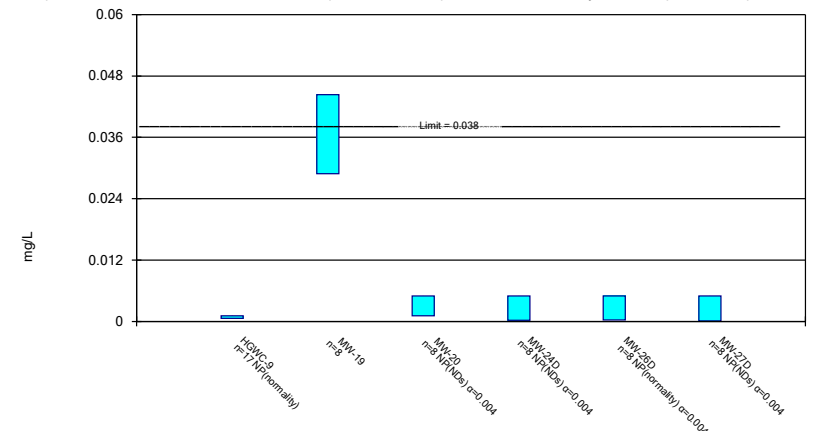
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

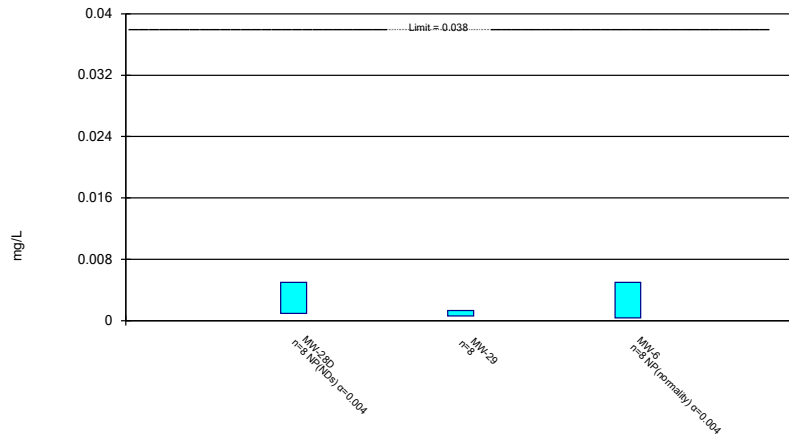
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

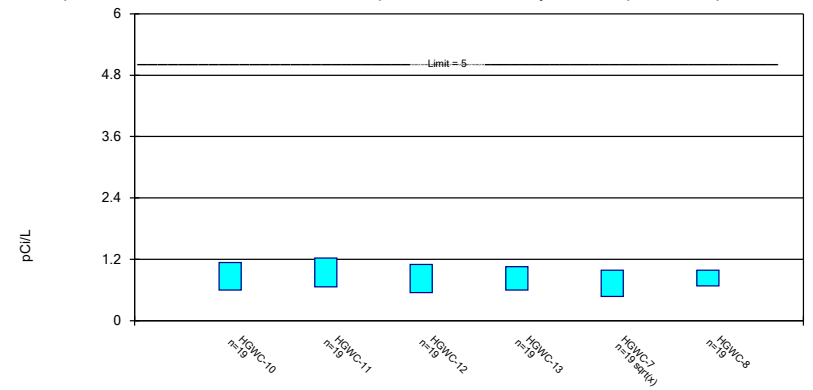
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

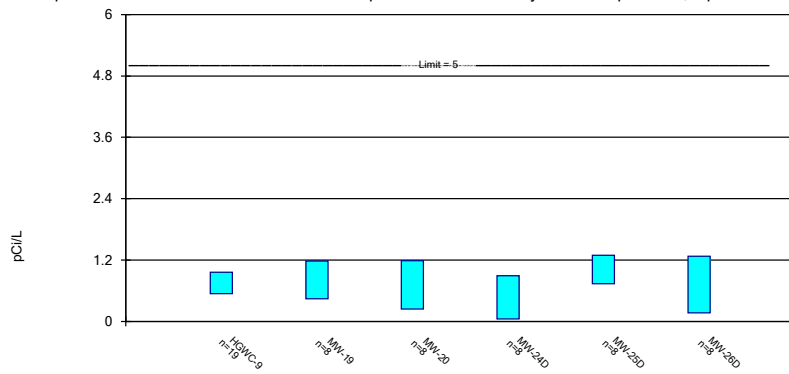
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

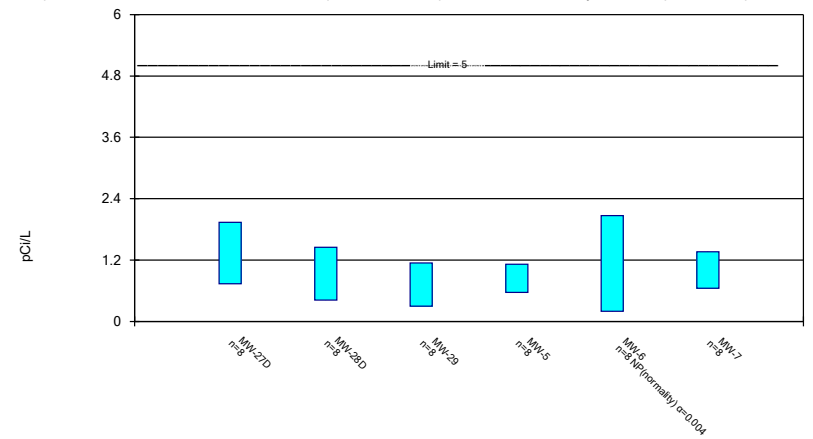
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

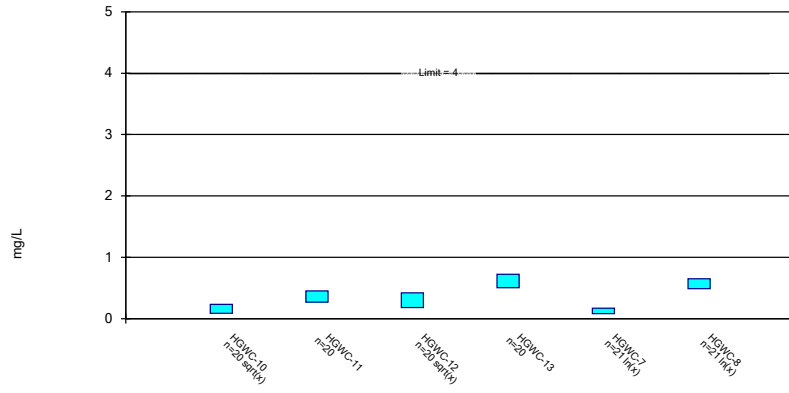
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

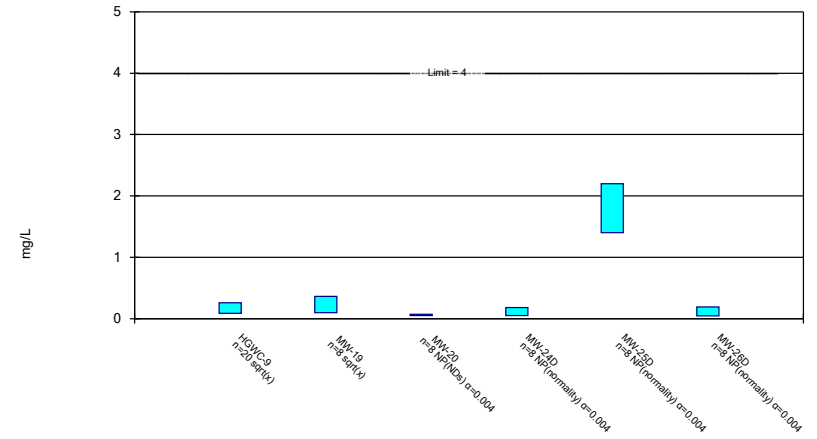
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

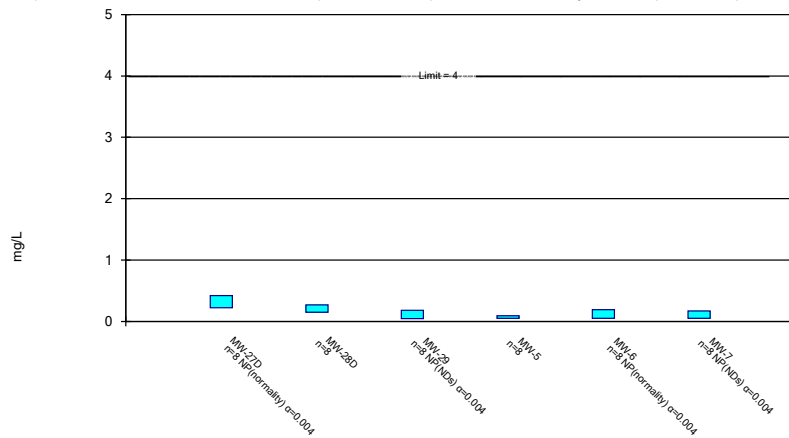
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

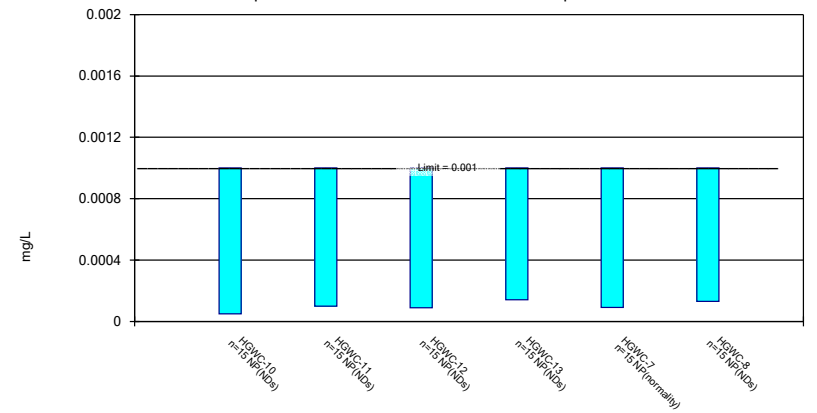
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

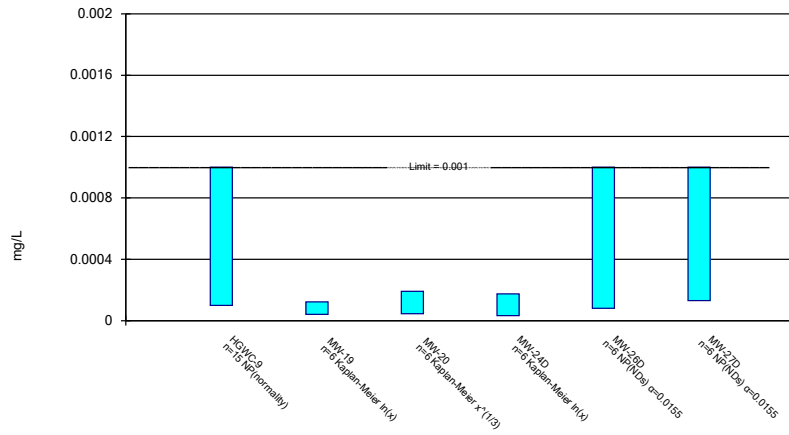
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

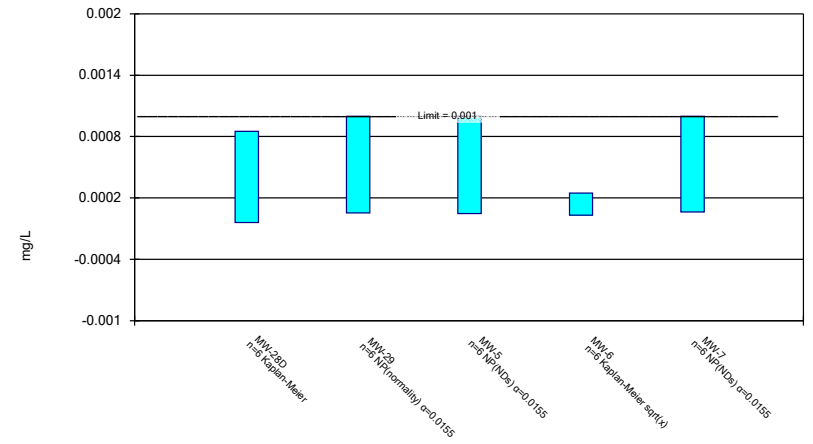
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

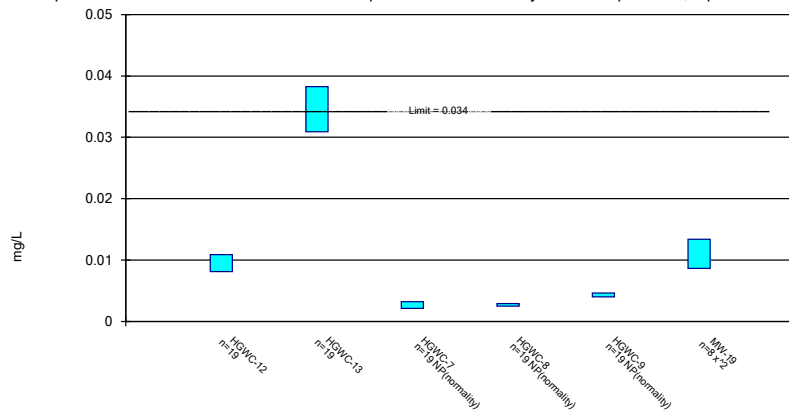
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Constituent: Lead Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

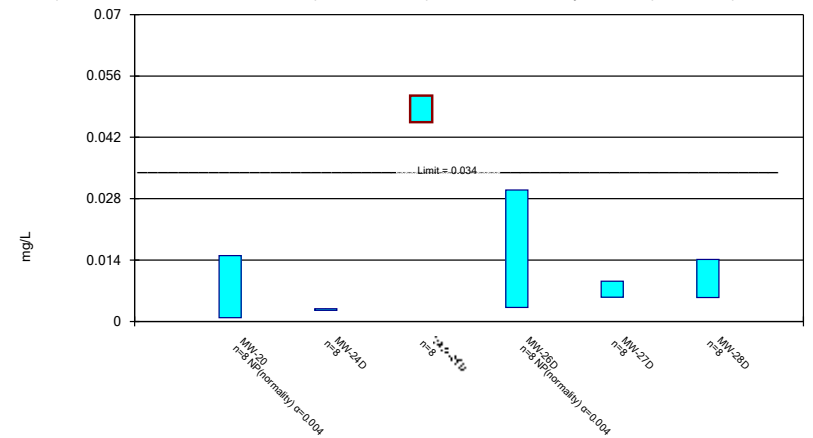
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Constituent: Lithium Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

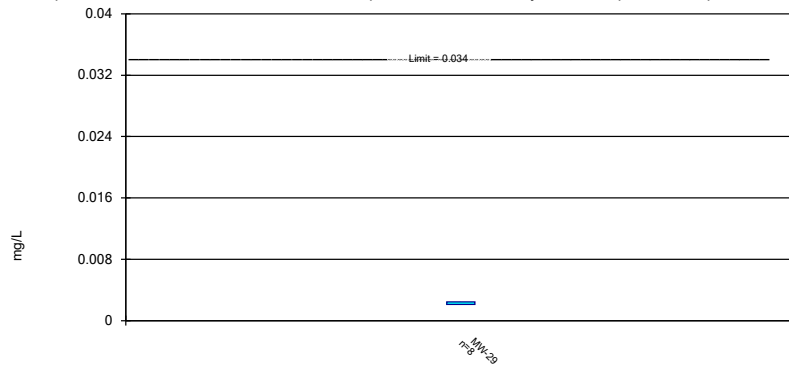
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

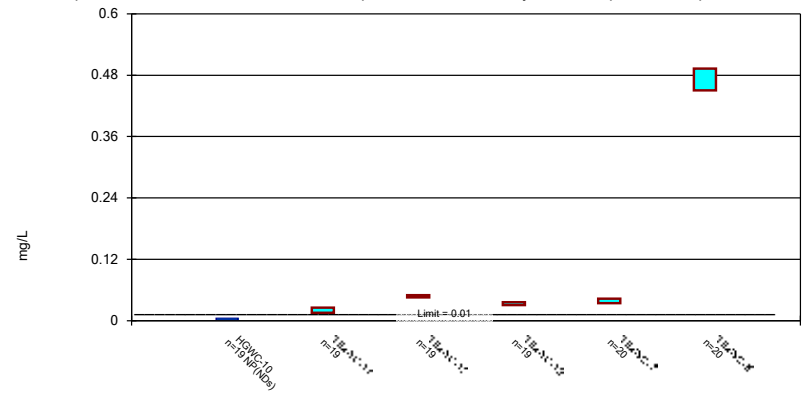
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

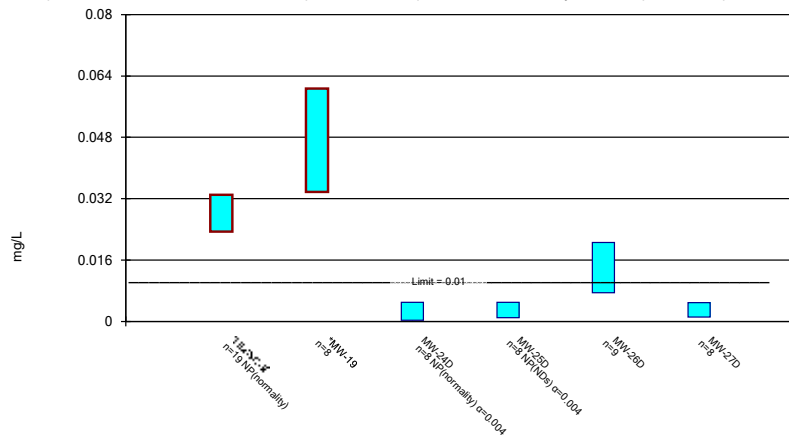
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

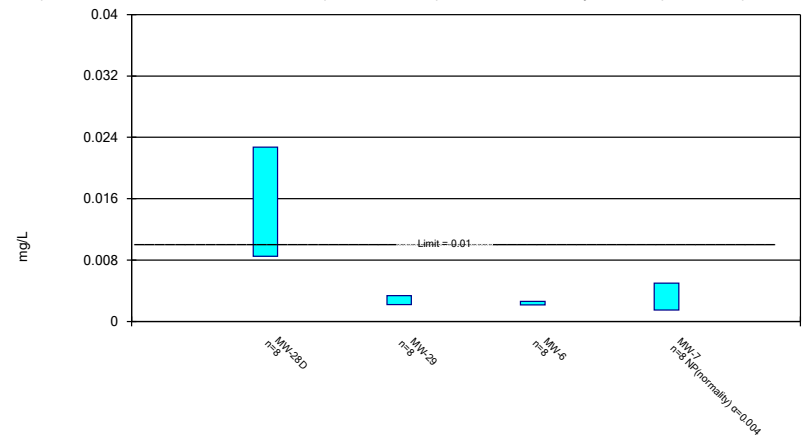
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

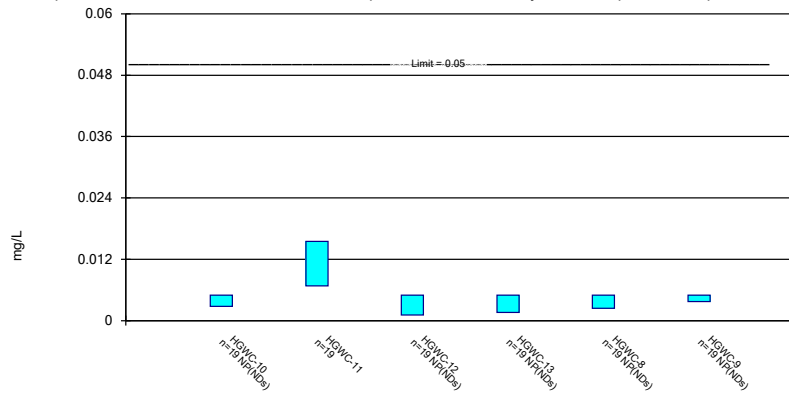
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

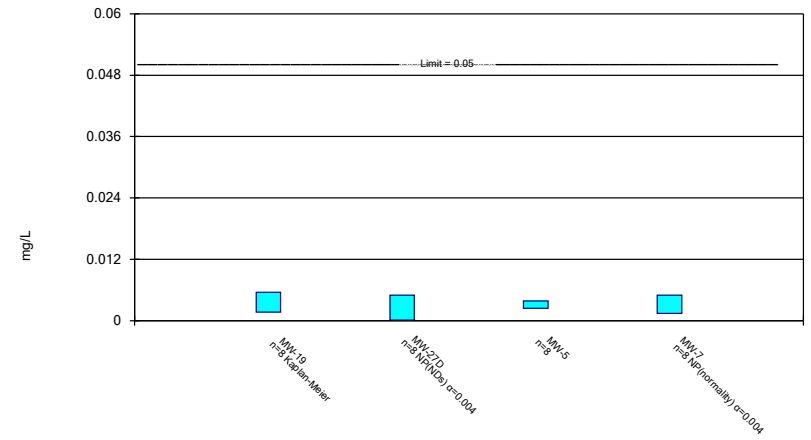
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

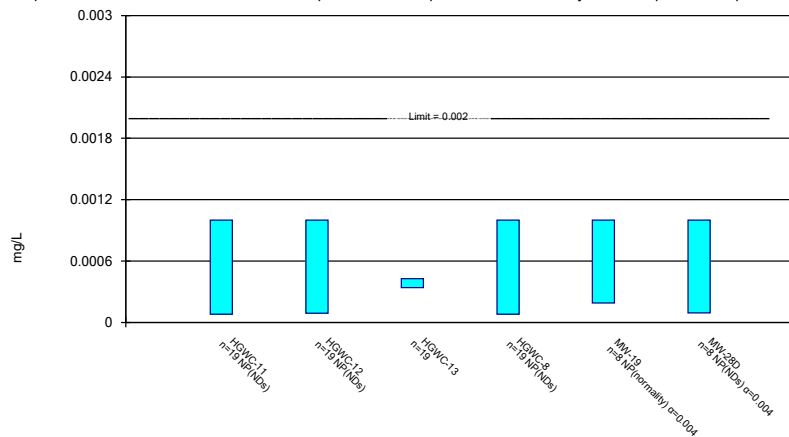
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

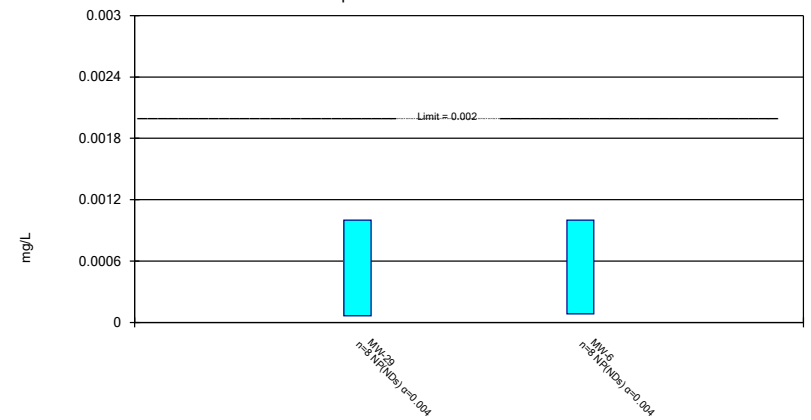
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 5/4/2021 7:36 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

FIGURE J.

Federal Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:34 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	HGWC-13	0.4313	0.3592	0.01	Yes	19	0.3953	0.06154	0	None	No	0.01	Param.
Lithium (mg/L)	MW-25D	0.05155	0.04545	0.04	Yes	8	0.0485	0.002878	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-8	0.4928	0.4503	0.1	Yes	20	0.4716	0.03743	0	None	No	0.01	Param.

Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:34 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-10	0.003	0.00065	0.006	No	17	0.002862	0.00057	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-11	0.003	0.00038	0.006	No	17	0.002846	0.0006354	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-13	0.003	0.00036	0.006	No	17	0.001925	0.001327	58.82	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-7	0.003	0.00034	0.006	No	17	0.002844	0.0006451	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-8	0.003	0.00064	0.006	No	17	0.002861	0.0005724	94.12	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-9	0.003	0.00043	0.006	No	17	0.002539	0.001026	82.35	None	No	0.01	NP (NDs)
Antimony (mg/L)	MW-24D	0.003	0.0017	0.006	No	8	0.002838	0.0004596	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-26D	0.003	0.0013	0.006	No	8	0.002663	0.0006523	75	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-27D	0.003	0.00016	0.006	No	8	0.0009775	0.00125	25	None	No	0.004	NP (normality)
Antimony (mg/L)	MW-28D	0.003	0.0019	0.006	No	8	0.002863	0.0003889	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-29	0.003	0.00094	0.006	No	8	0.002743	0.0007283	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-6	0.003	0.0014	0.006	No	8	0.0028	0.0005657	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	MW-7	0.003	0.00051	0.006	No	8	0.002096	0.001065	50	None	No	0.004	NP (normality)
Arsenic (mg/L)	HGWC-11	0.005	0.0015	0.01	No	19	0.003266	0.001768	42.11	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-12	0.004589	0.003137	0.01	No	19	0.003863	0.00124	10.53	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-13	0.4313	0.3592	0.01	Yes	19	0.3953	0.06154	0	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-7	0.005	0.0019	0.01	No	19	0.004837	0.0007112	94.74	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-9	0.005	0.0008	0.01	No	19	0.004312	0.001635	84.21	None	No	0.01	NP (NDs)
Arsenic (mg/L)	MW-19	0.005	0.00045	0.01	No	8	0.004431	0.001609	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-20	0.005	0.00038	0.01	No	8	0.003577	0.002033	62.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-25D	0.005	0.00075	0.01	No	8	0.003094	0.002064	50	None	No	0.004	NP (normality)
Arsenic (mg/L)	MW-26D	0.005	0.0006	0.01	No	8	0.003925	0.001991	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-27D	0.005	0.0002	0.01	No	8	0.003361	0.002272	62.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-28D	0.005	0.0011	0.01	No	8	0.004512	0.001379	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-29	0.005	0.00037	0.01	No	8	0.004421	0.001637	87.5	None	No	0.004	NP (NDs)
Barium (mg/L)	HGWC-10	0.08901	0.06608	2	No	19	0.07754	0.01958	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-11	0.05343	0.03154	2	No	19	0.04375	0.02072	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	HGWC-12	0.13	0.084	2	No	19	0.1029	0.02097	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-13	0.09256	0.06961	2	No	19	0.08108	0.0196	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-7	0.07536	0.06864	2	No	19	0.072	0.005743	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-8	0.0829	0.06	2	No	19	0.06984	0.01122	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-9	0.1226	0.1065	2	No	19	0.1146	0.01374	0	None	No	0.01	Param.
Barium (mg/L)	MW-19	0.0677	0.0498	2	No	8	0.05875	0.008447	0	None	No	0.01	Param.
Barium (mg/L)	MW-20	0.098	0.08425	2	No	8	0.09113	0.00649	0	None	No	0.01	Param.
Barium (mg/L)	MW-24D	0.08729	0.04433	2	No	8	0.06538	0.02462	0	None	ln(x)	0.01	Param.
Barium (mg/L)	MW-25D	0.4797	0.3928	2	No	8	0.4363	0.04104	0	None	No	0.01	Param.
Barium (mg/L)	MW-26D	0.17	0.093	2	No	8	0.1131	0.02538	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-27D	1.5	0.95	2	No	8	1.088	0.1866	0	None	No	0.004	NP (normality)
Barium (mg/L)	MW-28D	0.7327	0.1773	2	No	8	0.455	0.262	0	None	No	0.01	Param.
Barium (mg/L)	MW-29	0.08638	0.07637	2	No	8	0.08138	0.004719	0	None	No	0.01	Param.
Barium (mg/L)	MW-5	0.05227	0.04398	2	No	8	0.04813	0.003907	0	None	No	0.01	Param.
Barium (mg/L)	MW-6	0.09421	0.08179	2	No	8	0.088	0.005855	0	None	No	0.01	Param.
Barium (mg/L)	MW-7	0.06481	0.04669	2	No	8	0.05575	0.008548	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-11	0.0005	0.0001	0.004	No	17	0.000341	0.000197	58.82	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-13	0.0005	0.000097	0.004	No	17	0.000333	0.000206	58.82	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-7	0.0005	0.00019	0.004	No	17	0.0004322	0.0001526	82.35	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-8	0.0005	0.0001	0.004	No	17	0.0004014	0.0001834	76.47	None	No	0.01	NP (NDs)
Beryllium (mg/L)	MW-28D	0.0005	0.000048	0.004	No	8	0.0003428	0.0002188	62.5	None	No	0.004	NP (NDs)
Beryllium (mg/L)	MW-7	0.0005	0.000051	0.004	No	8	0.0004439	0.0001587	87.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	HGWC-10	0.0005	0.0001	0.005	No	17	0.0003421	0.0001959	58.82	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-11	0.0005	0.0001	0.005	No	17	0.0004292	0.0001577	82.35	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-12	0.0005	0.0003	0.005	No	17	0.0004259	0.000143	76.47	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-7	0.0005	0.0002	0.005	No	17	0.0004235	0.0001437	76.47	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-8	0.00032	0.00014	0.005	No	17	0.0003141	0.0003708	5.882	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-9	0.0005	0.0002	0.005	No	17	0.0004335	0.00015	82.35	None	No	0.01	NP (NDs)

Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:34 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cadmium (mg/L)	MW-19	0.0002284	0.0001459	0.005	No	8	0.000265	0.0001497	25	Kaplan-Meier	ln(x)	0.01	Param.
Chromium (mg/L)	HGWC-10	0.02	0.005	0.1	No	17	0.005882	0.003638	94.12	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-11	0.005	0.00061	0.1	No	17	0.004465	0.00151	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-12	0.005	0.0025	0.1	No	17	0.004342	0.001516	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-13	0.005	0.00059	0.1	No	17	0.004209	0.001762	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-7	0.071	0.0016	0.1	No	17	0.007779	0.01639	64.71	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-8	0.005	0.0015	0.1	No	17	0.004031	0.001811	76.47	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-9	0.005	0.00067	0.1	No	17	0.004482	0.001463	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-19	0.005	0.00047	0.1	No	8	0.00254	0.002111	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	MW-20	0.005	0.00051	0.1	No	8	0.003362	0.002261	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-24D	0.005	0.00042	0.1	No	8	0.004015	0.001856	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-25D	0.005	0.00061	0.1	No	8	0.004451	0.001552	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-26D	0.005	0.00076	0.1	No	8	0.002757	0.001958	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	MW-27D	0.005	0.0007	0.1	No	8	0.00394	0.001963	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-28D	0.005	0.00078	0.1	No	8	0.002692	0.002009	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	MW-29	0.005	0.001	0.1	No	8	0.0045	0.001414	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-5	0.004565	0.00231	0.1	No	8	0.003438	0.001064	0	None	No	0.01	Param.
Chromium (mg/L)	MW-6	0.005	0.00044	0.1	No	8	0.003879	0.002077	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	MW-7	0.005	0.0013	0.1	No	8	0.00215	0.001198	12.5	None	No	0.004	NP (normality)
Cobalt (mg/L)	HGWC-10	0.005	0.0007	0.038	No	17	0.003506	0.00209	64.71	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-11	0.00192	0.0009744	0.038	No	17	0.002656	0.001712	29.41	Kaplan-Meier	ln(x)	0.01	Param.
Cobalt (mg/L)	HGWC-12	0.0021	0.0012	0.038	No	17	0.001871	0.001212	11.76	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-13	0.004247	0.002671	0.038	No	17	0.003459	0.001258	5.882	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-7	0.0026	0.0005	0.038	No	17	0.001598	0.001703	17.65	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-8	0.0023	0.0019	0.038	No	17	0.002204	0.0007606	5.882	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-9	0.0011	0.00057	0.038	No	17	0.001238	0.001459	11.76	None	No	0.01	NP (normality)
Cobalt (mg/L)	MW-19	0.04433	0.02892	0.038	No	8	0.03663	0.007269	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-20	0.005	0.0011	0.038	No	8	0.004512	0.001379	87.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-24D	0.005	0.00025	0.038	No	8	0.003364	0.00227	62.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-26D	0.005	0.0003	0.038	No	8	0.002715	0.002444	50	None	No	0.004	NP (normality)
Cobalt (mg/L)	MW-27D	0.005	0.000091	0.038	No	8	0.003243	0.002428	62.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-28D	0.005	0.00093	0.038	No	8	0.004491	0.001439	87.5	None	No	0.004	NP (NDs)
Cobalt (mg/L)	MW-29	0.001302	0.0005925	0.038	No	8	0.0009475	0.0003349	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-6	0.005	0.00036	0.038	No	8	0.00109	0.00159	12.5	None	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	HGWC-10	1.137	0.597	5	No	19	0.8671	0.4612	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-11	1.226	0.6603	5	No	19	0.9432	0.4832	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-12	1.1	0.548	5	No	19	0.8239	0.4713	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-13	1.052	0.5958	5	No	19	0.824	0.3897	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-7	0.9855	0.4718	5	No	19	0.7699	0.4916	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-8	0.9892	0.6793	5	No	19	0.8343	0.2646	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-9	0.959	0.541	5	No	19	0.75	0.3569	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-19	1.183	0.4412	5	No	8	0.8119	0.3497	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-20	1.185	0.2405	5	No	8	0.713	0.4458	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-24D	0.8936	0.0469	5	No	8	0.4703	0.3994	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-25D	1.296	0.7346	5	No	8	1.015	0.2647	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-26D	1.275	0.1638	5	No	8	0.7193	0.524	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-27D	1.938	0.7381	5	No	8	1.338	0.5659	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-28D	1.449	0.4152	5	No	8	0.9321	0.4877	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-29	1.144	0.2969	5	No	8	0.7203	0.3994	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-5	1.116	0.5638	5	No	8	0.8399	0.2604	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-6	2.07	0.198	5	No	8	0.8654	0.5289	0	None	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-7	1.363	0.6459	5	No	8	1.004	0.3382	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-10	0.2311	0.08652	4	No	20	0.1758	0.1484	15	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-11	0.4538	0.2685	4	No	20	0.3612	0.1632	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-12	0.4227	0.1819	4	No	20	0.3266	0.2544	5	None	sqrt(x)	0.01	Param.

Federal Confidence Intervals - All Results

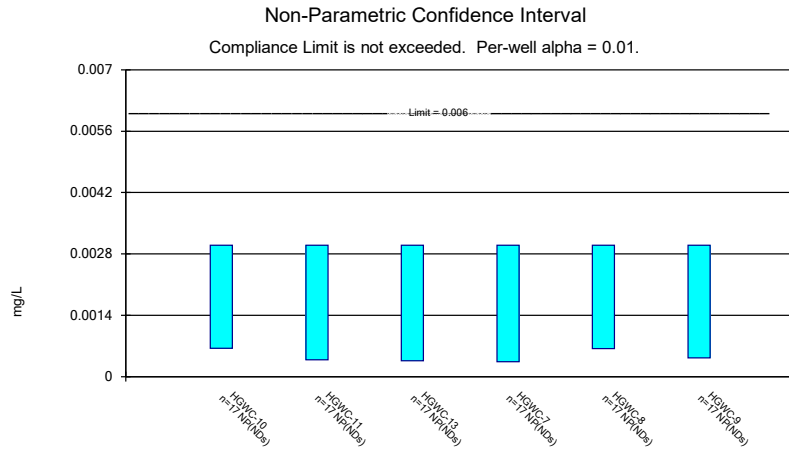
Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:34 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	HGWC-13	0.7221	0.5018	4	No	20	0.6119	0.194	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-7	0.1671	0.08288	4	No	21	0.1468	0.1188	9.524	None	ln(x)	0.01	Param.
Fluoride (mg/L)	HGWC-8	0.6486	0.4876	4	No	21	0.5823	0.1742	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	HGWC-9	0.2594	0.08768	4	No	20	0.1957	0.1662	10	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-19	0.3621	0.09633	4	No	8	0.2245	0.1448	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-20	0.072	0.05	4	No	8	0.05275	0.007778	87.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-24D	0.18	0.048	4	No	8	0.07088	0.04503	37.5	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-25D	2.2	1.4	4	No	8	1.65	0.239	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-26D	0.19	0.044	4	No	8	0.075	0.0477	12.5	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-27D	0.42	0.22	4	No	8	0.27	0.06302	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-28D	0.2674	0.1476	4	No	8	0.2075	0.05651	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-29	0.18	0.045	4	No	8	0.06813	0.04582	62.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	MW-5	0.09236	0.04939	4	No	8	0.07088	0.02027	12.5	None	No	0.01	Param.
Fluoride (mg/L)	MW-6	0.19	0.05	4	No	8	0.1014	0.06371	25	None	No	0.004	NP (normality)
Fluoride (mg/L)	MW-7	0.17	0.05	4	No	8	0.06738	0.042	75	None	No	0.004	NP (NDs)
Lead (mg/L)	HGWC-10	0.001	0.00005	0.015	No	15	0.0009367	0.0002453	93.33	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-11	0.001	0.000099	0.015	No	15	0.0006706	0.0004226	60	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-12	0.001	0.000089	0.015	No	15	0.0007159	0.0004245	66.67	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-13	0.001	0.00014	0.015	No	15	0.0006527	0.000441	60	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-7	0.001	0.00009	0.015	No	15	0.0005996	0.0004589	40	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-8	0.001	0.00013	0.015	No	15	0.0007684	0.0003982	73.33	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-9	0.001	0.0001	0.015	No	15	0.0005543	0.0004342	46.67	None	No	0.01	NP (normality)
Lead (mg/L)	MW-19	0.0001214	0.00004136	0.015	No	6	0.000384	0.0004777	33.33	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	MW-20	0.0001907	0.00004523	0.015	No	6	0.0004065	0.0004617	33.33	Kaplan-Meier	x^(1/3)	0.01	Param.
Lead (mg/L)	MW-24D	0.0001737	0.0000328	0.015	No	6	0.0002427	0.0003754	16.67	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	MW-26D	0.001	0.00008	0.015	No	6	0.0006967	0.00047	66.67	Kaplan-Meier	No	0.0155	NP (NDs)
Lead (mg/L)	MW-27D	0.001	0.00013	0.015	No	6	0.00076	0.0003837	66.67	Kaplan-Meier	No	0.0155	NP (NDs)
Lead (mg/L)	MW-28D	0.0008507	-0.0000419	0.015	No	6	0.0005037	0.0004058	16.67	Kaplan-Meier	No	0.01	Param.
Lead (mg/L)	MW-29	0.001	0.000052	0.015	No	6	0.000542	0.0005021	50	None	No	0.0155	NP (normality)
Lead (mg/L)	MW-5	0.001	0.000047	0.015	No	6	0.0008412	0.0003891	83.33	None	No	0.0155	NP (NDs)
Lead (mg/L)	MW-6	0.0002477	0.00003146	0.015	No	6	0.0004183	0.0004567	33.33	Kaplan-Meier	sqrt(x)	0.01	Param.
Lead (mg/L)	MW-7	0.001	0.000062	0.015	No	6	0.0008437	0.0003829	83.33	Kaplan-Meier	No	0.0155	NP (NDs)
Lithium (mg/L)	HGWC-12	0.01088	0.008093	0.04	No	19	0.009484	0.002375	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-13	0.03828	0.0309	0.04	No	19	0.03459	0.006309	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-7	0.0032	0.0021	0.04	No	19	0.003195	0.002903	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-8	0.0029	0.0025	0.04	No	19	0.003342	0.002837	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-9	0.0046	0.004	0.04	No	19	0.004779	0.002518	5.263	None	No	0.01	NP (normality)
Lithium (mg/L)	MW-19	0.01336	0.008619	0.04	No	8	0.011	0.002491	0	None	x^2	0.01	Param.
Lithium (mg/L)	MW-20	0.015	0.00082	0.04	No	8	0.004652	0.006392	25	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-24D	0.002919	0.002531	0.04	No	8	0.002725	0.0001832	0	None	No	0.01	Param.
Lithium (mg/L)	MW-25D	0.05155	0.04545	0.04	Yes	8	0.0485	0.002878	0	None	No	0.01	Param.
Lithium (mg/L)	MW-26D	0.03	0.0032	0.04	No	8	0.006925	0.009329	0	None	No	0.004	NP (normality)
Lithium (mg/L)	MW-27D	0.009164	0.005536	0.04	No	8	0.00735	0.001711	0	None	No	0.01	Param.
Lithium (mg/L)	MW-28D	0.0141	0.005449	0.04	No	8	0.009775	0.004082	0	None	No	0.01	Param.
Lithium (mg/L)	MW-29	0.002433	0.002117	0.04	No	8	0.002275	0.0001488	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-10	0.005	0.0014	0.1	No	19	0.003663	0.001814	63.16	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	HGWC-11	0.02514	0.01508	0.1	No	19	0.02011	0.00859	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-12	0.04978	0.0457	0.1	No	19	0.04774	0.003483	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-13	0.03593	0.0301	0.1	No	19	0.03302	0.004974	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-7	0.04274	0.03437	0.1	No	20	0.03856	0.007368	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-8	0.4928	0.4503	0.1	Yes	20	0.4716	0.03743	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-9	0.033	0.0234	0.1	No	19	0.05098	0.1033	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	MW-19	0.06073	0.03377	0.1	No	8	0.04725	0.01271	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-24D	0.005	0.00027	0.1	No	8	0.002902	0.002254	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	MW-25D	0.005	0.00094	0.1	No	8	0.004142	0.001623	75	None	No	0.004	NP (NDs)

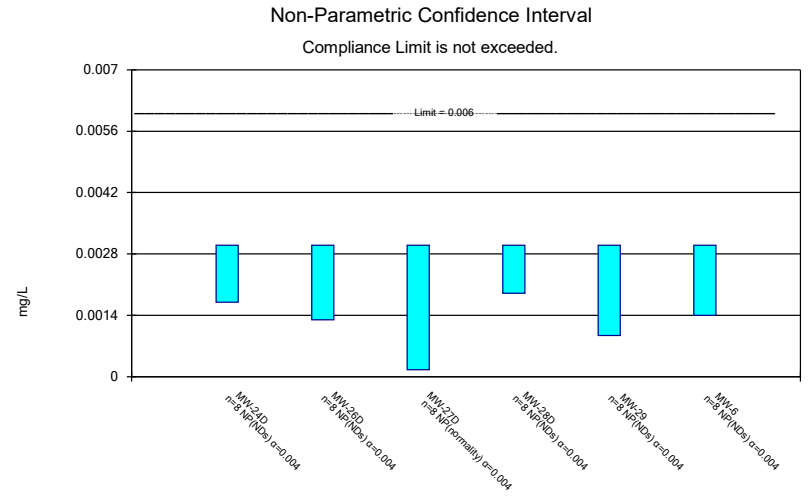
Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 5/4/2021, 7:34 PM

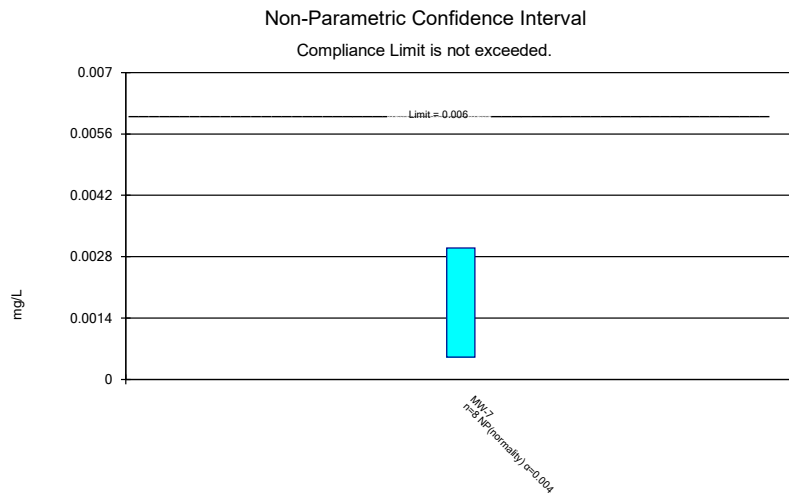
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Molybdenum (mg/L)	MW-26D	0.02056	0.007442	0.1	No	9	0.014	0.006793	11.11	None	No	0.01	Param.
Molybdenum (mg/L)	MW-27D	0.004925	0.00115	0.1	No	8	0.003037	0.001781	12.5	None	No	0.01	Param.
Molybdenum (mg/L)	MW-28D	0.02271	0.008486	0.1	No	8	0.0156	0.006712	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-29	0.003366	0.002184	0.1	No	8	0.002775	0.0005574	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-6	0.002589	0.002136	0.1	No	8	0.002363	0.0002134	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-7	0.005	0.0015	0.1	No	8	0.003475	0.001733	50	None	No	0.004	NP (normality)
Selenium (mg/L)	HGWC-10	0.005	0.0028	0.05	No	19	0.004353	0.001207	73.68	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-11	0.01552	0.006815	0.05	No	19	0.01117	0.007435	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-12	0.005	0.0011	0.05	No	19	0.004795	0.0008947	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-13	0.005	0.0016	0.05	No	19	0.004567	0.001317	89.47	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-8	0.005	0.0024	0.05	No	19	0.004863	0.0005965	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-9	0.005	0.0037	0.05	No	19	0.004932	0.0002982	94.74	None	No	0.01	NP (NDs)
Selenium (mg/L)	MW-19	0.005561	0.001677	0.05	No	8	0.004175	0.001851	25	Kaplan-Meier	No	0.01	Param.
Selenium (mg/L)	MW-27D	0.005	0.00012	0.05	No	8	0.00439	0.001725	87.5	Kaplan-Meier	No	0.004	NP (NDs)
Selenium (mg/L)	MW-5	0.003857	0.002393	0.05	No	8	0.003125	0.0006902	0	None	No	0.01	Param.
Selenium (mg/L)	MW-7	0.005	0.0014	0.05	No	8	0.003012	0.001692	37.5	None	No	0.004	NP (normality)
Thallium (mg/L)	HGWC-11	0.001	0.00008	0.002	No	19	0.0009032	0.0002901	89.47	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-12	0.001	0.00009	0.002	No	19	0.0007171	0.0004287	68.42	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-13	0.0004261	0.000341	0.002	No	19	0.0003836	0.00007267	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-8	0.001	0.00008	0.002	No	19	0.0007099	0.0004388	68.42	None	No	0.01	NP (NDs)
Thallium (mg/L)	MW-19	0.001	0.00019	0.002	No	8	0.0004425	0.0003455	25	None	No	0.004	NP (normality)
Thallium (mg/L)	MW-28D	0.001	0.000092	0.002	No	8	0.0008865	0.000321	87.5	None	No	0.004	NP (NDs)
Thallium (mg/L)	MW-29	0.001	0.000064	0.002	No	8	0.000883	0.0003309	87.5	None	No	0.004	NP (NDs)
Thallium (mg/L)	MW-6	0.001	0.000082	0.002	No	8	0.0008853	0.0003246	87.5	None	No	0.004	NP (NDs)



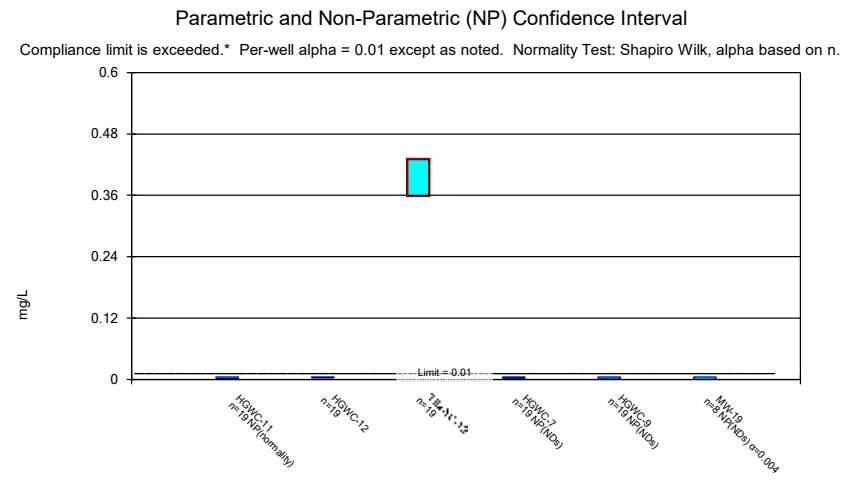
Constituent: Antimony Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1



Constituent: Antimony Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1



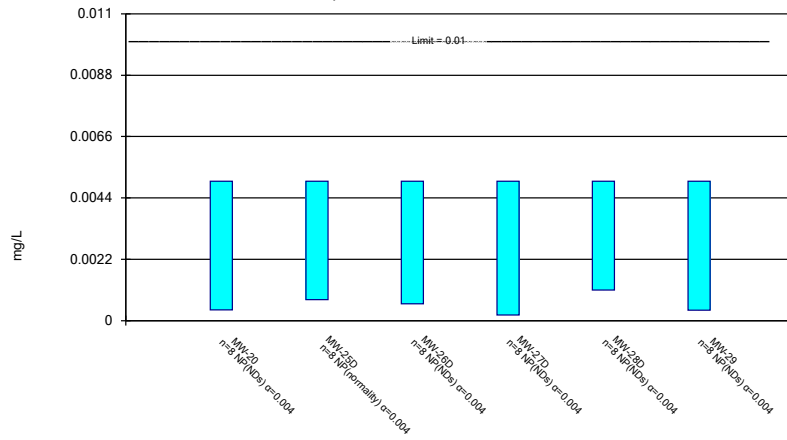
Constituent: Antimony Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1



Constituent: Arsenic Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

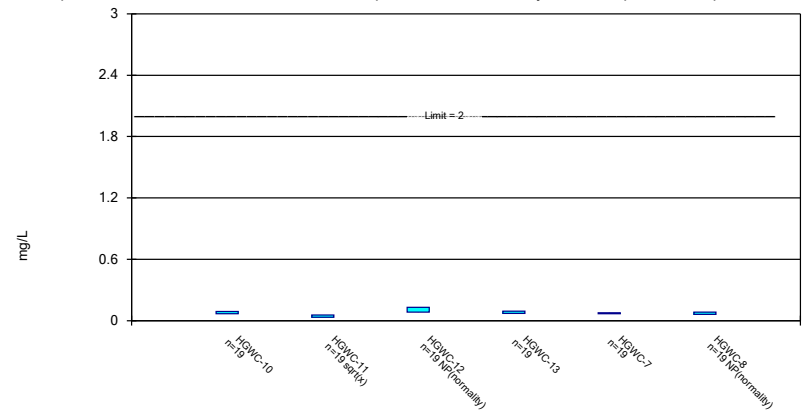
Compliance Limit is not exceeded.



Constituent: Arsenic Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

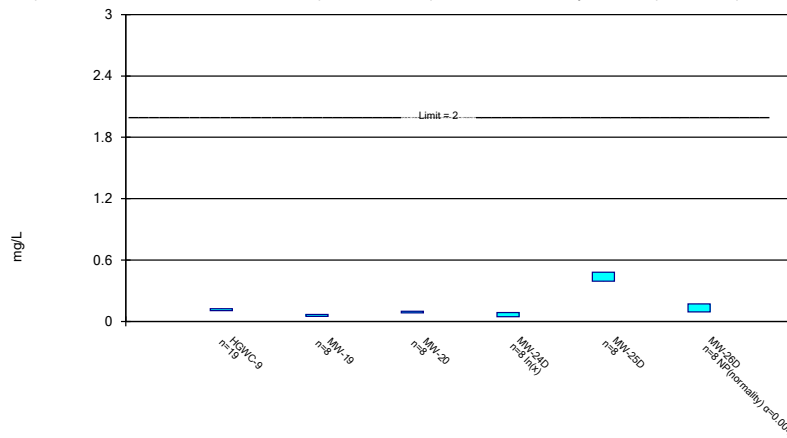
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

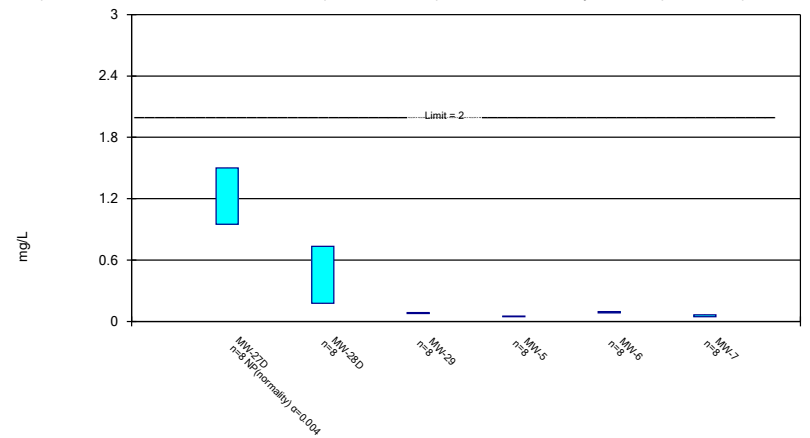
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

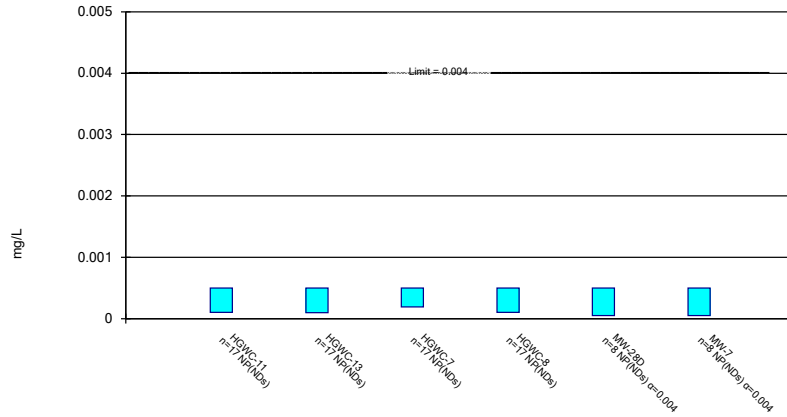
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Constituent: Barium Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

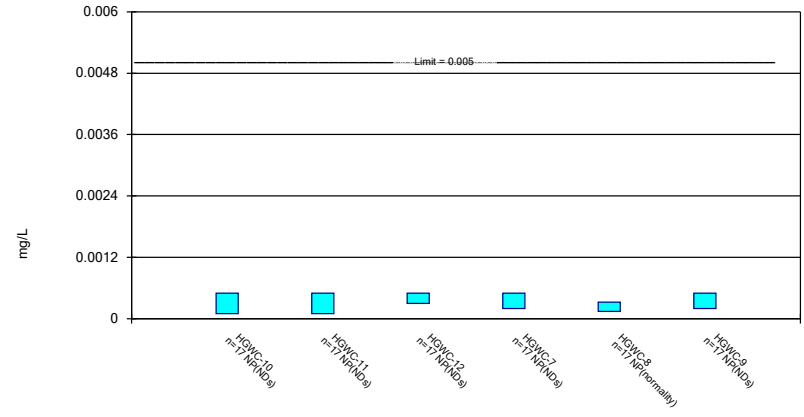
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Beryllium Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

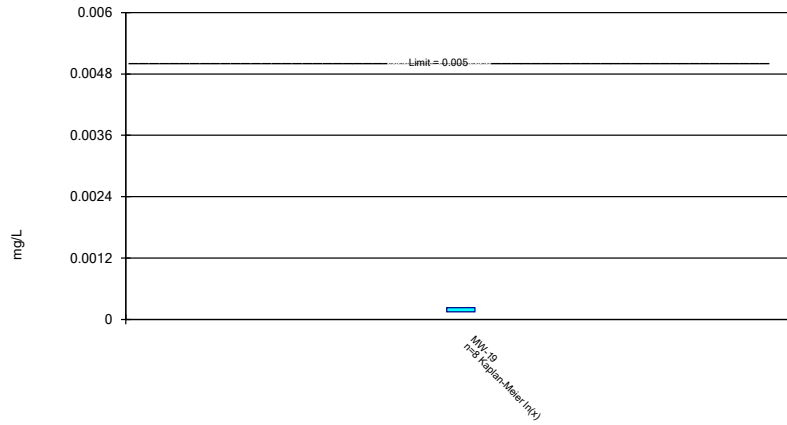
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Cadmium Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

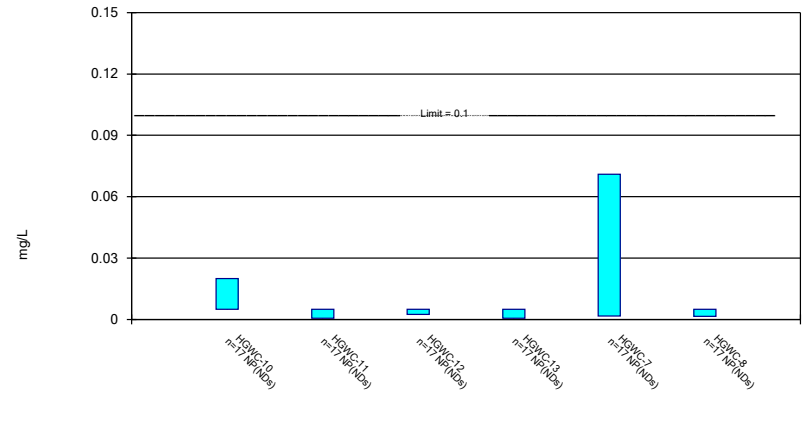
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

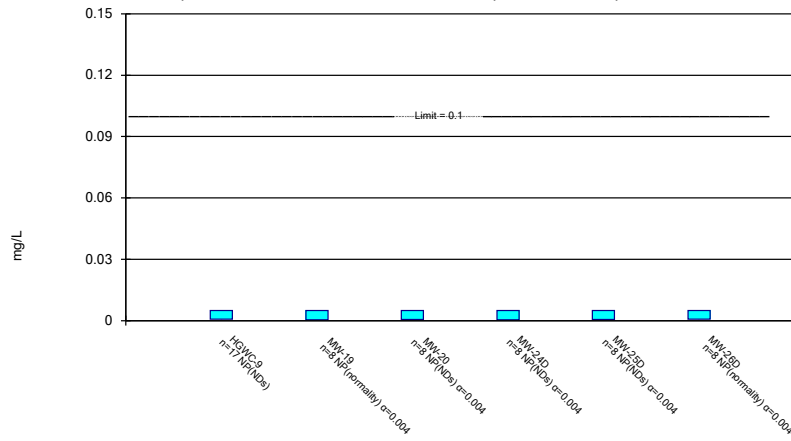
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

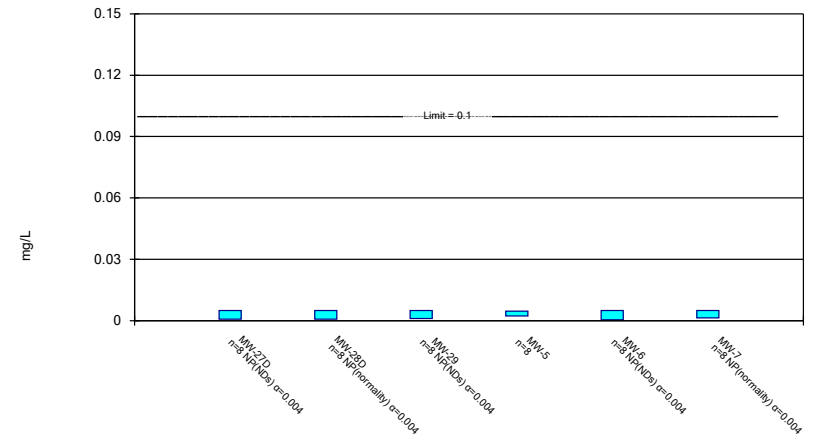
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 5/4/2021 7:30 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

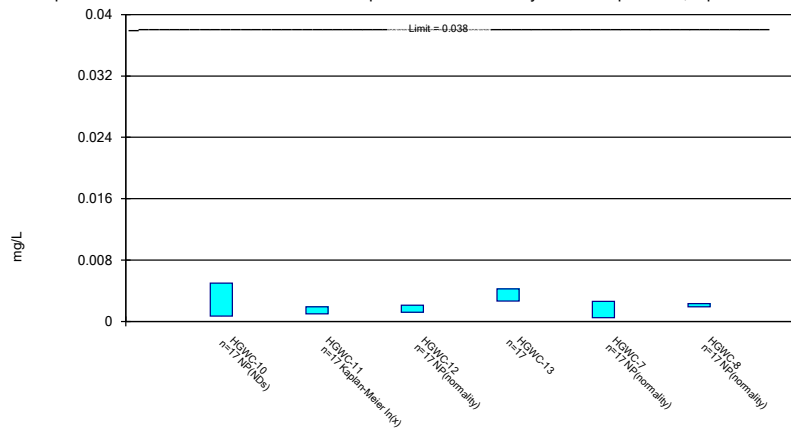
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Constituent: Chromium Analysis Run 5/4/2021 7:30 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

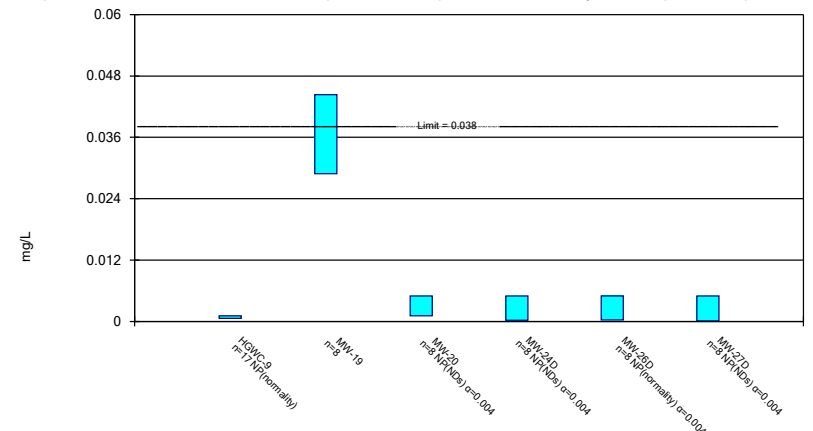
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Constituent: Cobalt Analysis Run 5/4/2021 7:30 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

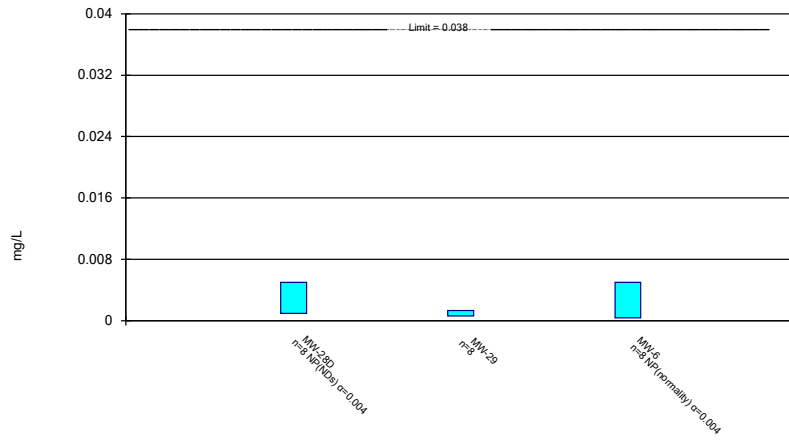
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 5/4/2021 7:30 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

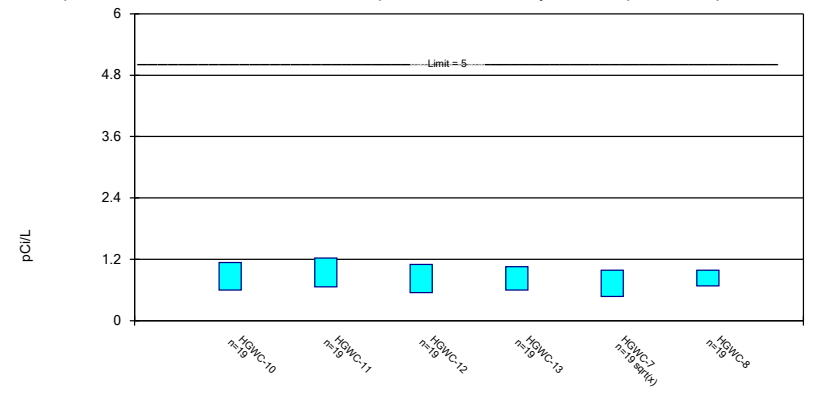
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Constituent: Cobalt Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

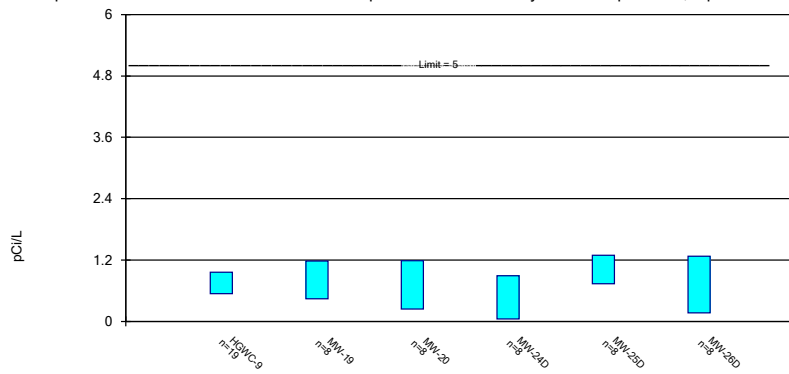
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Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

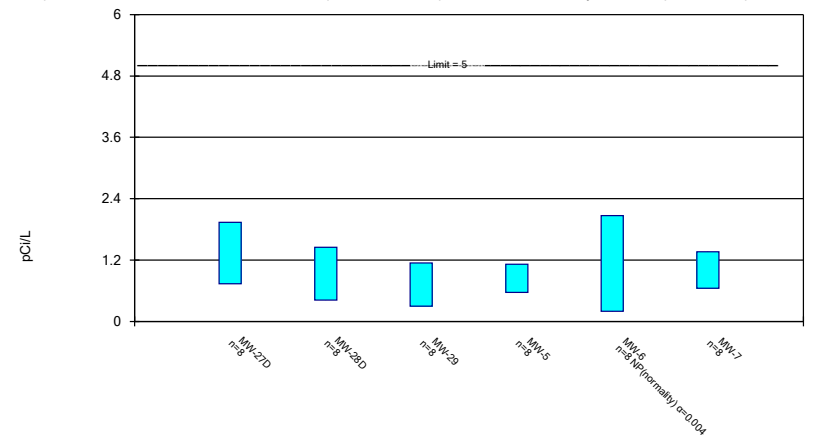
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Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

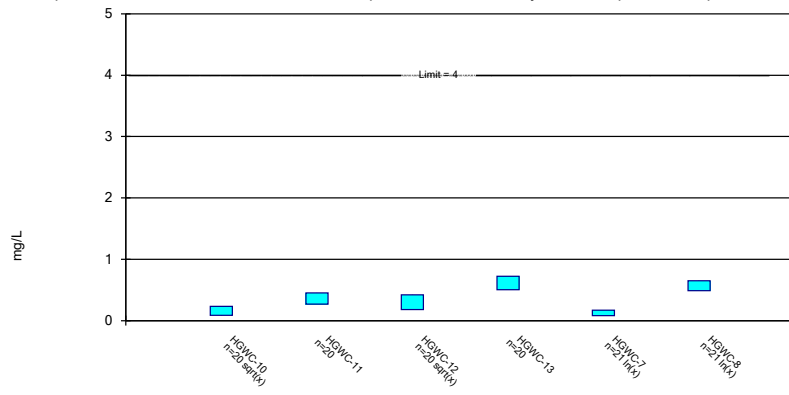
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Constituent: Combined Radium 226 + 228 Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

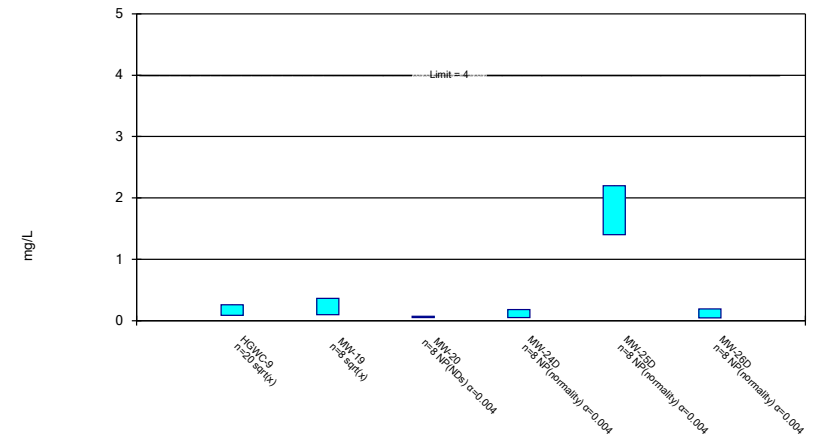
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

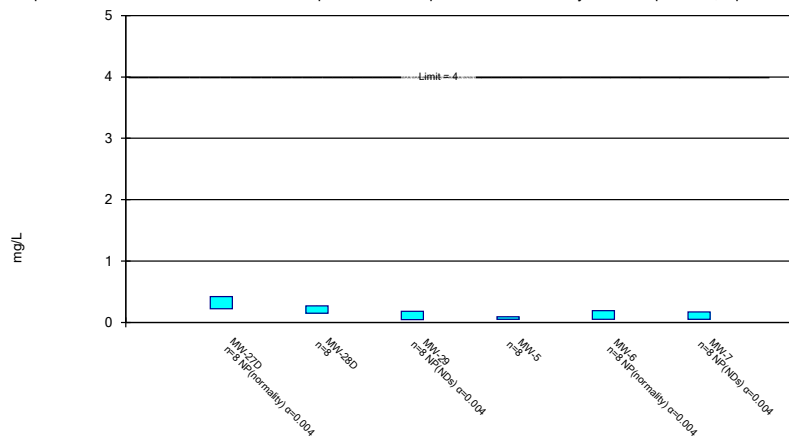
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

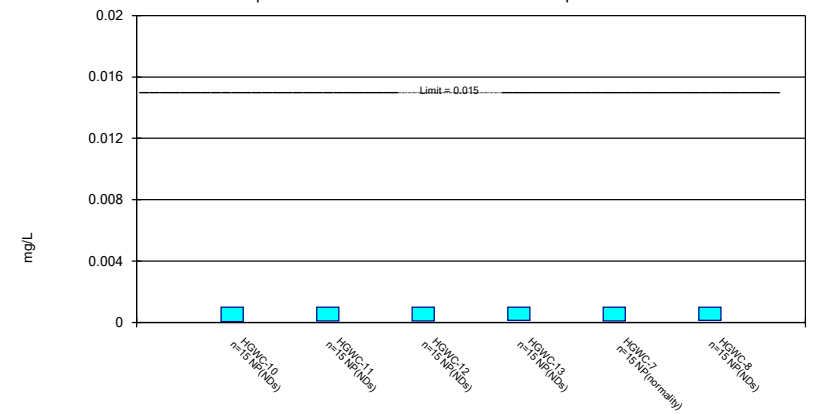
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Constituent: Fluoride Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

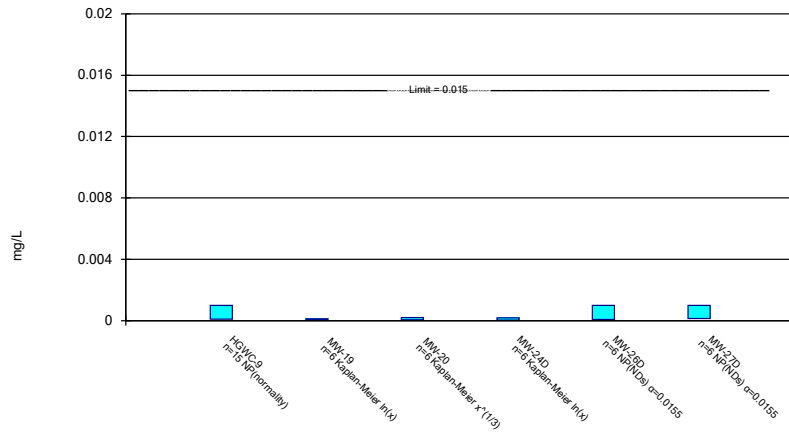
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Constituent: Lead Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

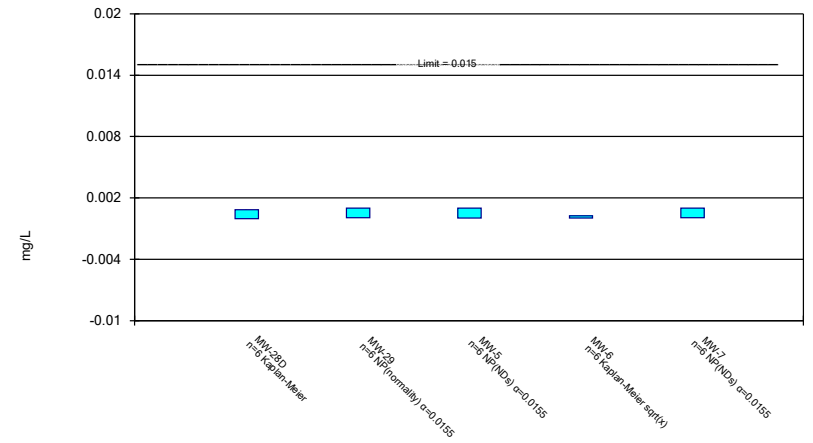
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

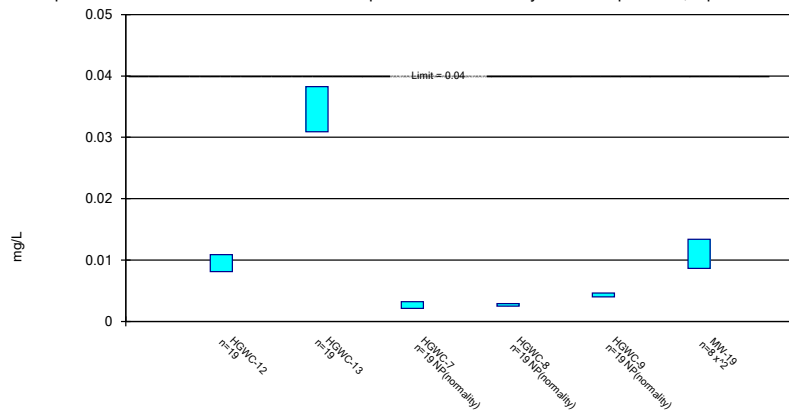
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

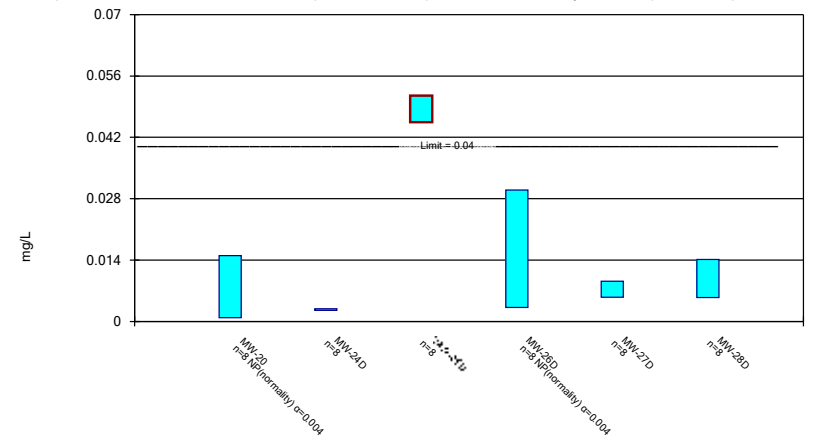
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Constituent: Lithium Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

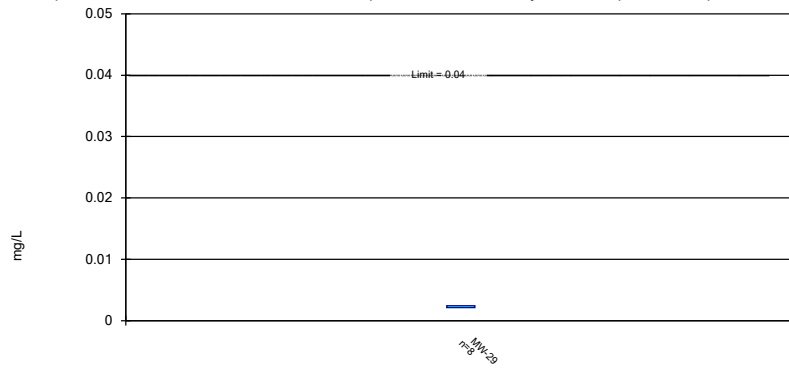
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Constituent: Lithium Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

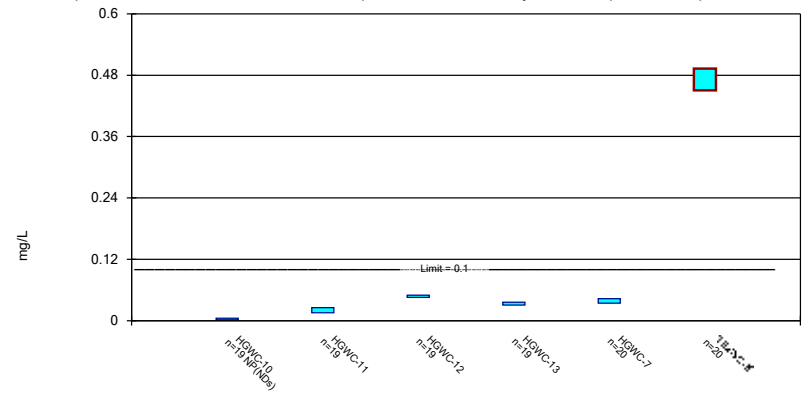
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

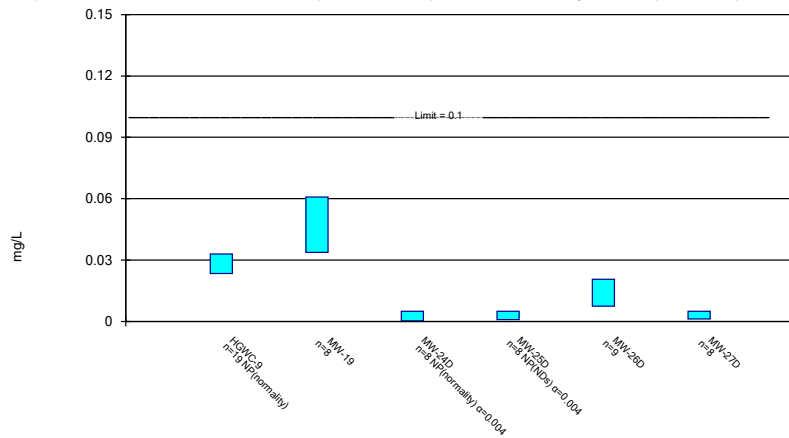
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Constituent: Molybdenum Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

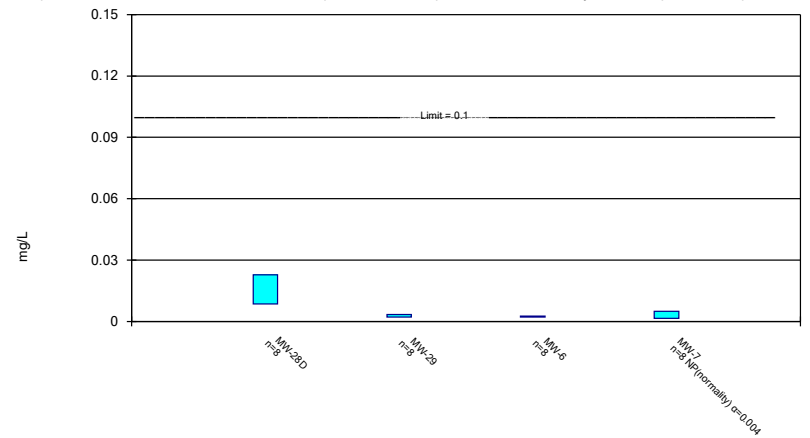
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

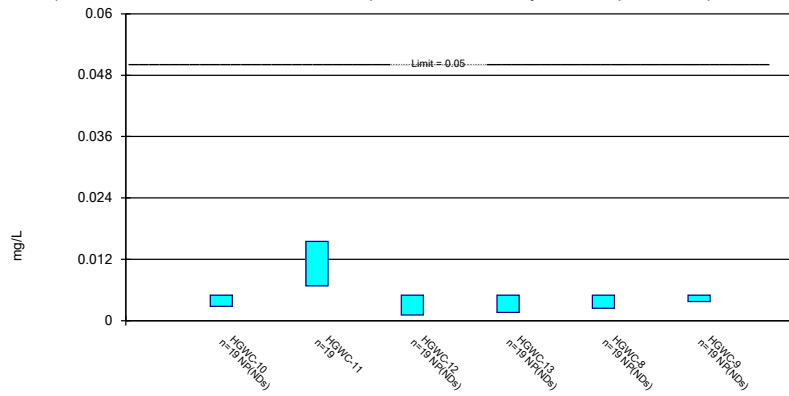
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

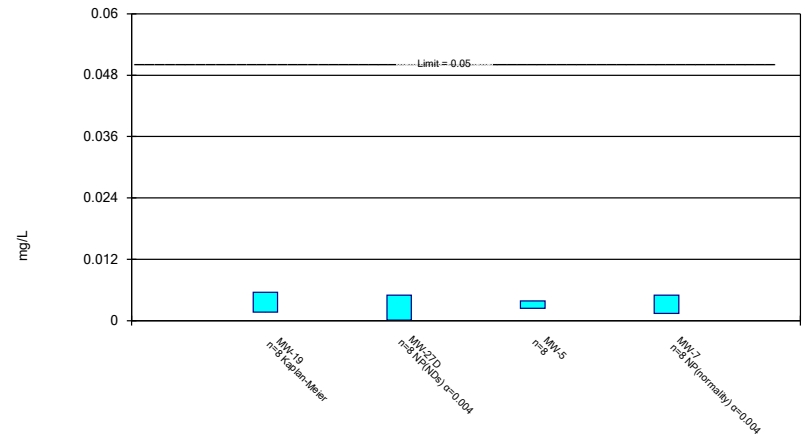
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

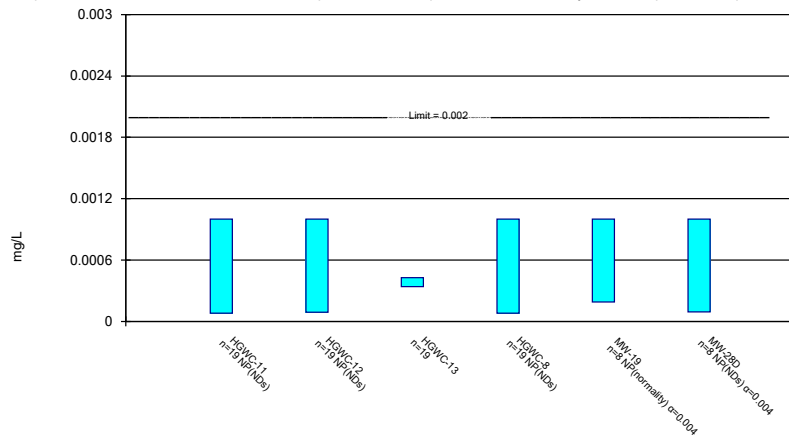
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

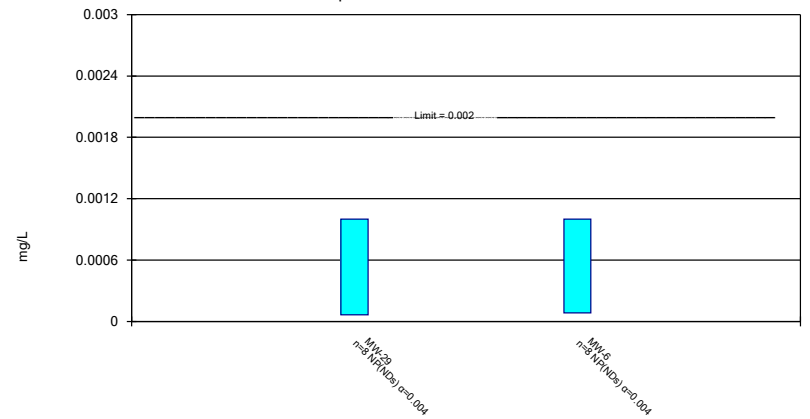
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 5/4/2021 7:30 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

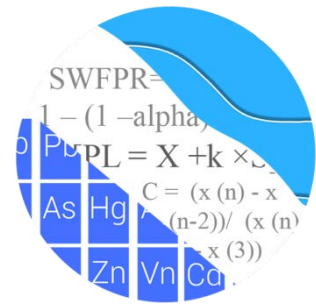
APPENDIX D2

August 2021 Statistical Report

GROUNDWATER STATS CONSULTING

January 31, 2022

Southern Company Services
Attn: Ms. Kristen Jurinko
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308



Re: Plant Hammond Ash Pond 1 (AP-1)
Statistical Analysis – August 2021 Sample Event

Dear Ms. Jurinko,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the August 2021 Semi-Annual Groundwater Detection and Assessment Monitoring statistical summary of groundwater data for Georgia Power Company's Plant Hammond AP-1. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015), the Georgia Environmental Protection Division (EPD) Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began for the Coal Combustion Residuals (CCR) program in 2016, and at least 8 background samples have been collected at each of the upgradient and downgradient groundwater monitoring wells. The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** HGWA-1, HGWA-2, HGWA-3, HGWA-43D, and HGWA-44D
- **Downgradient wells:** HGWC-7, HGWC-8, HGWC-9, HGWC-10, HGWC-11, HGWC-12, and HGWC-13
- **Delineation wells:** MW-5, MW-6, MW-7, MW-19, MW-20, MW-24D, MW-25D, MW-26D, MW-27D, MW-28D, and MW-29

Sampling at upgradient wells HGWA-43D and HGWA-44D began in September 2020 and a maximum of seven samples have been collected. The February 2021 sampling event was a Scan event during which only Appendix IV constituents were sampled.

Data from delineation wells are included on time series and box plots for all parameters. When a minimum of 4 samples is available, these wells are evaluated using confidence intervals for the Appendix IV constituents. For the delineation wells previously identified, sampling began in March 2019. Wells MW-30D and MW-40D were included as delineation wells during previous reporting periods, but each was reclassified as a "piezometer" based on the findings presented in the alternate source demonstration included as an appendix of the 2020 Annual Groundwater Monitoring & Corrective Action Report, submitted to Georgia EPD in January 2021. Because of this reclassification, data for wells MW-30D and MW-40D are not presented in this report.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Andrew Collins, Project Manager of Groundwater Stats Consulting. The statistical analysis was performed according to the groundwater screening that was performed in April 2018 by GSC and approved by Dr. Cameron, PhD Statistician with MacStat Consulting and primary author of the USEPA Unified Guidance (2009).

The CCR program consists of the constituents listed below. The terms "parameters" and "constituents" are used interchangeably.

- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Appendix IV** (Assessment Monitoring) – 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, annual Scan events are conducted to determine which Appendix IV constituents are detected in downgradient wells and, therefore, require statistical analysis. Any constituents that are not detected do not require statistical analysis. During the annual Scan event conducted in February 2021, mercury was not detected and was not required to be sampled during the subsequent event.

For all constituents, a substitution of the most recent reporting limit is used for non-detect data. In the case of lithium, historical reporting limits vary among the wells. Therefore, the

reporting limit of 0.03 mg/L was substituted across all wells, which is the most recent reporting limit provided by the laboratory.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. No values were flagged as outliers (Figure C).

In earlier analyses, data at all wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves were provided with the previous 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

The following Appendix III parameters are evaluated using interwell prediction limits combined with a 1-of-2 resample plan: boron, calcium, chloride, fluoride, pH, sulfate, and TDS.

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits.

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).

- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Note that values shown on data pages reflect raw data and any non-detects that have been substituted with one-half of the reporting limit 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.

Statistical Analysis of Appendix III Parameters – August 2021

All Appendix III parameters were analyzed using interwell prediction limits. Background (upgradient) well data were re-assessed for potential outliers during this analysis. No new values were flagged as shown in the outlier summary following this report (Figure C).

Interwell Prediction Limits

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed for Appendix III parameters using all historical upgradient well data through August 2021 (Figure D). Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The August 2021 sample from each downgradient well is compared to the background limit to determine whether statistically significant increases (SSIs) are present. Note that during this analysis, the reporting limit for boron

decreased from 0.1 mg/L to 0.04 mg/L; however, this did not result in any change for the interwell prediction limit.

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 (SSI) is identified and further research would be required to identify the cause of the exceedance (i.e., impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result and, therefore, no exceedance is noted and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance.

When the August 2021 compliance data from downgradient wells were compared to interwell prediction limits, several exceedances were identified. A summary table of these findings is provided along with the prediction limits (Figure D).

Trend Test Evaluation – Appendix III

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure E). Upgradient well data are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. Upgradient trends are an indication of natural variability in groundwater unrelated to practices at the site. A summary of the trend test results follows this letter. Statistically significant trends were noted for the following well/constituent pairs:

Increasing trends:

- Boron: HGWA-2 (upgradient), HGWC-7, and HGWC-9
- Calcium: HGWA-3 (upgradient)
- Chloride: HGWA-44D (upgradient)
- Sulfate: HGWA-2 (upgradient)

Decreasing trends:

- Boron: HGWC-13
- Chloride: HGWC-8, HGWC-9 and HGWC-12

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 (Maximum Contaminant Limits (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 – August 2021

For Appendix IV parameters, confidence intervals for each downgradient well/constituent pair were compared against corresponding Groundwater Protection Standards (GWPS). GWPS were developed as described below. Well/constituent pairs that have 100% non-detects do not require analysis. Data from upgradient wells for Appendix IV parameters are reassessed for outliers during each analysis. No new values were flagged and a summary of previously flagged outliers follows this report (Figure C).

Interwell Upper Tolerance Limits

Site specific background limits were calculated as upper one-sided tolerance limits (UTLs) on pooled upgradient well data all historical upgradient well data through August 2021 (Figure F). When varying detection limits were present in upgradient wells, all non-detects were substituted with the most recent reporting limit. As mentioned above, an alternate reporting limit of 0.03 mg/L was substituted across all wells for lithium. Parametric tolerance limits were used when data follow a normal or transformed-normal distribution. When data contained greater than 50% non-detects or did not follow a normal or transformed-normal distribution, non-parametric tolerance limits were used.

Groundwater Protection Standards

The background limits were then used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia EPD Rule 391-3-4-.10(6)(a).

As described in 40 CFR §257.95(h) (1-3), the GWPS is:

- The maximum contaminant level (MCL) established under §141.62 and §141.66 of this title

- Where an MCL has not been established for a constituent, CCR-rule specified levels have been specified for cobalt (0.006 mg/L), lead (0.015 mg/L), lithium (0.040 mg/L), and molybdenum (0.100 mg/L)
- The respective background level for a constituent when the background level is higher than the MCL or Federal CCR Rule identified GWPS

On July 30, 2018, USEPA revised the Federal CCR Rule updating GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR §257.95(h)(2). Georgia EPD has not incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a); therefore, for sites regulated under Georgia EPD Rules, the GWPS is:

- The MCL or
- The background concentration when an MCL is not established or when the background concentration is higher than the MCL.

Following the above Georgia EPD Rule requirements and the CCR Rule, State and Federal GWPS were established for statistical comparison of Appendix IV constituents for the August 2021 sample event (Figures G and H, respectively). Delineation wells were included when a minimum of 4 samples were available. Note that a GWPS is established for mercury; however, since it was not sampled during the August 2021 sampling event, no statistical comparison with confidence intervals is required.

Confidence Intervals

To complete the statistical comparison to GWPS, confidence intervals were constructed for each of the Appendix IV constituents in each downgradient well and delineation wells with 4 or more samples. The Sanitas software was used to calculate the tolerance limits and the confidence intervals, either parametric or nonparametric, as appropriate. For the State requirements, confidence intervals were compared to the GWPS established using the Georgia EPD Rules 391-3-4-.10(6)(a). For Federal requirements, confidence intervals were compared to the GWPS prepared according to the CCR Rule. Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified.

Summaries of the confidence interval results, along with graphical comparison against GWPS for both State and Federal requirements follow this letter (Figures I and J, respectively). Exceedances were noted for the following well/constituent pairs:

State:

- Arsenic: HGWC-13
- Lithium: MW-25D
- Molybdenum: HGWC-7, HGWC-8, HGWC-9, HGWC-11, HGWC-12, HGWC-13, and MW-19

Federal:

- Arsenic: HGWC-13
- Lithium: MW-25D
- Molybdenum: HGWC-8

Trend Test Evaluation – Appendix IV

Data at wells with confidence interval exceedances are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable (Figure K). Upgradient wells are included in the trend analyses to identify whether similar patterns exist upgradient of the site for the same constituents. When trends are present in upgradient trends, it is an indication of natural variability in groundwater quality unrelated to practices at the site. A summary of the Appendix IV trend test results follows this letter. Statistically significant trends were identified for the following well/constituent pairs:

Increasing trends:

- Molybdenum: HGWC-7 and HGWC-9

Decreasing trends:

- Lithium: HGWA-1 and HGWA-2 (both upgradient)

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Hammond AP-1. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Abdul Diane
Groundwater Analyst



Andrew Collins
Project Manager

100% Non-Detects: Appendix IV Downgradient & Delineation

Analysis Run 10/20/2021 5:40 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Antimony (mg/L)

HGWC-12, MW-19, MW-20, MW-25D, MW-5

Arsenic (mg/L)

HGWC-10, HGWC-8, MW-24D, MW-5, MW-6, MW-7

Beryllium (mg/L)

HGWC-10, HGWC-12, HGWC-9, MW-20, MW-24D, MW-25D, MW-26D, MW-27D, MW-29, MW-5, MW-6

Cadmium (mg/L)

HGWC-13, MW-20, MW-24D, MW-25D, MW-26D, MW-27D, MW-28D, MW-29, MW-5, MW-6, MW-7

Cobalt (mg/L)

MW-25D, MW-5, MW-7

Lead (mg/L)

MW-25D

Lithium (mg/L)

HGWC-10, HGWC-11, MW-5, MW-6, MW-7

Molybdenum (mg/L)

MW-20, MW-5

Selenium (mg/L)

HGWC-7, MW-20, MW-24D, MW-25D, MW-26D, MW-28D, MW-29, MW-6

Thallium (mg/L)

HGWC-10, HGWC-7, HGWC-9, MW-20, MW-24D, MW-25D, MW-26D, MW-27D, MW-5, MW-7

Appendix III Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/20/2021, 5:16 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-10	0.4	n/a	8/17/2021	0.88	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-11	0.4	n/a	8/18/2021	0.91	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-12	0.4	n/a	8/18/2021	1.9	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-13	0.4	n/a	8/19/2021	0.73	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-7	0.4	n/a	8/16/2021	1.1	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-8	0.4	n/a	8/18/2021	1.8	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-9	0.4	n/a	8/17/2021	2.3	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-10	138	n/a	8/17/2021	153	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-12	138	n/a	8/18/2021	163	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-13	138	n/a	8/19/2021	179	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-8	138	n/a	8/18/2021	147	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-9	138	n/a	8/17/2021	183	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-12	41.1	n/a	8/18/2021	47.3	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-8	41.1	n/a	8/18/2021	50.9	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-9	41.1	n/a	8/17/2021	88.6	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-10	88.2	n/a	8/17/2021	156	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-11	88.2	n/a	8/18/2021	237	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-12	88.2	n/a	8/18/2021	226	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-13	88.2	n/a	8/19/2021	339	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-7	88.2	n/a	8/16/2021	98.1	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-8	88.2	n/a	8/18/2021	245	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-9	88.2	n/a	8/17/2021	207	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-13	632	n/a	8/19/2021	726	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-9	632	n/a	8/17/2021	704	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2

Appendix III Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/20/2021, 5:16 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-10	0.4	n/a	8/17/2021	0.88	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-11	0.4	n/a	8/18/2021	0.91	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-12	0.4	n/a	8/18/2021	1.9	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-13	0.4	n/a	8/19/2021	0.73	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-7	0.4	n/a	8/16/2021	1.1	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-8	0.4	n/a	8/18/2021	1.8	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-9	0.4	n/a	8/17/2021	2.3	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-10	138	n/a	8/17/2021	153	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-11	138	n/a	8/18/2021	128	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-12	138	n/a	8/18/2021	163	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-13	138	n/a	8/19/2021	179	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-7	138	n/a	8/16/2021	112	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-8	138	n/a	8/18/2021	147	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-9	138	n/a	8/17/2021	183	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-10	41.1	n/a	8/17/2021	28.3	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-11	41.1	n/a	8/18/2021	19.9	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-12	41.1	n/a	8/18/2021	47.3	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-13	41.1	n/a	8/19/2021	24.4	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-7	41.1	n/a	8/16/2021	40.3	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-8	41.1	n/a	8/18/2021	50.9	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-9	41.1	n/a	8/17/2021	88.6	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-10	0.87	n/a	8/17/2021	0.05ND	No	79	n/a	n/a	31.65	n/a	n/a	0.0003072	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-11	0.87	n/a	8/18/2021	0.21	No	79	n/a	n/a	31.65	n/a	n/a	0.0003072	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-12	0.87	n/a	8/18/2021	0.15	No	79	n/a	n/a	31.65	n/a	n/a	0.0003072	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-13	0.87	n/a	8/19/2021	0.53	No	79	n/a	n/a	31.65	n/a	n/a	0.0003072	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-7	0.87	n/a	8/16/2021	0.084J	No	79	n/a	n/a	31.65	n/a	n/a	0.0003072	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-8	0.87	n/a	8/18/2021	0.41	No	79	n/a	n/a	31.65	n/a	n/a	0.0003072	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-9	0.87	n/a	8/17/2021	0.095J	No	79	n/a	n/a	31.65	n/a	n/a	0.0003072	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-10	7.92	4.9	8/17/2021	6.75	No	79	n/a	n/a	0	n/a	n/a	0.0006143	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-11	7.92	4.9	8/18/2021	6.1	No	79	n/a	n/a	0	n/a	n/a	0.0006143	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-12	7.92	4.9	8/18/2021	6.89	No	79	n/a	n/a	0	n/a	n/a	0.0006143	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-13	7.92	4.9	8/19/2021	7.38	No	79	n/a	n/a	0	n/a	n/a	0.0006143	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-7	7.92	4.9	8/16/2021	7.12	No	79	n/a	n/a	0	n/a	n/a	0.0006143	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-8	7.92	4.9	8/18/2021	7.02	No	79	n/a	n/a	0	n/a	n/a	0.0006143	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-9	7.92	4.9	8/17/2021	7.1	No	79	n/a	n/a	0	n/a	n/a	0.0006143	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-10	88.2	n/a	8/17/2021	156	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-11	88.2	n/a	8/18/2021	237	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-12	88.2	n/a	8/18/2021	226	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-13	88.2	n/a	8/19/2021	339	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-7	88.2	n/a	8/16/2021	98.1	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-8	88.2	n/a	8/18/2021	245	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-9	88.2	n/a	8/17/2021	207	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-10	632	n/a	8/17/2021	496	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-11	632	n/a	8/18/2021	566	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-12	632	n/a	8/18/2021	600	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-13	632	n/a	8/19/2021	726	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-7	632	n/a	8/16/2021	407	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-8	632	n/a	8/18/2021	620	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-9	632	n/a	8/17/2021	704	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2

Appendix III Trend Test Summary - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/20/2021, 5:19 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-2 (bg)	0.002396	83	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-13	-0.2963	-79	-63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-7	0.04766	92	68	Yes	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-9	0.1232	71	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	2.813	71	68	Yes	18	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-44D (bg)	13.69	15	14	Yes	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-12	-24.65	-96	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-8	-9.055	-70	-68	Yes	18	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-9	-13	-86	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.201	66	63	Yes	17	0	n/a	n/a	0.01	NP

Appendix III Trend Test Summary - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/20/2021, 5:19 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-1 (bg)	0	-1	-68	No	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-2 (bg)	0.002396	83	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-3 (bg)	0	0	68	No	18	16.67	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-43D (bg)	-0.02108	-9	-14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-44D (bg)	0.3042	8	14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-10	0.02235	18	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-11	-0.2373	-50	-63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-12	-0.1865	-56	-63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-13	-0.2963	-79	-63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-7	0.04766	92	68	Yes	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-8	0.1123	34	68	No	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-9	0.1232	71	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-1 (bg)	3.476	57	68	No	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-2 (bg)	0.3671	20	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	2.813	71	68	Yes	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-43D (bg)	-2.444	-1	-14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-44D (bg)	-5.272	-5	-14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-10	-3.3	-30	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-12	-8.499	-58	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-13	11.16	17	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-8	-2.839	-31	-68	No	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-9	0.7439	23	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-1 (bg)	0.9675	48	68	No	18	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-2 (bg)	-0.2131	-62	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-3 (bg)	-0.1313	-57	-68	No	18	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-43D (bg)	-0.6657	-2	-14	No	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-44D (bg)	13.69	15	14	Yes	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-12	-24.65	-96	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-8	-9.055	-70	-68	Yes	18	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-9	-13	-86	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-1 (bg)	2.869	46	68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.201	66	63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-3 (bg)	1.327	60	68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-43D (bg)	-12.17	-13	-14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-44D (bg)	4.171	3	14	No	6	16.67	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-10	-5.889	-41	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-11	-14.3	-22	-63	No	17	5.882	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-12	-24.63	-62	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-13	27.63	14	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-7	0	4	68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-8	-9.402	-20	-68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-9	-5.158	-55	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	5.962	23	68	No	18	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-2 (bg)	-2.657	-23	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-3 (bg)	0	-2	-68	No	18	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-43D (bg)	-5.84	-3	-14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-44D (bg)	83.43	9	14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-13	9.753	10	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-9	-49.17	-42	-63	No	17	0	n/a	n/a	0.01	NP

Upper Tolerance Limits Summary Table

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/21/2021, 3:36 PM

Constituent	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	0.003	n/a	n/a	n/a	n/a	68	77.94	n/a	0.03056	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	n/a	n/a	n/a	74	67.57	n/a	0.02247	NP Inter(NDs)
Barium (mg/L)	0.46	n/a	n/a	n/a	n/a	74	0	n/a	0.02247	NP Inter(normality)
Beryllium (mg/L)	0.0005	n/a	n/a	n/a	n/a	68	77.94	n/a	0.03056	NP Inter(NDs)
Cadmium (mg/L)	0.0005	n/a	n/a	n/a	n/a	68	86.76	n/a	0.03056	NP Inter(NDs)
Chromium (mg/L)	0.0079	n/a	n/a	n/a	n/a	68	80.88	n/a	0.03056	NP Inter(NDs)
Cobalt (mg/L)	0.038	n/a	n/a	n/a	n/a	68	72.06	n/a	0.03056	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	4.36	n/a	n/a	n/a	n/a	74	0	n/a	0.02247	NP Inter(normality)
Fluoride (mg/L)	0.87	n/a	n/a	n/a	n/a	79	31.65	n/a	0.01738	NP Inter(normality)
Lead (mg/L)	0.001	n/a	n/a	n/a	n/a	65	61.54	n/a	0.03565	NP Inter(NDs)
Lithium (mg/L)	0.034	n/a	n/a	n/a	n/a	74	21.62	n/a	0.02247	NP Inter(normality)
Mercury (mg/L)	0.0005	n/a	n/a	n/a	n/a	46	95.65	n/a	0.09447	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	n/a	n/a	76	81.58	n/a	0.02028	NP Inter(NDs)
Selenium (mg/L)	0.005	n/a	n/a	n/a	n/a	74	98.65	n/a	0.02247	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	n/a	n/a	74	98.65	n/a	0.02247	NP Inter(NDs)

PLANT HAMMOND AP-1 GWPS (State)				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	State GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.46	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0079	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.87	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.001
Lithium, Total (mg/L)	n/a	0.04	0.034	0.034
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.01
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**Grey cell indicates background is higher than MCL or CCR-Rule*

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

PLANT HAMMOND AP-1 GWPS (Federal)				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	Federal GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.46	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0079	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.87	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.015
Lithium, Total (mg/L)	n/a	0.04	0.034	0.04
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**Grey cell indicates background is higher than MCL or CCR-Rule*

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

State Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 11/11/2021, 3:33 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	HGWC-13	0.4267	0.3553	0.01	Yes	20	0.391	0.06286	0	None	No	0.01	Param.
Lithium (mg/L)	MW-25D	0.05094	0.0455	0.034	Yes	9	0.04822	0.002819	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-11	0.02626	0.01574	0.01	Yes	20	0.021	0.009269	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-12	0.04956	0.04565	0.01	Yes	20	0.04761	0.003445	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-13	0.03572	0.03021	0.01	Yes	20	0.03297	0.004847	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-7	0.0429	0.03482	0.01	Yes	21	0.03886	0.007318	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-8	0.4921	0.4518	0.01	Yes	21	0.472	0.03653	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-9	0.033	0.0236	0.01	Yes	20	0.05018	0.1006	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	MW-19	0.05804	0.03307	0.01	Yes	9	0.04556	0.01293	0	None	No	0.01	Param.

State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 11/11/2021, 3:33 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-10	0.003	0.00065	0.006	No	18	0.002869	0.0005539	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-11	0.003	0.00038	0.006	No	18	0.002854	0.0006175	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-13	0.003	0.00036	0.006	No	18	0.001985	0.001312	61.11	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-7	0.003	0.0017	0.006	No	18	0.00278	0.0006815	88.89	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-8	0.003	0.00064	0.006	No	18	0.002869	0.0005563	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-9	0.003	0.00043	0.006	No	18	0.002565	0.001001	83.33	None	No	0.01	NP (NDs)
Antimony (mg/L)	MW-24D	0.003	0.0017	0.006	No	9	0.002856	0.0004333	88.89	None	No	0.002	NP (NDs)
Antimony (mg/L)	MW-26D	0.003	0.0013	0.006	No	9	0.0027	0.0006205	77.78	None	No	0.002	NP (NDs)
Antimony (mg/L)	MW-27D	0.003	0.00016	0.006	No	9	0.001202	0.00135	33.33	None	No	0.002	NP (normality)
Antimony (mg/L)	MW-28D	0.003	0.0019	0.006	No	9	0.002878	0.0003667	88.89	None	No	0.002	NP (NDs)
Antimony (mg/L)	MW-29	0.003	0.00094	0.006	No	9	0.002771	0.0006867	88.89	None	No	0.002	NP (NDs)
Antimony (mg/L)	MW-6	0.003	0.0014	0.006	No	9	0.002822	0.0005333	88.89	None	No	0.002	NP (NDs)
Antimony (mg/L)	MW-7	0.003	0.00051	0.006	No	9	0.002197	0.001041	55.56	None	No	0.002	NP (NDs)
Arsenic (mg/L)	HGWC-11	0.005	0.0017	0.01	No	20	0.003352	0.001764	45	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-12	0.004509	0.003111	0.01	No	20	0.00381	0.00123	10	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-13	0.4267	0.3553	0.01	Yes	20	0.391	0.06286	0	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-7	0.005	0.0019	0.01	No	20	0.004845	0.0006932	95	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-9	0.005	0.0008	0.01	No	20	0.004346	0.001599	85	None	No	0.01	NP (NDs)
Arsenic (mg/L)	MW-19	0.005	0.00045	0.01	No	9	0.004494	0.001517	88.89	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-20	0.005	0.00038	0.01	No	9	0.003736	0.00196	66.67	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-25D	0.005	0.00075	0.01	No	9	0.003306	0.002032	55.56	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-26D	0.005	0.0006	0.01	No	9	0.004044	0.001897	77.78	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-27D	0.005	0.0002	0.01	No	9	0.003543	0.002194	66.67	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-28D	0.005	0.0011	0.01	No	9	0.004567	0.0013	88.89	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-29	0.005	0.00037	0.01	No	9	0.004486	0.001543	88.89	None	No	0.002	NP (NDs)
Barium (mg/L)	HGWC-10	0.08761	0.06522	2	No	20	0.07642	0.01972	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-11	0.05264	0.032	2	No	20	0.04356	0.02019	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	HGWC-12	0.127	0.084	2	No	20	0.102	0.02089	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-13	0.09105	0.06791	2	No	20	0.07948	0.02038	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-7	0.07501	0.06859	2	No	20	0.0718	0.005661	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-8	0.07573	0.06317	2	No	20	0.06945	0.01106	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-9	0.1216	0.1056	2	No	20	0.1136	0.01407	0	None	No	0.01	Param.
Barium (mg/L)	MW-19	0.06604	0.0484	2	No	9	0.05722	0.009135	0	None	No	0.01	Param.
Barium (mg/L)	MW-20	0.09679	0.08499	2	No	9	0.09089	0.006112	0	None	No	0.01	Param.
Barium (mg/L)	MW-24D	0.12	0.043	2	No	9	0.06344	0.02374	0	None	No	0.002	NP (normality)
Barium (mg/L)	MW-25D	0.5115	0.3929	2	No	9	0.4522	0.0614	0	None	No	0.01	Param.
Barium (mg/L)	MW-26D	0.135	0.08209	2	No	9	0.1086	0.02741	0	None	No	0.01	Param.
Barium (mg/L)	MW-27D	1.5	0.95	2	No	9	1.089	0.1746	0	None	No	0.002	NP (normality)
Barium (mg/L)	MW-28D	0.7012	0.2255	2	No	9	0.4633	0.2464	0	None	No	0.01	Param.
Barium (mg/L)	MW-29	0.08543	0.07568	2	No	9	0.08056	0.005053	0	None	No	0.01	Param.
Barium (mg/L)	MW-5	0.05145	0.04411	2	No	9	0.04778	0.003801	0	None	No	0.01	Param.
Barium (mg/L)	MW-6	0.09297	0.08147	2	No	9	0.08722	0.005954	0	None	No	0.01	Param.
Barium (mg/L)	MW-7	0.06362	0.04816	2	No	9	0.05589	0.008007	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-11	0.0005	0.0001	0.004	No	18	0.0003498	0.0001948	61.11	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-13	0.0005	0.00093	0.004	No	18	0.0003186	0.000209	55.56	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-7	0.0005	0.00019	0.004	No	18	0.000436	0.0001489	83.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-8	0.0005	0.000087	0.004	No	18	0.0003839	0.0001927	72.22	None	No	0.01	NP (NDs)
Beryllium (mg/L)	MW-19	0.0005	0.000058	0.004	No	9	0.0004509	0.0001473	88.89	None	No	0.002	NP (NDs)
Beryllium (mg/L)	MW-28D	0.0005	0.000048	0.004	No	9	0.0003602	0.0002112	66.67	None	No	0.002	NP (NDs)
Beryllium (mg/L)	MW-7	0.0005	0.000051	0.004	No	9	0.0004501	0.0001497	88.89	None	No	0.002	NP (NDs)
Cadmium (mg/L)	HGWC-10	0.0005	0.0001	0.005	No	18	0.0003508	0.0001937	61.11	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-11	0.0005	0.0001	0.005	No	18	0.0004331	0.0001539	83.33	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-12	0.0005	0.0003	0.005	No	18	0.00043	0.0001398	77.78	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-7	0.0005	0.0002	0.005	No	18	0.0004278	0.0001406	77.78	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-8	0.00032	0.00017	0.005	No	18	0.0003078	0.0003607	5.556	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-9	0.0005	0.0002	0.005	No	18	0.0004372	0.0001463	83.33	None	No	0.01	NP (NDs)
Cadmium (mg/L)	MW-19	0.0002432	0.0001534	0.005	No	9	0.0002656	0.00014	22.22	Kaplan-Meier	x^(1/3)	0.01	Param.
Chromium (mg/L)	HGWC-10	0.02	0.005	0.1	No	18	0.005833	0.003536	94.44	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-11	0.005	0.00061	0.1	No	18	0.004495	0.001471	88.89	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-12	0.005	0.0025	0.1	No	18	0.004378	0.001479	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-13	0.005	0.00059	0.1	No	18	0.004253	0.00172	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-7	0.071	0.0016	0.1	No	18	0.007624	0.01591	66.67	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-8	0.005	0.0015	0.1	No	18	0.004084	0.001772	77.78	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-9	0.005	0.00067	0.1	No	18	0.004511	0.001425	88.89	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-19	0.005	0.00047	0.1	No	9	0.002813	0.002138	44.44	None	No	0.002	NP (normality)
Chromium (mg/L)	MW-20	0.005	0.00051	0.1	No	9	0.003544	0.002184	66.67	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-24D	0.005	0.00042	0.1	No	9	0.004124	0.001767	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-25D	0.005	0.00061	0.1	No	9	0.004512	0.001463	88.89	None	No	0.002	NP (NDs)

State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 11/11/2021, 3:33 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chromium (mg/L)	MW-26D	0.005	0.00076	0.1	No	9	0.003007	0.001978	44.44	None	No	0.002	NP (normality)
Chromium (mg/L)	MW-27D	0.005	0.0007	0.1	No	9	0.004058	0.00187	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-28D	0.005	0.00078	0.1	No	9	0.002949	0.00203	44.44	None	No	0.002	NP (normality)
Chromium (mg/L)	MW-29	0.005	0.001	0.1	No	9	0.004556	0.001333	88.89	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-5	0.004351	0.00216	0.1	No	9	0.003256	0.001135	0	None	No	0.01	Param.
Chromium (mg/L)	MW-6	0.005	0.00044	0.1	No	9	0.004003	0.001978	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-7	0.005	0.0013	0.1	No	9	0.002467	0.001469	22.22	None	No	0.002	NP (normality)
Cobalt (mg/L)	HGWC-10	0.005	0.0007	0.038	No	18	0.003589	0.002058	66.67	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-11	0.005	0.00098	0.038	No	18	0.002787	0.001751	33.33	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-12	0.0018	0.0012	0.038	No	18	0.001833	0.001186	11.11	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-13	0.004154	0.002647	0.038	No	18	0.003401	0.001245	5.556	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-7	0.0026	0.00065	0.038	No	18	0.001576	0.001654	16.67	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-8	0.0023	0.0019	0.038	No	18	0.002193	0.0007395	5.556	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-9	0.0011	0.00053	0.038	No	18	0.001194	0.001428	11.11	None	No	0.01	NP (normality)
Cobalt (mg/L)	MW-19	0.0435	0.03028	0.038	No	9	0.03689	0.006846	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-20	0.005	0.0011	0.038	No	9	0.004567	0.0013	88.89	None	No	0.002	NP (NDs)
Cobalt (mg/L)	MW-24D	0.005	0.00025	0.038	No	9	0.003546	0.002192	66.67	None	No	0.002	NP (NDs)
Cobalt (mg/L)	MW-26D	0.005	0.0003	0.038	No	9	0.002463	0.002407	44.44	None	No	0.002	NP (normality)
Cobalt (mg/L)	MW-27D	0.005	0.000091	0.038	No	9	0.003438	0.002345	66.67	None	No	0.002	NP (NDs)
Cobalt (mg/L)	MW-28D	0.005	0.00093	0.038	No	9	0.004548	0.001357	88.89	None	No	0.002	NP (NDs)
Cobalt (mg/L)	MW-29	0.001333	0.0006621	0.038	No	9	0.0009978	0.0003477	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-6	0.005	0.00036	0.038	No	9	0.001524	0.001978	22.22	None	No	0.002	NP (normality)
Combined Radium 226 + 228 (pCi/L)	HGWC-10	1.111	0.5962	5	No	20	0.8535	0.453	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-11	1.209	0.6749	5	No	20	0.942	0.4703	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-12	1.089	0.5679	5	No	20	0.8287	0.4592	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-13	1.037	0.6055	5	No	20	0.821	0.3795	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-7	0.9458	0.4368	5	No	20	0.7386	0.4986	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-8	0.9917	0.6954	5	No	20	0.8436	0.2609	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-9	0.9483	0.5538	5	No	20	0.7511	0.3474	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-19	1.114	0.4725	5	No	9	0.793	0.332	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-20	1.115	0.31	5	No	9	0.7126	0.417	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-24D	0.7621	0.1304	5	No	9	0.4432	0.3823	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-25D	1.247	0.7658	5	No	9	1.006	0.2491	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-26D	1.165	0.1241	5	No	9	0.6445	0.539	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-27D	1.826	0.7882	5	No	9	1.307	0.5374	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-28D	1.367	0.4851	5	No	9	0.9259	0.4566	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-29	1.06	0.2667	5	No	9	0.6633	0.4108	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-5	1.072	0.4887	5	No	9	0.7803	0.3021	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-6	2.07	0.198	5	No	9	0.8311	0.5053	0	None	No	0.002	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-7	1.317	0.5092	5	No	9	0.9131	0.4184	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-10	0.2118	0.08062	4	No	21	0.1793	0.1403	19.05	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-11	0.4436	0.2643	4	No	21	0.354	0.1625	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-12	0.394	0.1856	4	No	21	0.3206	0.2485	4.762	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	HGWC-13	0.7128	0.5033	4	No	21	0.608	0.1899	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-7	0.17	0.084	4	No	22	0.1485	0.1138	9.091	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-8	0.6378	0.4818	4	No	22	0.5745	0.1739	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	HGWC-9	0.2549	0.0956	4	No	21	0.1956	0.1598	9.524	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-19	0.3219	0.1032	4	No	9	0.2129	0.1399	0	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	MW-20	0.1	0.072	4	No	9	0.09689	0.009333	88.89	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-24D	0.1031	0.04171	4	No	9	0.09078	0.03986	44.44	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-25D	2.2	1.4	4	No	9	1.633	0.2291	0	None	No	0.002	NP (normality)
Fluoride (mg/L)	MW-26D	0.1112	0.04811	4	No	9	0.08056	0.04423	11.11	None	ln(x)	0.01	Param.
Fluoride (mg/L)	MW-27D	0.42	0.22	4	No	9	0.2667	0.05979	0	None	No	0.002	NP (normality)
Fluoride (mg/L)	MW-28D	0.2555	0.1445	4	No	9	0.2	0.05745	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-29	0.18	0.045	4	No	9	0.09944	0.03592	66.67	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-5	0.09166	0.05606	4	No	9	0.07967	0.02074	22.22	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-6	0.19	0.055	4	No	9	0.1073	0.05586	22.22	None	No	0.002	NP (normality)
Fluoride (mg/L)	MW-7	0.17	0.069	4	No	9	0.1043	0.02667	77.78	None	No	0.002	NP (NDs)
Lead (mg/L)	HGWC-10	0.001	0.00005	0.001	No	16	0.0009406	0.0002375	93.75	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-11	0.001	0.000099	0.001	No	16	0.0006912	0.0004165	62.5	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-12	0.001	0.000089	0.001	No	16	0.0007336	0.0004162	68.75	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-13	0.001	0.00014	0.001	No	16	0.0006744	0.0004348	62.5	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-7	0.001	0.00009	0.001	No	16	0.0006246	0.0004545	43.75	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-8	0.001	0.00013	0.001	No	16	0.0007829	0.000389	75	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-9	0.001	0.00014	0.001	No	16	0.0005821	0.0004341	50	None	No	0.01	NP (normality)
Lead (mg/L)	MW-19	0.001	0.000038	0.001	No	7	0.000472	0.0004944	42.86	None	No	0.008	NP (normality)
Lead (mg/L)	MW-20	0.0001863	0.00004985	0.001	No	7	0.0004913	0.0004775	42.86	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	MW-24D	0.0001552	0.00003672	0.001	No	7	0.0003509	0.0004465	28.57	Kaplan-Meier	ln(x)	0.01	Param.

State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 11/11/2021, 3:33 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lead (mg/L)	MW-26D	0.001	0.00008	0.001	No	7	0.00074	0.0004441	71.43	Kaplan-Meier	No	0.008	NP (NDs)
Lead (mg/L)	MW-27D	0.001	0.00013	0.001	No	7	0.0007943	0.0003618	71.43	Kaplan-Meier	No	0.008	NP (NDs)
Lead (mg/L)	MW-28D	0.0007798	0.00008112	0.001	No	7	0.0005746	0.0004152	28.57	Kaplan-Meier	sqrt(x)	0.01	Param.
Lead (mg/L)	MW-29	0.001	0.000052	0.001	No	7	0.0006074	0.0004899	57.14	Kaplan-Meier	No	0.008	NP (NDs)
Lead (mg/L)	MW-5	0.001	0.000047	0.001	No	7	0.0008639	0.0003602	85.71	Kaplan-Meier	No	0.008	NP (NDs)
Lead (mg/L)	MW-6	0.0002356	0.00004291	0.001	No	7	0.0005014	0.0004713	42.86	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	MW-7	0.001	0.000062	0.001	No	7	0.000866	0.0003545	85.71	Kaplan-Meier	No	0.008	NP (NDs)
Lithium (mg/L)	HGWC-12	0.01082	0.008191	0.034	No	20	0.009505	0.002314	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-13	0.03785	0.03067	0.034	No	20	0.03426	0.006315	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-7	0.003	0.0021	0.034	No	20	0.00316	0.00283	5	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-8	0.0029	0.0025	0.034	No	20	0.00332	0.002763	5	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-9	0.0045	0.004	0.034	No	20	0.00474	0.002457	5	None	No	0.01	NP (normality)
Lithium (mg/L)	MW-19	0.01378	0.008886	0.034	No	9	0.01133	0.002535	0	None	No	0.01	Param.
Lithium (mg/L)	MW-20	0.015	0.00082	0.034	No	9	0.004237	0.006108	22.22	None	No	0.002	NP (normality)
Lithium (mg/L)	MW-24D	0.002888	0.002557	0.034	No	9	0.002722	0.0001716	0	None	No	0.01	Param.
Lithium (mg/L)	MW-25D	0.05094	0.0455	0.034	Yes	9	0.04822	0.002819	0	None	No	0.01	Param.
Lithium (mg/L)	MW-26D	0.03	0.0032	0.034	No	9	0.006556	0.008797	0	None	No	0.002	NP (normality)
Lithium (mg/L)	MW-27D	0.008967	0.005855	0.034	No	9	0.007411	0.001611	0	None	No	0.01	Param.
Lithium (mg/L)	MW-28D	0.01335	0.005939	0.034	No	9	0.009644	0.003838	0	None	No	0.01	Param.
Lithium (mg/L)	MW-29	0.002401	0.00211	0.034	No	9	0.002256	0.0001509	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-10	0.005	0.0014	0.01	No	20	0.00354	0.001849	60	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	HGWC-11	0.02626	0.01574	0.01	Yes	20	0.021	0.009269	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-12	0.04956	0.04565	0.01	Yes	20	0.04761	0.003445	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-13	0.03572	0.03021	0.01	Yes	20	0.03297	0.004847	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-7	0.0429	0.03482	0.01	Yes	21	0.03886	0.007318	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-8	0.4921	0.4518	0.01	Yes	21	0.472	0.03653	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-9	0.033	0.0236	0.01	Yes	20	0.05018	0.1006	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	MW-19	0.05804	0.03307	0.01	Yes	9	0.04556	0.01293	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-24D	0.005	0.00027	0.01	No	9	0.002677	0.002215	44.44	None	No	0.002	NP (normality)
Molybdenum (mg/L)	MW-25D	0.005	0.00094	0.01	No	9	0.004238	0.001545	77.78	None	No	0.002	NP (NDs)
Molybdenum (mg/L)	MW-26D	0.02137	0.008627	0.01	No	10	0.015	0.007143	10	None	No	0.01	Param.
Molybdenum (mg/L)	MW-27D	0.004551	0.001204	0.01	No	9	0.002878	0.001733	11.11	None	No	0.01	Param.
Molybdenum (mg/L)	MW-28D	0.02271	0.009909	0.01	No	9	0.01631	0.006631	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-29	0.003271	0.002263	0.01	No	9	0.002767	0.000522	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-6	0.002621	0.002179	0.01	No	9	0.0024	0.0002291	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-7	0.005	0.0015	0.01	No	9	0.003422	0.001629	44.44	None	No	0.002	NP (normality)
Selenium (mg/L)	HGWC-10	0.005	0.0041	0.05	No	20	0.004385	0.001184	75	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-11	0.015	0.006546	0.05	No	20	0.01078	0.007448	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-12	0.005	0.0011	0.05	No	20	0.004805	0.0008721	95	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-13	0.005	0.0016	0.05	No	20	0.004589	0.001286	90	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-8	0.005	0.0024	0.05	No	20	0.00487	0.0005814	95	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-9	0.005	0.0037	0.05	No	20	0.004935	0.0002907	95	None	No	0.01	NP (NDs)
Selenium (mg/L)	MW-19	0.00518	0.001815	0.05	No	9	0.004	0.00181	22.22	Kaplan-Meier	No	0.01	Param.
Selenium (mg/L)	MW-27D	0.005	0.00012	0.05	No	9	0.004458	0.001627	88.89	Kaplan-Meier	No	0.002	NP (NDs)
Selenium (mg/L)	MW-5	0.003741	0.002193	0.05	No	9	0.002967	0.0008016	0	None	No	0.01	Param.
Selenium (mg/L)	MW-7	0.005	0.0014	0.05	No	9	0.003233	0.001716	44.44	None	No	0.002	NP (normality)
Thallium (mg/L)	HGWC-11	0.001	0.00008	0.002	No	20	0.000908	0.0002832	90	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-12	0.001	0.0001	0.002	No	20	0.0007312	0.000422	70	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-13	0.0004208	0.000328	0.002	No	20	0.0003744	0.00008178	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-8	0.001	0.00009	0.002	No	20	0.0007244	0.000432	70	None	No	0.01	NP (NDs)
Thallium (mg/L)	MW-19	0.001	0.00019	0.002	No	9	0.0004189	0.0003308	22.22	None	No	0.002	NP (normality)
Thallium (mg/L)	MW-28D	0.001	0.000092	0.002	No	9	0.0008991	0.0003027	88.89	None	No	0.002	NP (NDs)
Thallium (mg/L)	MW-29	0.001	0.000064	0.002	No	9	0.000896	0.000312	88.89	None	No	0.002	NP (NDs)
Thallium (mg/L)	MW-6	0.001	0.000082	0.002	No	9	0.000898	0.000306	88.89	None	No	0.002	NP (NDs)

Federal Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/25/2021, 6:49 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	HGWC-13	0.4267	0.3553	0.01	Yes	20	0.06286	0	No	0.01	Param.
Lithium (mg/L)	MW-25D	0.05094	0.0455	0.04	Yes	9	0.002819	0	No	0.01	Param.
Molybdenum (mg/L)	HGWC-8	0.4921	0.4518	0.1	Yes	21	0.03653	0	No	0.01	Param.

Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/25/2021, 6:49 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Antimony (mg/L)	HGWC-10	0.003	0.00065	0.006	No	18	0.0005539	94.44	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-11	0.003	0.00038	0.006	No	18	0.0006175	94.44	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-13	0.003	0.00036	0.006	No	18	0.001312	61.11	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-7	0.003	0.0017	0.006	No	18	0.0006815	88.89	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-8	0.003	0.00064	0.006	No	18	0.0005563	94.44	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-9	0.003	0.00043	0.006	No	18	0.001001	83.33	No	0.01	NP (NDs)
Antimony (mg/L)	MW-24D	0.003	0.0017	0.006	No	9	0.0004333	88.89	No	0.002	NP (NDs)
Antimony (mg/L)	MW-26D	0.003	0.0013	0.006	No	9	0.0006205	77.78	No	0.002	NP (NDs)
Antimony (mg/L)	MW-27D	0.003	0.00016	0.006	No	9	0.00135	33.33	No	0.002	NP (normality)
Antimony (mg/L)	MW-28D	0.003	0.0019	0.006	No	9	0.0003667	88.89	No	0.002	NP (NDs)
Antimony (mg/L)	MW-29	0.003	0.00094	0.006	No	9	0.0006867	88.89	No	0.002	NP (NDs)
Antimony (mg/L)	MW-6	0.003	0.0014	0.006	No	9	0.0005333	88.89	No	0.002	NP (NDs)
Antimony (mg/L)	MW-7	0.003	0.00051	0.006	No	9	0.001041	55.56	No	0.002	NP (NDs)
Arsenic (mg/L)	HGWC-11	0.005	0.0017	0.01	No	20	0.001764	45	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-12	0.004509	0.003111	0.01	No	20	0.00123	10	No	0.01	Param.
Arsenic (mg/L)	HGWC-13	0.4267	0.3553	0.01	Yes	20	0.06286	0	No	0.01	Param.
Arsenic (mg/L)	HGWC-7	0.005	0.0019	0.01	No	20	0.0006932	95	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-9	0.005	0.0008	0.01	No	20	0.001599	85	No	0.01	NP (NDs)
Arsenic (mg/L)	MW-19	0.005	0.00045	0.01	No	9	0.001517	88.89	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-20	0.005	0.00038	0.01	No	9	0.00196	66.67	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-25D	0.005	0.00075	0.01	No	9	0.002032	55.56	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-26D	0.005	0.0006	0.01	No	9	0.001897	77.78	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-27D	0.005	0.0002	0.01	No	9	0.002194	66.67	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-28D	0.005	0.0011	0.01	No	9	0.0013	88.89	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-29	0.005	0.00037	0.01	No	9	0.001543	88.89	No	0.002	NP (NDs)
Barium (mg/L)	HGWC-10	0.08761	0.06522	2	No	20	0.01972	0	No	0.01	Param.
Barium (mg/L)	HGWC-11	0.05264	0.032	2	No	20	0.02019	0	sqrt(x)	0.01	Param.
Barium (mg/L)	HGWC-12	0.127	0.084	2	No	20	0.02089	0	No	0.01	NP (normality)
Barium (mg/L)	HGWC-13	0.09105	0.06791	2	No	20	0.02038	0	No	0.01	Param.
Barium (mg/L)	HGWC-7	0.07501	0.06859	2	No	20	0.005661	0	No	0.01	Param.
Barium (mg/L)	HGWC-8	0.07573	0.06317	2	No	20	0.01106	0	No	0.01	Param.
Barium (mg/L)	HGWC-9	0.1216	0.1056	2	No	20	0.01407	0	No	0.01	Param.
Barium (mg/L)	MW-19	0.06604	0.0484	2	No	9	0.009135	0	No	0.01	Param.
Barium (mg/L)	MW-20	0.09679	0.08499	2	No	9	0.006112	0	No	0.01	Param.
Barium (mg/L)	MW-24D	0.12	0.043	2	No	9	0.02374	0	No	0.002	NP (normality)
Barium (mg/L)	MW-25D	0.5115	0.3929	2	No	9	0.0614	0	No	0.01	Param.
Barium (mg/L)	MW-26D	0.135	0.08209	2	No	9	0.02741	0	No	0.01	Param.
Barium (mg/L)	MW-27D	1.5	0.95	2	No	9	0.1746	0	No	0.002	NP (normality)
Barium (mg/L)	MW-28D	0.7012	0.2255	2	No	9	0.2464	0	No	0.01	Param.
Barium (mg/L)	MW-29	0.08543	0.07568	2	No	9	0.005053	0	No	0.01	Param.
Barium (mg/L)	MW-5	0.05145	0.04411	2	No	9	0.003801	0	No	0.01	Param.
Barium (mg/L)	MW-6	0.09297	0.08147	2	No	9	0.005954	0	No	0.01	Param.
Barium (mg/L)	MW-7	0.06362	0.04816	2	No	9	0.008007	0	No	0.01	Param.
Beryllium (mg/L)	HGWC-11	0.0005	0.0001	0.004	No	18	0.0001948	61.11	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-13	0.0005	0.000093	0.004	No	18	0.000209	55.56	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-7	0.0005	0.00019	0.004	No	18	0.0001489	83.33	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-8	0.0005	0.000087	0.004	No	18	0.0001927	72.22	No	0.01	NP (NDs)
Beryllium (mg/L)	MW-19	0.0005	0.000058	0.004	No	9	0.0001473	88.89	No	0.002	NP (NDs)
Beryllium (mg/L)	MW-28D	0.0005	0.000048	0.004	No	9	0.0002112	66.67	No	0.002	NP (NDs)
Beryllium (mg/L)	MW-7	0.0005	0.000051	0.004	No	9	0.0001497	88.89	No	0.002	NP (NDs)
Cadmium (mg/L)	HGWC-10	0.0005	0.0001	0.005	No	18	0.0001937	61.11	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-11	0.0005	0.0001	0.005	No	18	0.0001539	83.33	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-12	0.0005	0.0003	0.005	No	18	0.0001398	77.78	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-7	0.0005	0.0002	0.005	No	18	0.0001406	77.78	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-8	0.00032	0.00017	0.005	No	18	0.0003607	5.556	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-9	0.0005	0.0002	0.005	No	18	0.0001463	83.33	No	0.01	NP (NDs)
Cadmium (mg/L)	MW-19	0.0002432	0.0001534	0.005	No	9	0.00014	22.22	x^(1/3)	0.01	Param.
Chromium (mg/L)	HGWC-10	0.02	0.005	0.1	No	18	0.003536	94.44	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-11	0.005	0.00061	0.1	No	18	0.001471	88.89	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-12	0.005	0.0025	0.1	No	18	0.001479	83.33	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-13	0.005	0.00059	0.1	No	18	0.00172	83.33	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-7	0.071	0.0016	0.1	No	18	0.01591	66.67	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-8	0.005	0.0015	0.1	No	18	0.001772	77.78	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-9	0.005	0.00067	0.1	No	18	0.001425	88.89	No	0.01	NP (NDs)
Chromium (mg/L)	MW-19	0.005	0.00047	0.1	No	9	0.002138	44.44	No	0.002	NP (normality)
Chromium (mg/L)	MW-20	0.005	0.00051	0.1	No	9	0.002184	66.67	No	0.002	NP (NDs)
Chromium (mg/L)	MW-24D	0.005	0.00042	0.1	No	9	0.001767	77.78	No	0.002	NP (NDs)
Chromium (mg/L)	MW-25D	0.005	0.00061	0.1	No	9	0.001463	88.89	No	0.002	NP (NDs)

Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/25/2021, 6:49 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Chromium (mg/L)	MW-26D	0.005	0.00076	0.1	No	9	0.001978	44.44	No	0.002	NP (normality)
Chromium (mg/L)	MW-27D	0.005	0.0007	0.1	No	9	0.00187	77.78	No	0.002	NP (NDs)
Chromium (mg/L)	MW-28D	0.005	0.00078	0.1	No	9	0.00203	44.44	No	0.002	NP (normality)
Chromium (mg/L)	MW-29	0.005	0.001	0.1	No	9	0.001333	88.89	No	0.002	NP (NDs)
Chromium (mg/L)	MW-5	0.004351	0.00216	0.1	No	9	0.001135	0	No	0.01	Param.
Chromium (mg/L)	MW-6	0.005	0.00044	0.1	No	9	0.001978	77.78	No	0.002	NP (NDs)
Chromium (mg/L)	MW-7	0.005	0.0013	0.1	No	9	0.001469	22.22	No	0.002	NP (normality)
Cobalt (mg/L)	HGWC-10	0.005	0.0007	0.038	No	18	0.002058	66.67	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-11	0.005	0.00098	0.038	No	18	0.001751	33.33	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-12	0.0018	0.0012	0.038	No	18	0.001186	11.11	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-13	0.004154	0.002647	0.038	No	18	0.001245	5.556	No	0.01	Param.
Cobalt (mg/L)	HGWC-7	0.0026	0.00065	0.038	No	18	0.001654	16.67	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-8	0.0023	0.0019	0.038	No	18	0.0007395	5.556	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-9	0.0011	0.00053	0.038	No	18	0.001428	11.11	No	0.01	NP (normality)
Cobalt (mg/L)	MW-19	0.0435	0.03028	0.038	No	9	0.006846	0	No	0.01	Param.
Cobalt (mg/L)	MW-20	0.005	0.0011	0.038	No	9	0.0013	88.89	No	0.002	NP (NDs)
Cobalt (mg/L)	MW-24D	0.005	0.00025	0.038	No	9	0.002192	66.67	No	0.002	NP (NDs)
Cobalt (mg/L)	MW-26D	0.005	0.0003	0.038	No	9	0.002407	44.44	No	0.002	NP (normality)
Cobalt (mg/L)	MW-27D	0.005	0.000091	0.038	No	9	0.002345	66.67	No	0.002	NP (NDs)
Cobalt (mg/L)	MW-28D	0.005	0.00093	0.038	No	9	0.001357	88.89	No	0.002	NP (NDs)
Cobalt (mg/L)	MW-29	0.001333	0.0006621	0.038	No	9	0.0003477	0	No	0.01	Param.
Cobalt (mg/L)	MW-6	0.005	0.00036	0.038	No	9	0.001978	22.22	No	0.002	NP (normality)
Combined Radium 226 + 228 (pCi/L)	HGWC-10	1.111	0.5962	5	No	20	0.453	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-11	1.209	0.6749	5	No	20	0.4703	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-12	1.089	0.5679	5	No	20	0.4592	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-13	1.037	0.6055	5	No	20	0.3795	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-7	0.9458	0.4368	5	No	20	0.4986	0	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-8	0.9917	0.6954	5	No	20	0.2609	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-9	0.9483	0.5538	5	No	20	0.3474	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-19	1.114	0.4725	5	No	9	0.332	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-20	1.115	0.31	5	No	9	0.417	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-24D	0.7621	0.1304	5	No	9	0.3823	0	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-25D	1.247	0.7658	5	No	9	0.2491	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-26D	1.165	0.1241	5	No	9	0.539	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-27D	1.826	0.7882	5	No	9	0.5374	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-28D	1.367	0.4851	5	No	9	0.4566	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-29	1.06	0.2667	5	No	9	0.4108	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-5	1.072	0.4887	5	No	9	0.3021	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-6	2.07	0.198	5	No	9	0.5053	0	No	0.002	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-7	1.317	0.5092	5	No	9	0.4184	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-10	0.2118	0.08062	4	No	21	0.1403	19.05	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-11	0.4436	0.2643	4	No	21	0.1625	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-12	0.394	0.1856	4	No	21	0.2485	4.762	x^(1/3)	0.01	Param.
Fluoride (mg/L)	HGWC-13	0.7128	0.5033	4	No	21	0.1899	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-7	0.17	0.084	4	No	22	0.1138	9.091	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-8	0.6378	0.4818	4	No	22	0.1739	0	ln(x)	0.01	Param.
Fluoride (mg/L)	HGWC-9	0.2549	0.0956	4	No	21	0.1598	9.524	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-19	0.3219	0.1032	4	No	9	0.1399	0	x^(1/3)	0.01	Param.
Fluoride (mg/L)	MW-20	0.1	0.072	4	No	9	0.009333	88.89	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-24D	0.1031	0.04171	4	No	9	0.03986	44.44	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-25D	2.2	1.4	4	No	9	0.2291	0	No	0.002	NP (normality)
Fluoride (mg/L)	MW-26D	0.1112	0.04811	4	No	9	0.04423	11.11	ln(x)	0.01	Param.
Fluoride (mg/L)	MW-27D	0.42	0.22	4	No	9	0.05979	0	No	0.002	NP (normality)
Fluoride (mg/L)	MW-28D	0.2555	0.1445	4	No	9	0.05745	0	No	0.01	Param.
Fluoride (mg/L)	MW-29	0.18	0.045	4	No	9	0.03592	66.67	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-5	0.09166	0.05606	4	No	9	0.02074	22.22	No	0.01	Param.
Fluoride (mg/L)	MW-6	0.19	0.055	4	No	9	0.05586	22.22	No	0.002	NP (normality)
Fluoride (mg/L)	MW-7	0.17	0.069	4	No	9	0.02667	77.78	No	0.002	NP (NDs)
Lead (mg/L)	HGWC-10	0.001	0.00005	0.015	No	16	0.0002375	93.75	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-11	0.001	0.000099	0.015	No	16	0.0004165	62.5	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-12	0.001	0.000089	0.015	No	16	0.0004162	68.75	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-13	0.001	0.00014	0.015	No	16	0.0004348	62.5	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-7	0.001	0.00009	0.015	No	16	0.0004545	43.75	No	0.01	NP (normality)
Lead (mg/L)	HGWC-8	0.001	0.00013	0.015	No	16	0.000389	75	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-9	0.001	0.00014	0.015	No	16	0.0004341	50	No	0.01	NP (normality)
Lead (mg/L)	MW-19	0.001	0.000038	0.015	No	7	0.0004944	42.86	No	0.008	NP (normality)
Lead (mg/L)	MW-20	0.0001863	0.00004985	0.015	No	7	0.0004775	42.86	ln(x)	0.01	Param.
Lead (mg/L)	MW-24D	0.0001552	0.00003672	0.015	No	7	0.0004465	28.57	ln(x)	0.01	Param.

Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/25/2021, 6:49 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Lead (mg/L)	MW-26D	0.001	0.00008	0.015	No	7	0.0004441	71.43	No	0.008	NP (NDs)
Lead (mg/L)	MW-27D	0.001	0.00013	0.015	No	7	0.0003618	71.43	No	0.008	NP (NDs)
Lead (mg/L)	MW-28D	0.0007798	0.00008112	0.015	No	7	0.0004152	28.57	sqrt(x)	0.01	Param.
Lead (mg/L)	MW-29	0.001	0.000052	0.015	No	7	0.0004899	57.14	No	0.008	NP (NDs)
Lead (mg/L)	MW-5	0.001	0.000047	0.015	No	7	0.0003602	85.71	No	0.008	NP (NDs)
Lead (mg/L)	MW-6	0.0002356	0.00004291	0.015	No	7	0.0004713	42.86	ln(x)	0.01	Param.
Lead (mg/L)	MW-7	0.001	0.000062	0.015	No	7	0.0003545	85.71	No	0.008	NP (NDs)
Lithium (mg/L)	HGWC-12	0.01082	0.008191	0.04	No	20	0.002314	0	No	0.01	Param.
Lithium (mg/L)	HGWC-13	0.03785	0.03067	0.04	No	20	0.006315	0	No	0.01	Param.
Lithium (mg/L)	HGWC-7	0.003	0.0021	0.04	No	20	0.00283	5	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-8	0.0029	0.0025	0.04	No	20	0.002763	5	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-9	0.0045	0.004	0.04	No	20	0.002457	5	No	0.01	NP (normality)
Lithium (mg/L)	MW-19	0.01378	0.008886	0.04	No	9	0.002535	0	No	0.01	Param.
Lithium (mg/L)	MW-20	0.015	0.00082	0.04	No	9	0.006108	22.22	No	0.002	NP (normality)
Lithium (mg/L)	MW-24D	0.002888	0.002557	0.04	No	9	0.0001716	0	No	0.01	Param.
Lithium (mg/L)	MW-25D	0.05094	0.0455	0.04	Yes	9	0.002819	0	No	0.01	Param.
Lithium (mg/L)	MW-26D	0.03	0.0032	0.04	No	9	0.008797	0	No	0.002	NP (normality)
Lithium (mg/L)	MW-27D	0.008967	0.005855	0.04	No	9	0.001611	0	No	0.01	Param.
Lithium (mg/L)	MW-28D	0.01335	0.005939	0.04	No	9	0.003838	0	No	0.01	Param.
Lithium (mg/L)	MW-29	0.002401	0.00211	0.04	No	9	0.0001509	0	No	0.01	Param.
Molybdenum (mg/L)	HGWC-10	0.005	0.0014	0.1	No	20	0.001849	60	No	0.01	NP (NDs)
Molybdenum (mg/L)	HGWC-11	0.02626	0.01574	0.1	No	20	0.009269	0	No	0.01	Param.
Molybdenum (mg/L)	HGWC-12	0.04956	0.04565	0.1	No	20	0.003445	0	No	0.01	Param.
Molybdenum (mg/L)	HGWC-13	0.03572	0.03021	0.1	No	20	0.004847	0	No	0.01	Param.
Molybdenum (mg/L)	HGWC-7	0.0429	0.03482	0.1	No	21	0.007318	0	No	0.01	Param.
Molybdenum (mg/L)	HGWC-8	0.4921	0.4518	0.1	Yes	21	0.03653	0	No	0.01	Param.
Molybdenum (mg/L)	HGWC-9	0.033	0.0236	0.1	No	20	0.1006	0	No	0.01	NP (normality)
Molybdenum (mg/L)	MW-19	0.05804	0.03307	0.1	No	9	0.01293	0	No	0.01	Param.
Molybdenum (mg/L)	MW-24D	0.005	0.00027	0.1	No	9	0.002215	44.44	No	0.002	NP (normality)
Molybdenum (mg/L)	MW-25D	0.005	0.00094	0.1	No	9	0.001545	77.78	No	0.002	NP (NDs)
Molybdenum (mg/L)	MW-26D	0.02137	0.008627	0.1	No	10	0.007143	10	No	0.01	Param.
Molybdenum (mg/L)	MW-27D	0.004551	0.001204	0.1	No	9	0.001733	11.11	No	0.01	Param.
Molybdenum (mg/L)	MW-28D	0.02271	0.009909	0.1	No	9	0.006631	0	No	0.01	Param.
Molybdenum (mg/L)	MW-29	0.003271	0.002263	0.1	No	9	0.000522	0	No	0.01	Param.
Molybdenum (mg/L)	MW-6	0.002621	0.002179	0.1	No	9	0.0002291	0	No	0.01	Param.
Molybdenum (mg/L)	MW-7	0.005	0.0015	0.1	No	9	0.001629	44.44	No	0.002	NP (normality)
Selenium (mg/L)	HGWC-10	0.005	0.0041	0.05	No	20	0.001184	75	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-11	0.015	0.006546	0.05	No	20	0.007448	0	No	0.01	Param.
Selenium (mg/L)	HGWC-12	0.005	0.0011	0.05	No	20	0.0008721	95	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-13	0.005	0.0016	0.05	No	20	0.001286	90	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-8	0.005	0.0024	0.05	No	20	0.0005814	95	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-9	0.005	0.0037	0.05	No	20	0.0002907	95	No	0.01	NP (NDs)
Selenium (mg/L)	MW-19	0.00518	0.001815	0.05	No	9	0.00181	22.22	No	0.01	Param.
Selenium (mg/L)	MW-27D	0.005	0.00012	0.05	No	9	0.001627	88.89	No	0.002	NP (NDs)
Selenium (mg/L)	MW-5	0.003741	0.002193	0.05	No	9	0.0008016	0	No	0.01	Param.
Selenium (mg/L)	MW-7	0.005	0.0014	0.05	No	9	0.001716	44.44	No	0.002	NP (normality)
Thallium (mg/L)	HGWC-11	0.001	0.00008	0.002	No	20	0.0002832	90	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-12	0.001	0.0001	0.002	No	20	0.000422	70	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-13	0.0004208	0.000328	0.002	No	20	0.00008178	0	No	0.01	Param.
Thallium (mg/L)	HGWC-8	0.001	0.00009	0.002	No	20	0.000432	70	No	0.01	NP (NDs)
Thallium (mg/L)	MW-19	0.001	0.00019	0.002	No	9	0.0003308	22.22	No	0.002	NP (normality)
Thallium (mg/L)	MW-28D	0.001	0.000092	0.002	No	9	0.0003027	88.89	No	0.002	NP (NDs)
Thallium (mg/L)	MW-29	0.001	0.000064	0.002	No	9	0.000312	88.89	No	0.002	NP (NDs)
Thallium (mg/L)	MW-6	0.001	0.000082	0.002	No	9	0.000306	88.89	No	0.002	NP (NDs)

Appendix IV Trend Test Summary - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/25/2021, 7:17 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Lithium (mg/L)	HGWA-1 (bg)	-0.006059	-119	-81	Yes	20	45	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-2 (bg)	-0.0003434	-84	-81	Yes	20	30	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-7	0.00396	155	87	Yes	21	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-9	0.002522	128	81	Yes	20	0	n/a	n/a	0.01	NP

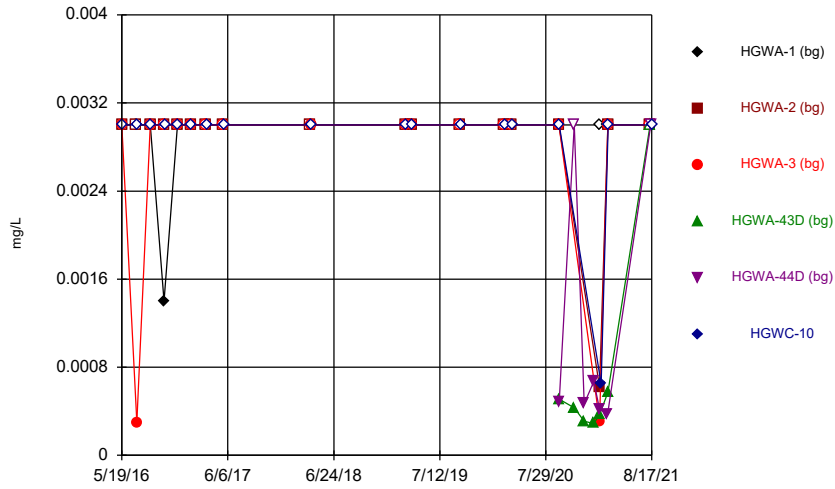
Appendix IV Trend Test Summary - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/25/2021, 7:17 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Arsenic (mg/L)	HGWA-1 (bg)	0	-1	-81	No	20	90	n/a	n/a	0.01	NP
Arsenic (mg/L)	HGWA-2 (bg)	0	20	81	No	20	60	n/a	n/a	0.01	NP
Arsenic (mg/L)	HGWA-3 (bg)	0	8	81	No	20	60	n/a	n/a	0.01	NP
Arsenic (mg/L)	HGWA-43D (bg)	-0.003883	-10	-18	No	7	28.57	n/a	n/a	0.01	NP
Arsenic (mg/L)	HGWA-44D (bg)	0	-2	-18	No	7	85.71	n/a	n/a	0.01	NP
Arsenic (mg/L)	HGWC-13	0.0173	61	81	No	20	0	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-1 (bg)	-0.006059	-119	-81	Yes	20	45	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-2 (bg)	-0.0003434	-84	-81	Yes	20	30	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-3 (bg)	0.00003978	21	81	No	20	5	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-43D (bg)	0.001273	11	18	No	7	0	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-44D (bg)	0.01521	13	18	No	7	0	n/a	n/a	0.01	NP
Lithium (mg/L)	MW-25D	-0.0008246	-11	-25	No	9	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-1 (bg)	0	0	87	No	21	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-2 (bg)	0	0	81	No	20	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-3 (bg)	0	0	87	No	21	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-43D (bg)	-0.001109	-4	-18	No	7	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-44D (bg)	0.003529	12	18	No	7	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-11	-0.001035	-19	-81	No	20	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-12	-0.0002265	-14	-81	No	20	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-13	-0.0002928	-12	-81	No	20	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-7	0.00396	155	87	Yes	21	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-8	-0.005012	-34	-87	No	21	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-9	0.002522	128	81	Yes	20	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	MW-19	-0.006345	-7	-25	No	9	0	n/a	n/a	0.01	NP

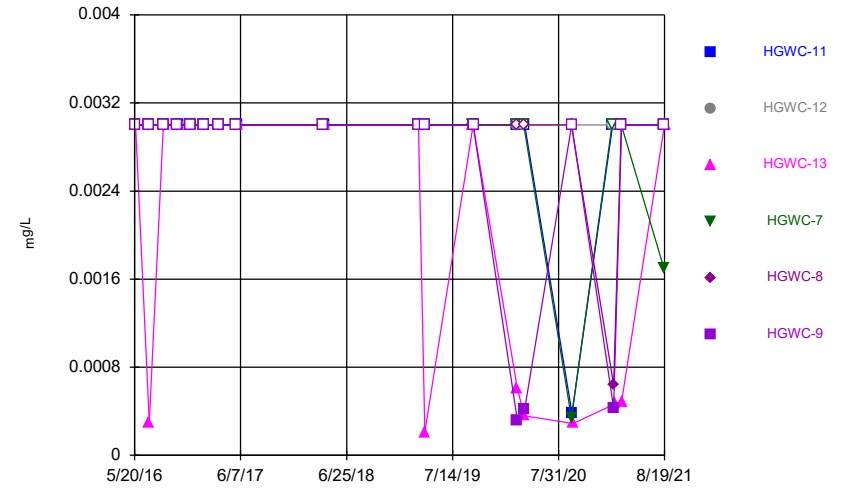
FIGURE A.

Time Series



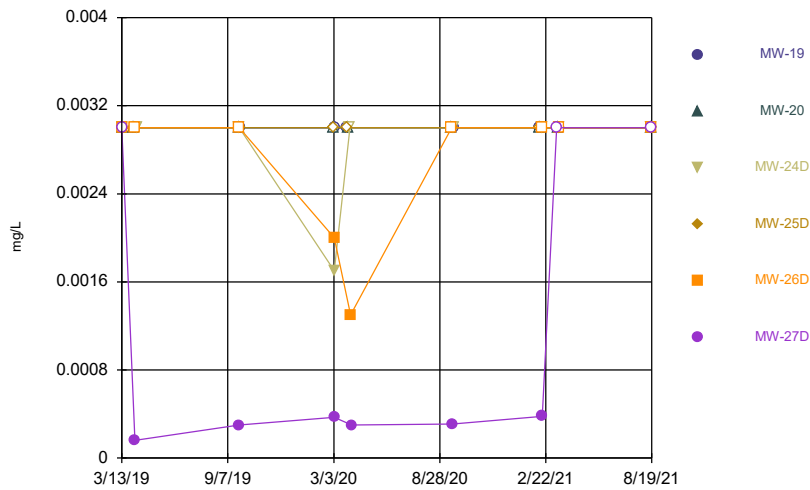
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Time Series



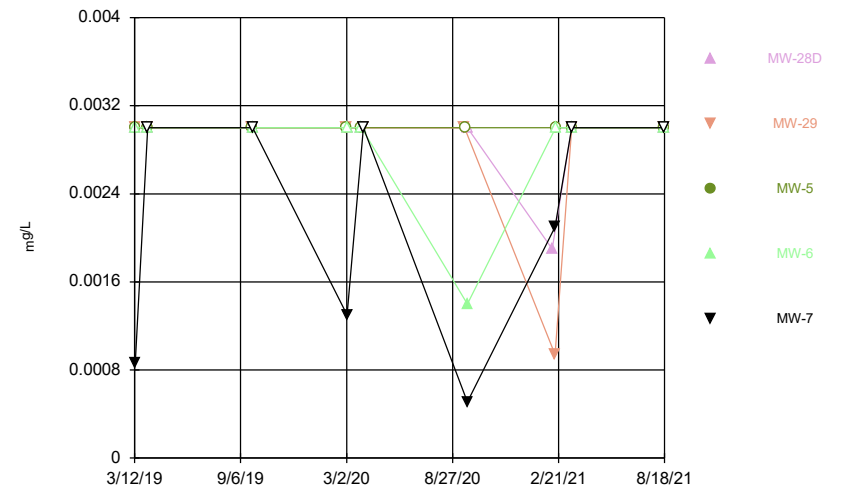
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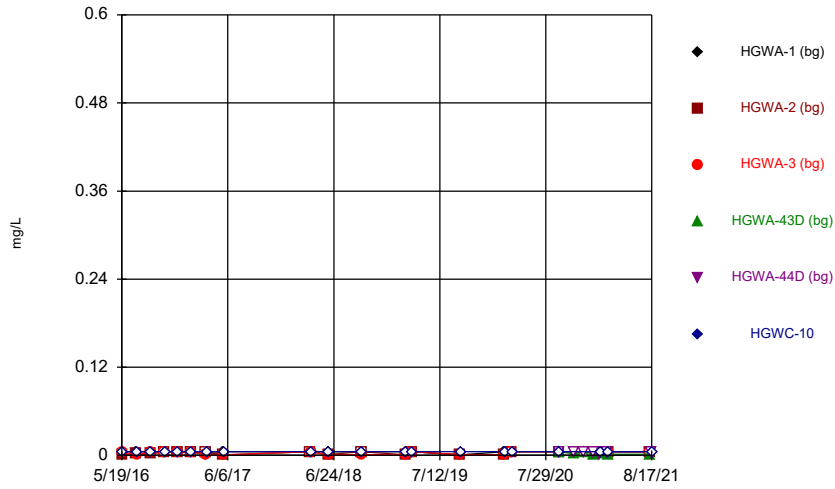
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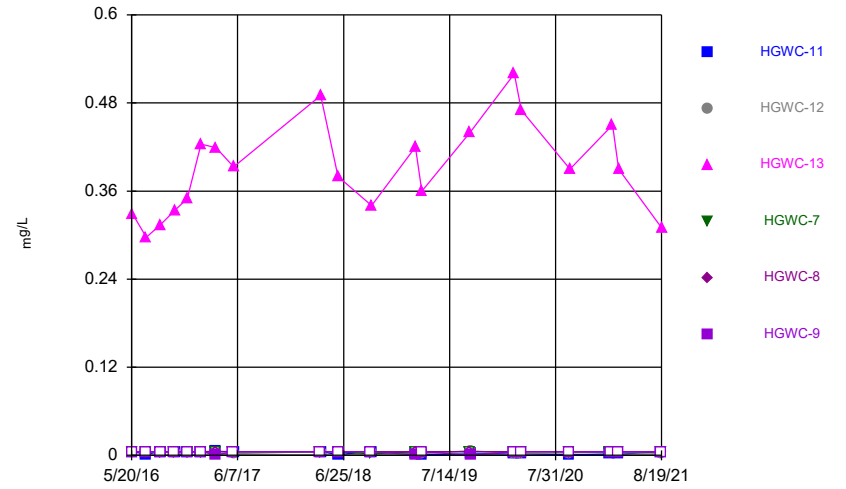
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Time Series



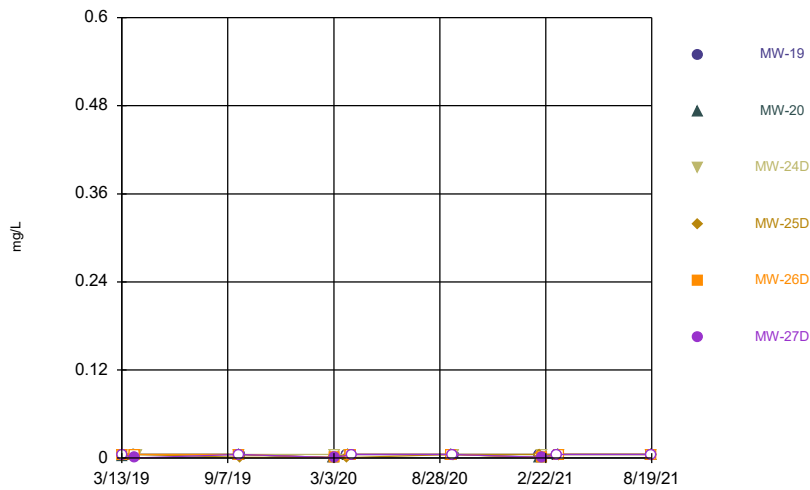
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Time Series



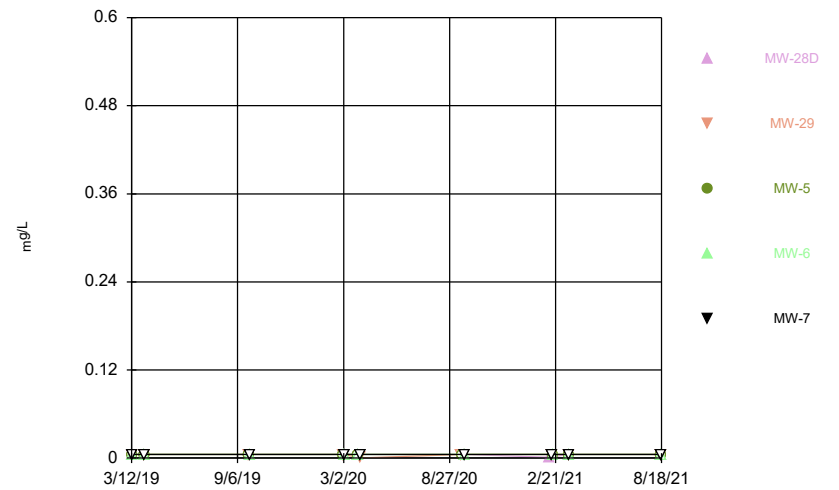
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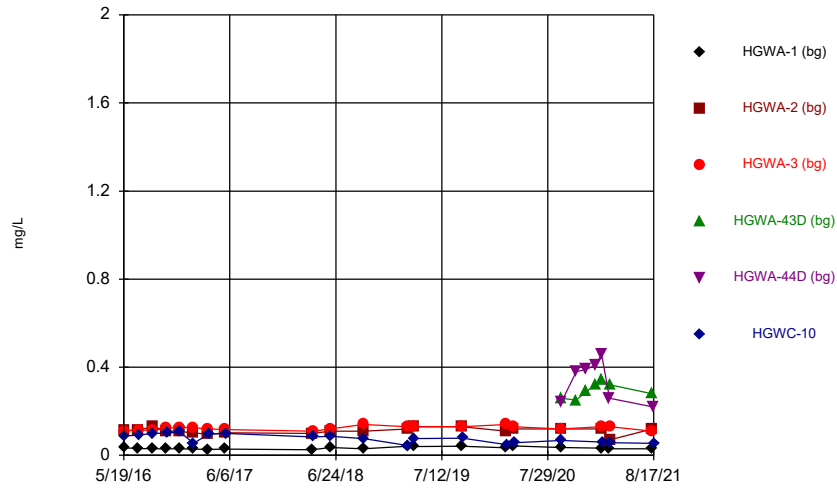
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Time Series



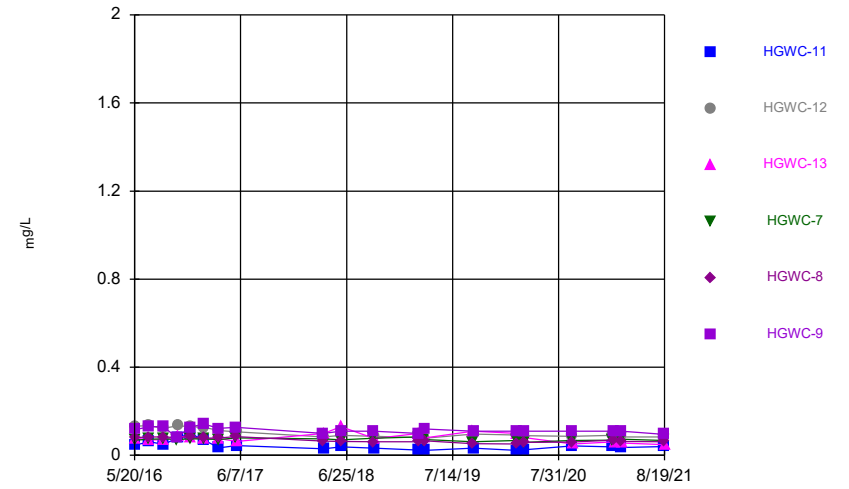
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Time Series



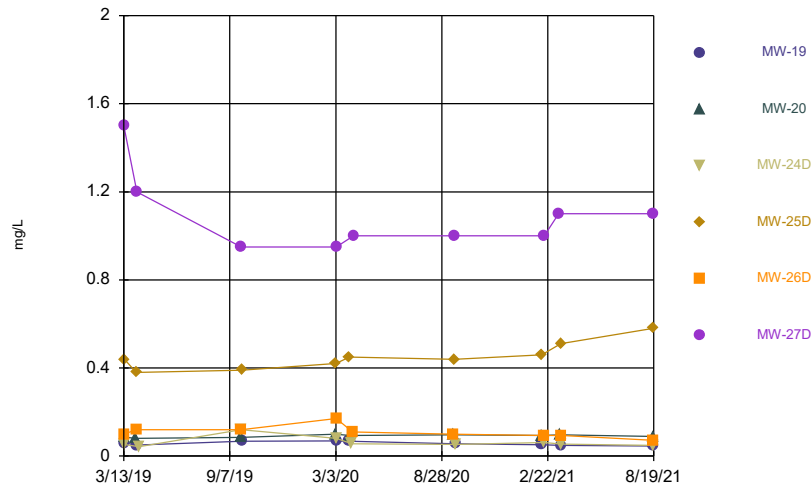
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



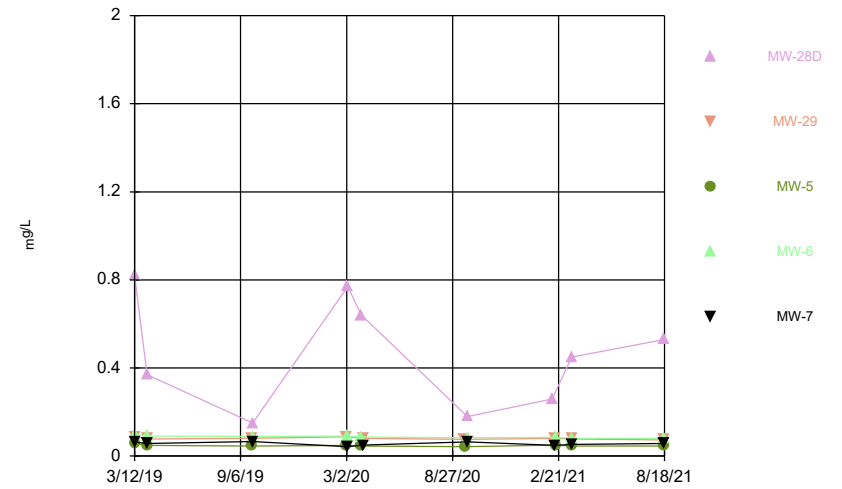
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



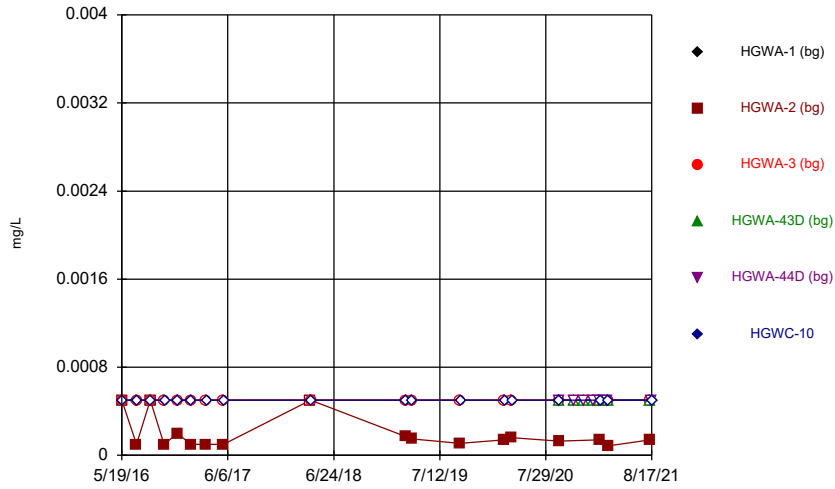
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



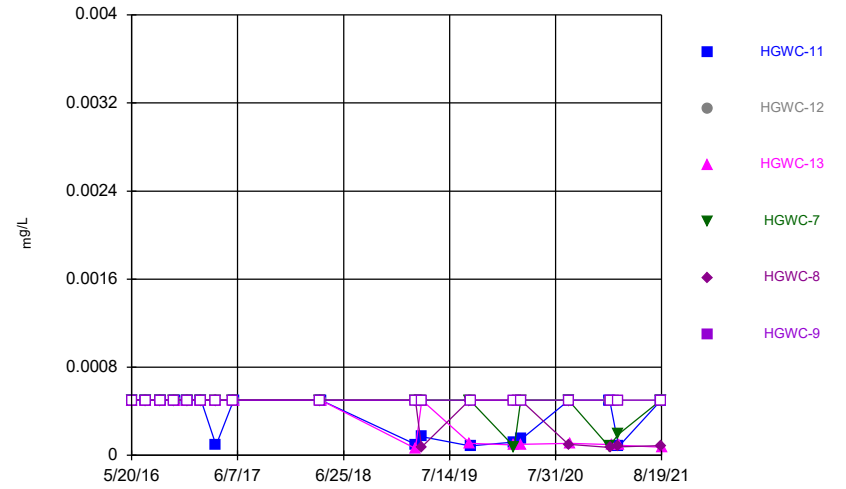
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Time Series



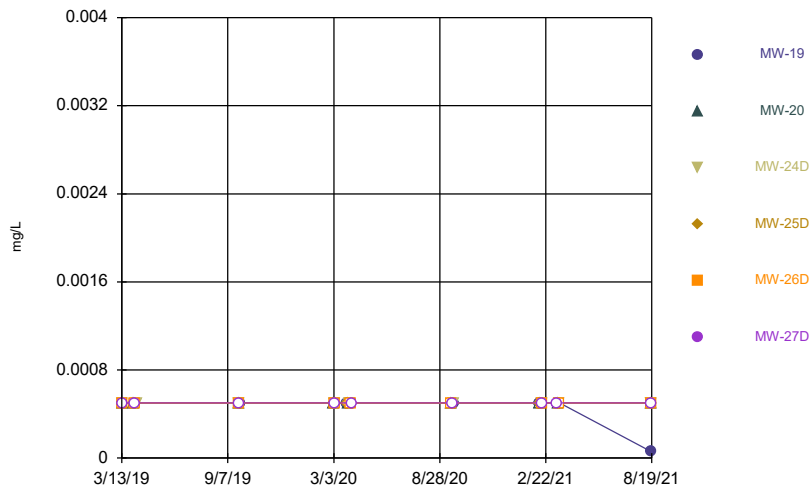
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Time Series



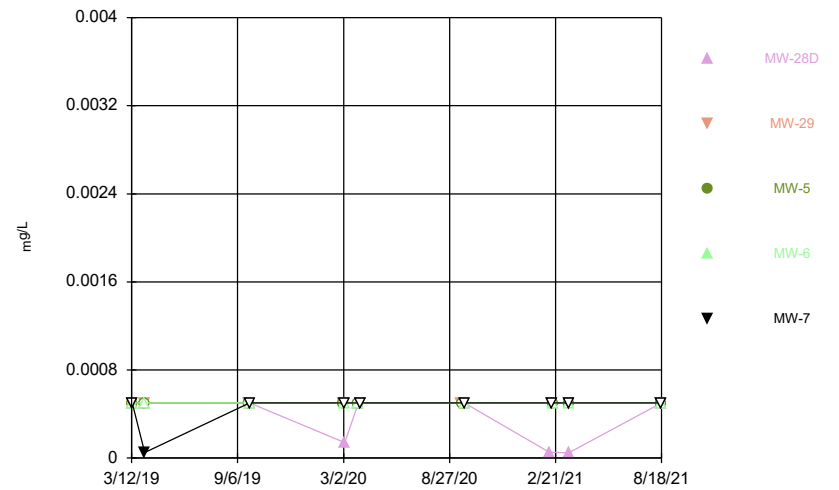
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Time Series



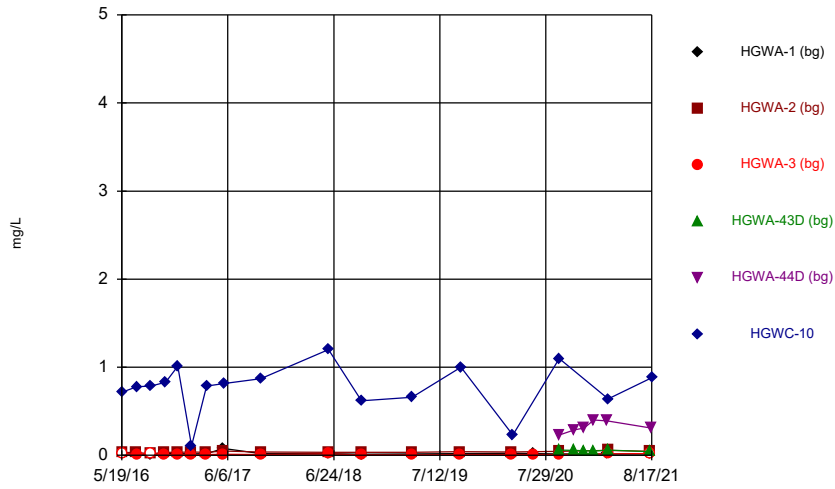
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Time Series



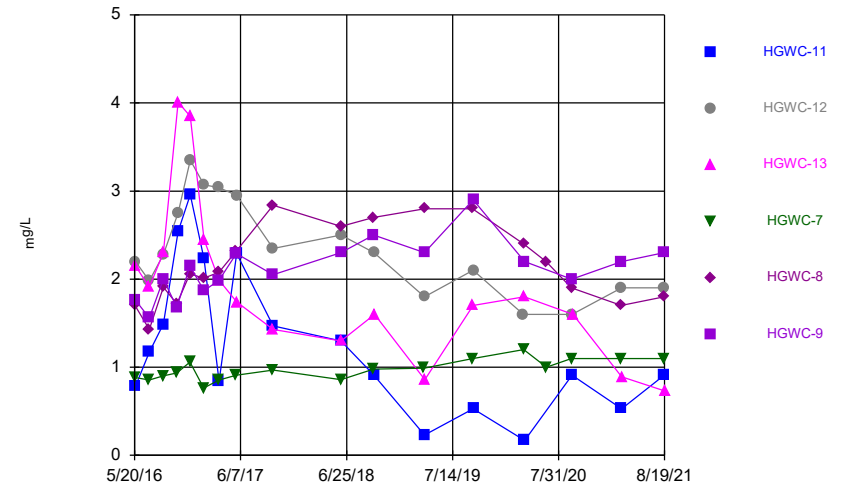
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Time Series



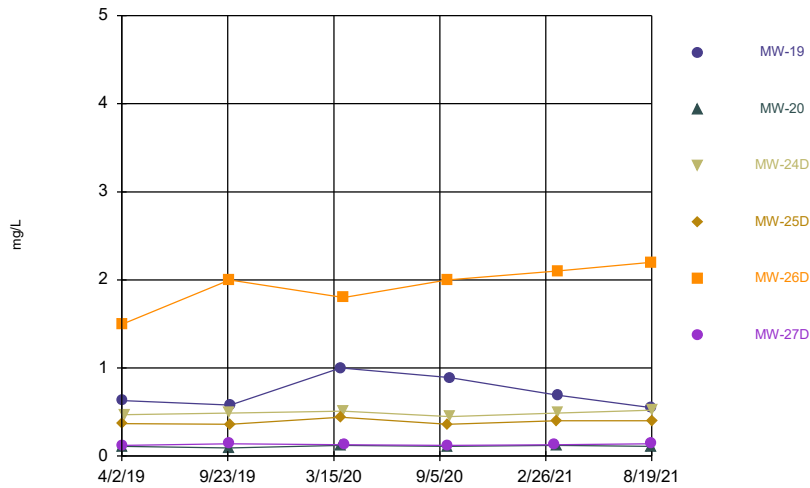
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Time Series



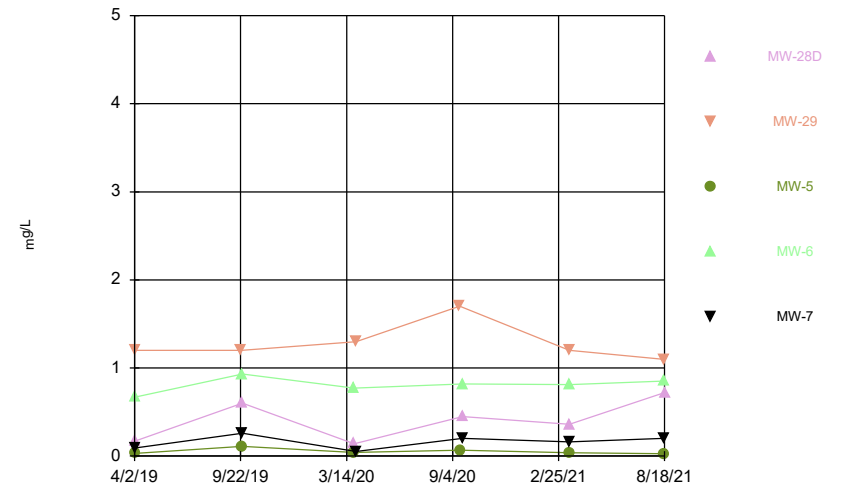
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Time Series



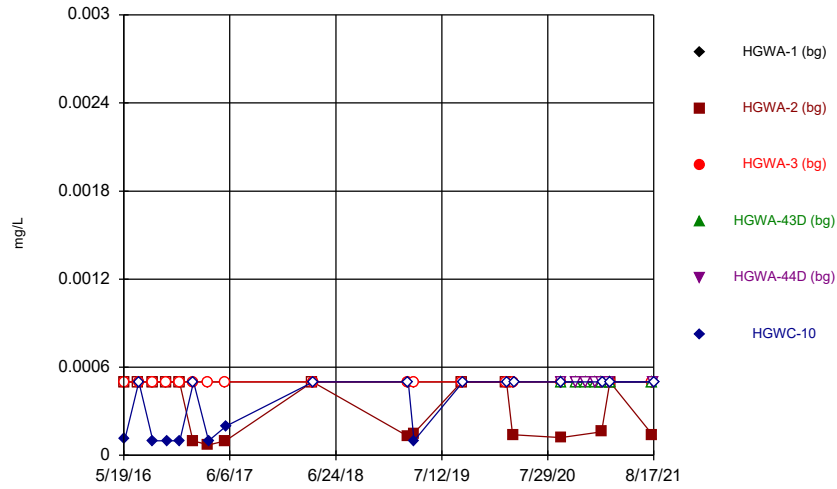
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Time Series



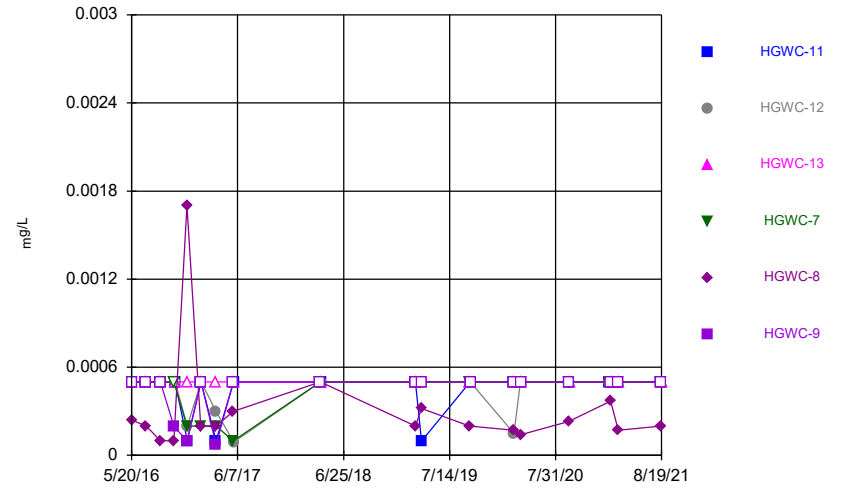
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Time Series



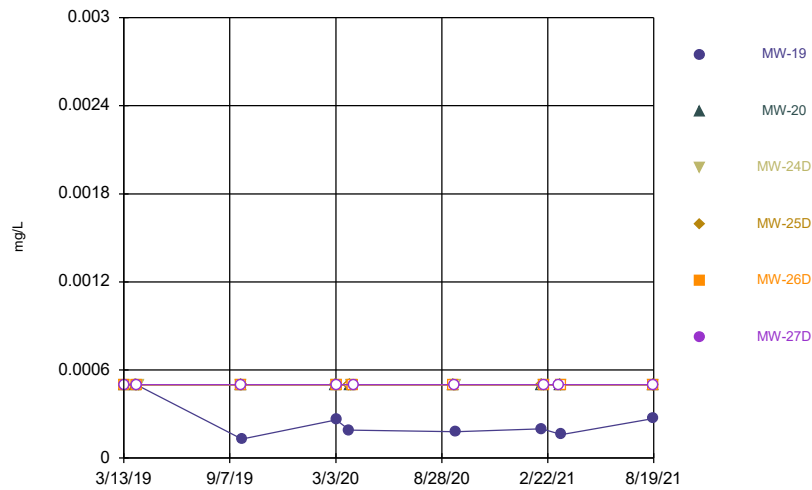
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Time Series



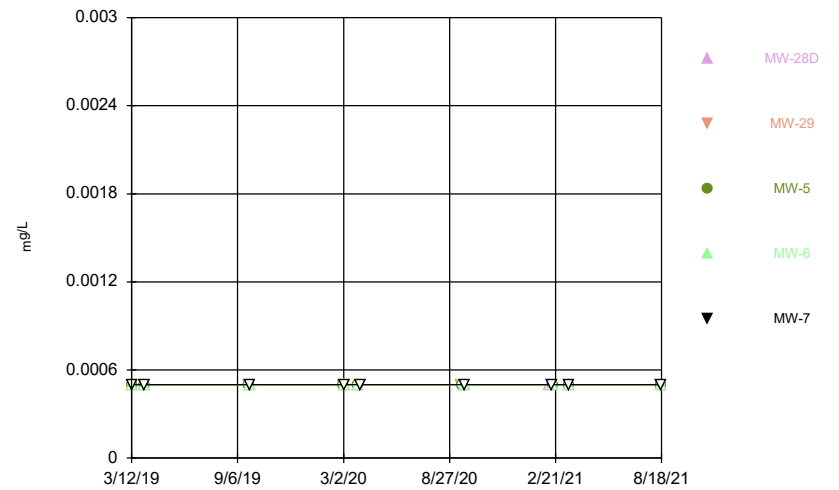
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Time Series



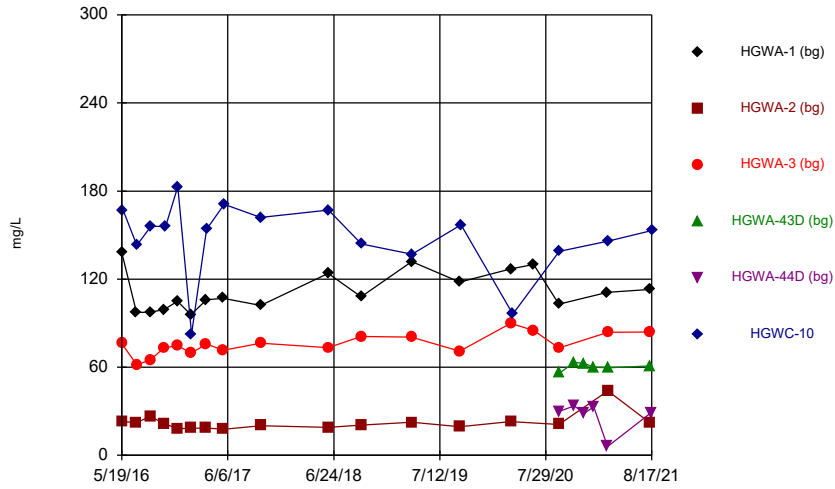
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Time Series



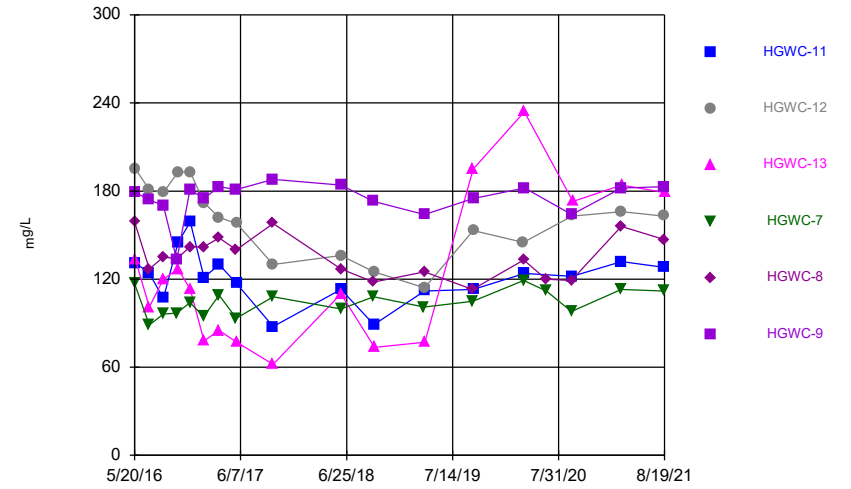
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Time Series



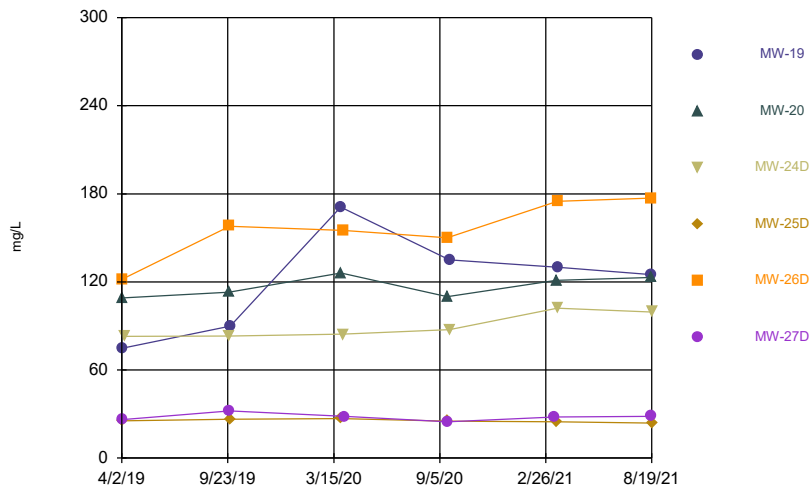
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



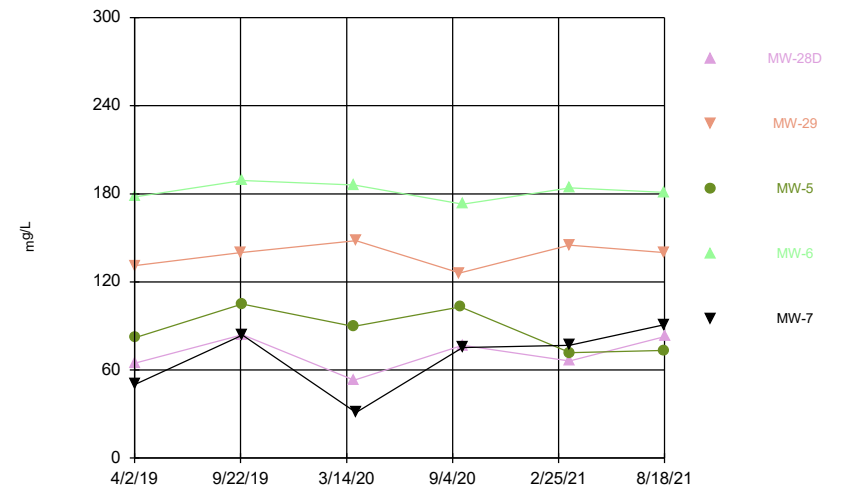
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Time Series



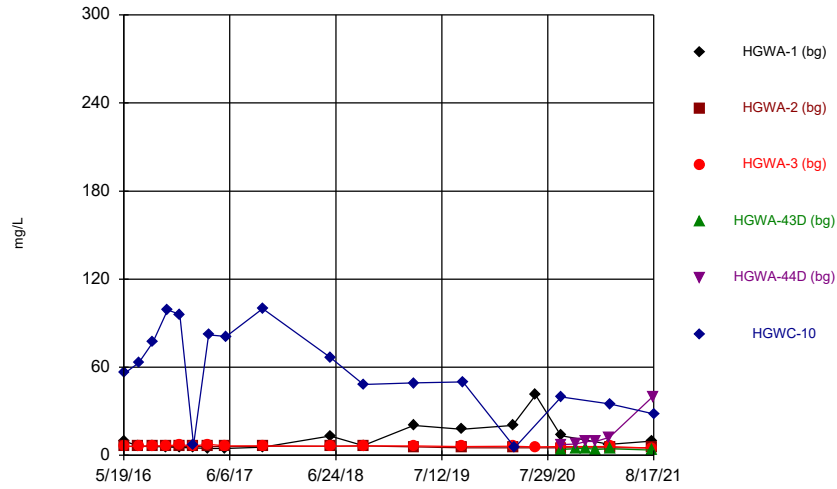
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Time Series



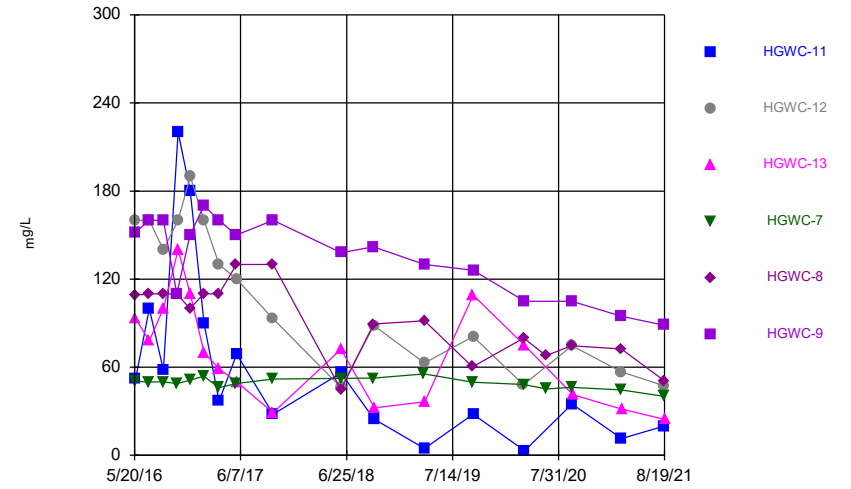
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Time Series



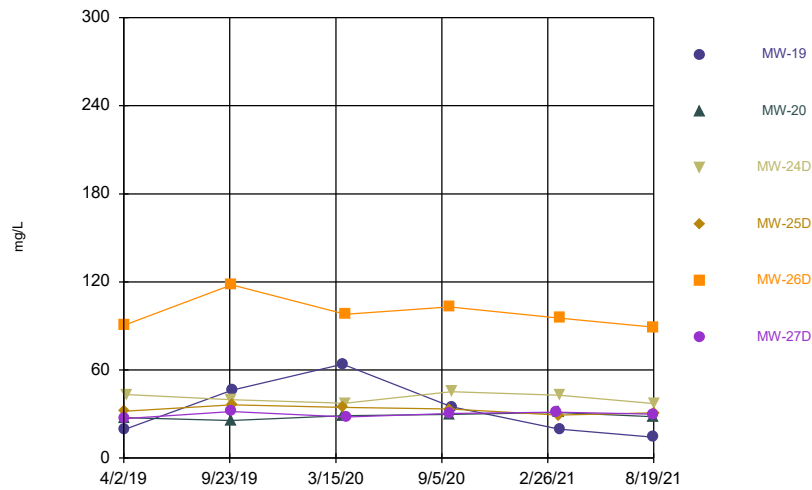
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



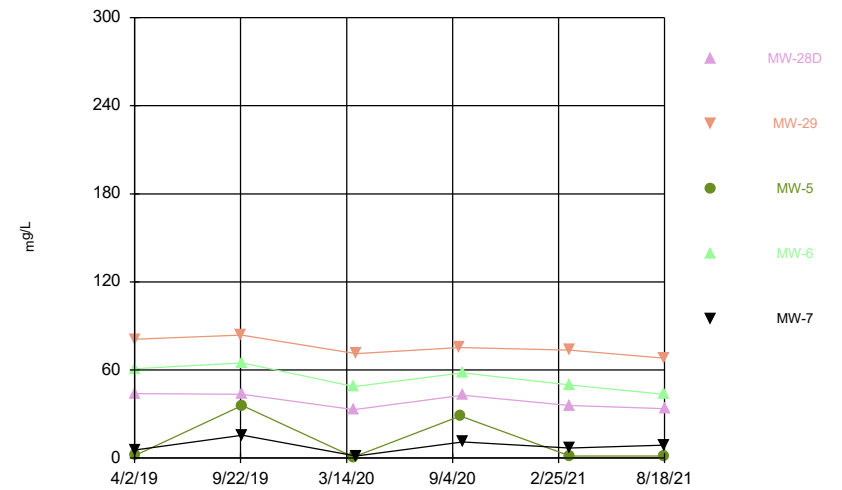
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Time Series



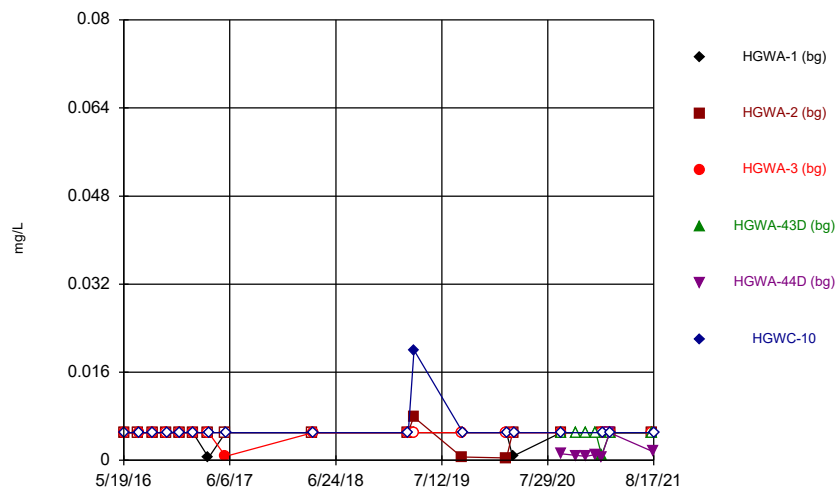
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Time Series



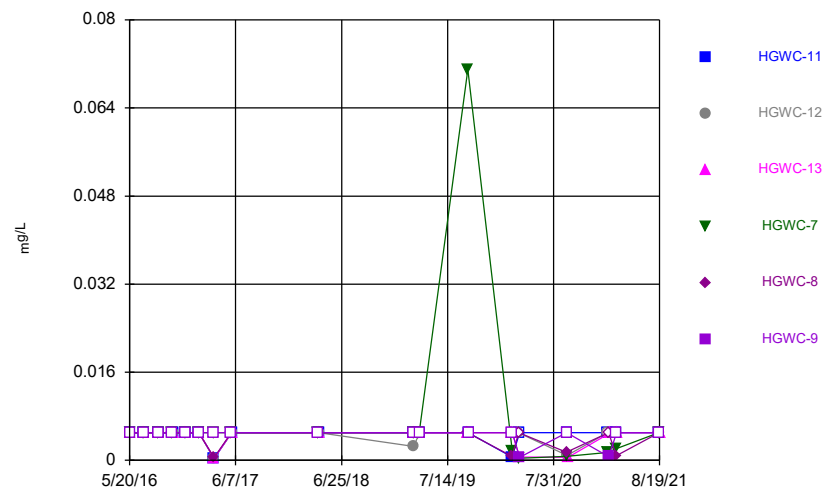
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Time Series



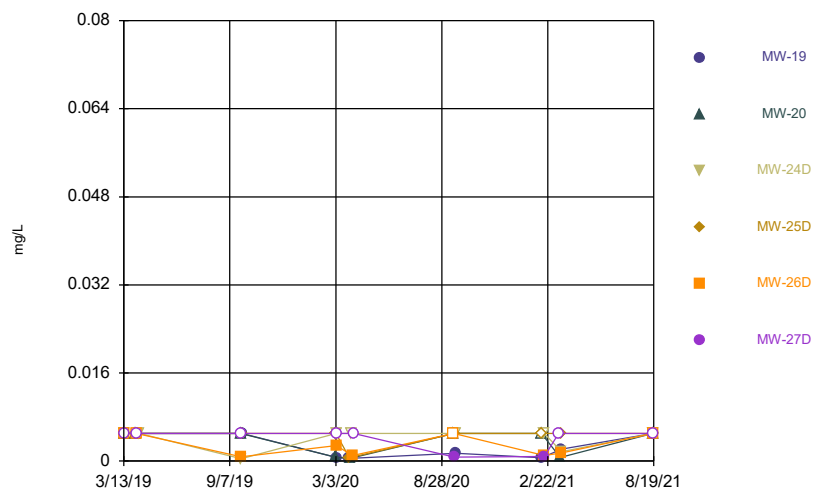
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Time Series



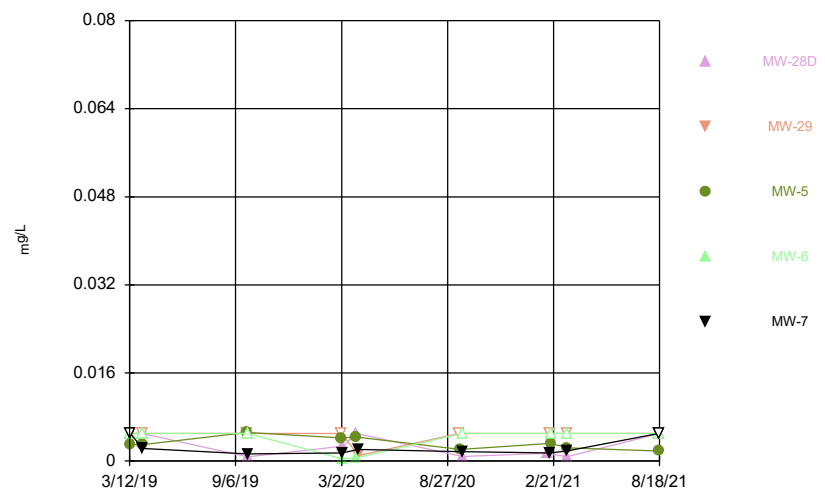
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Time Series



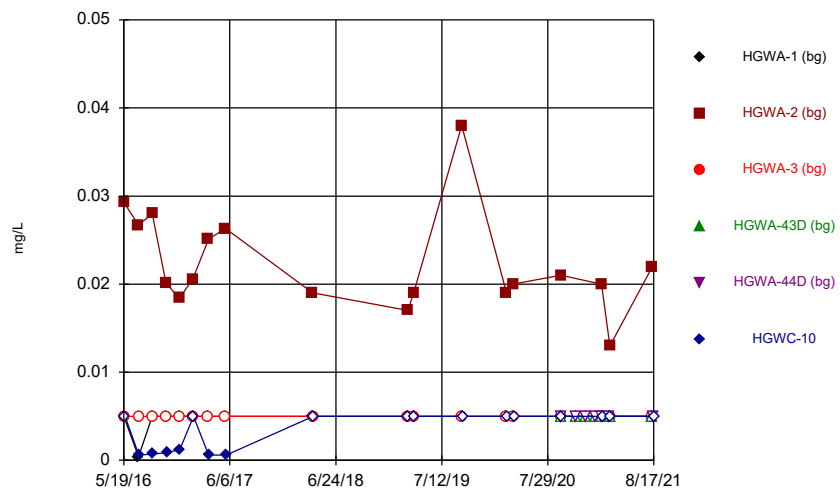
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Time Series



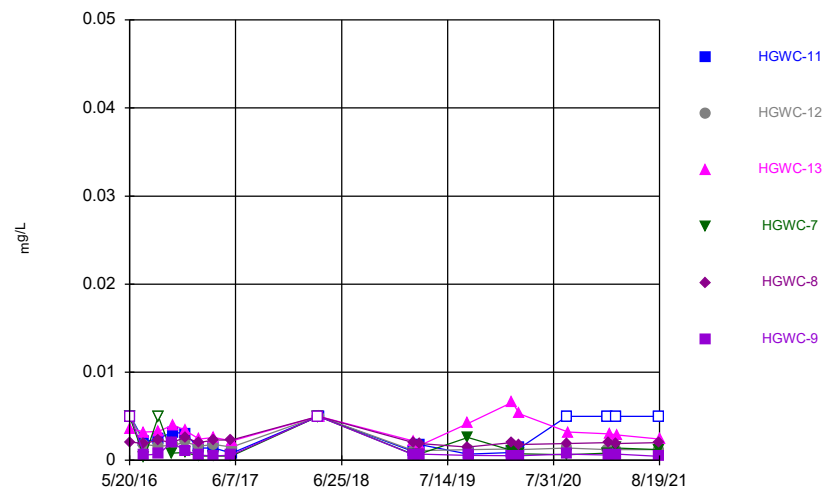
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Time Series



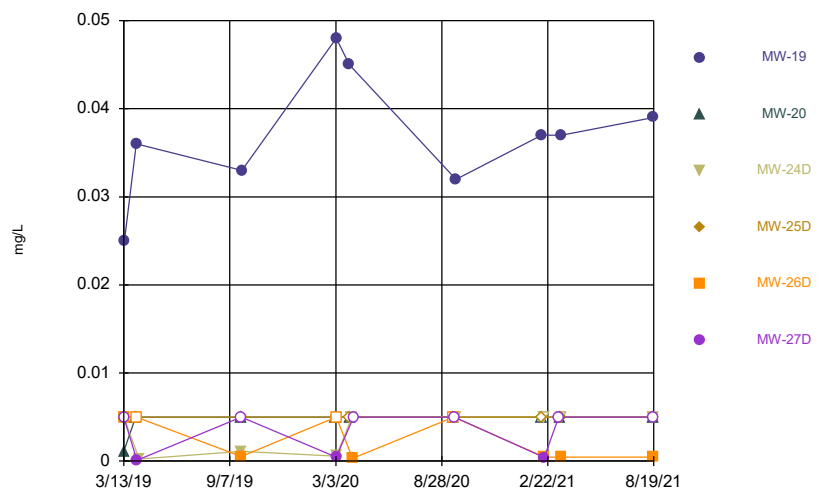
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Time Series



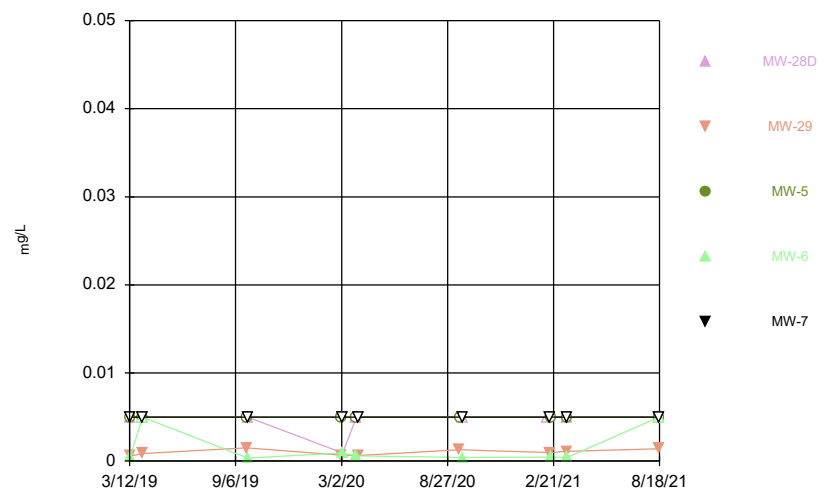
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Time Series



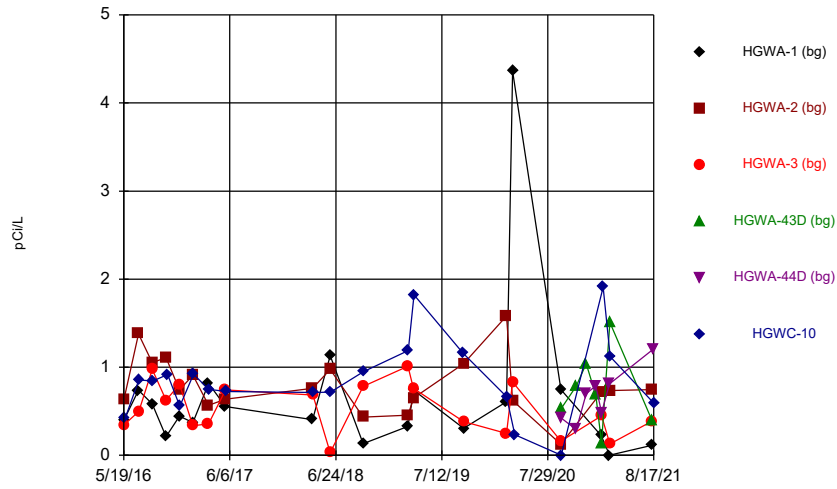
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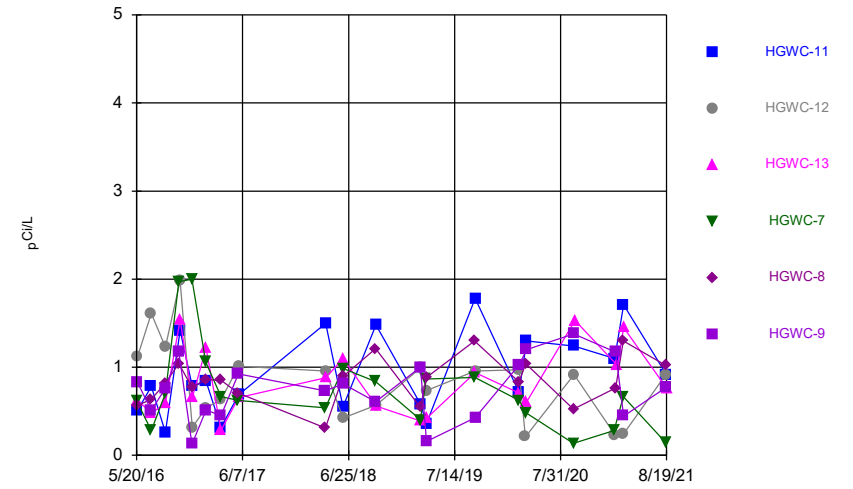
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Time Series



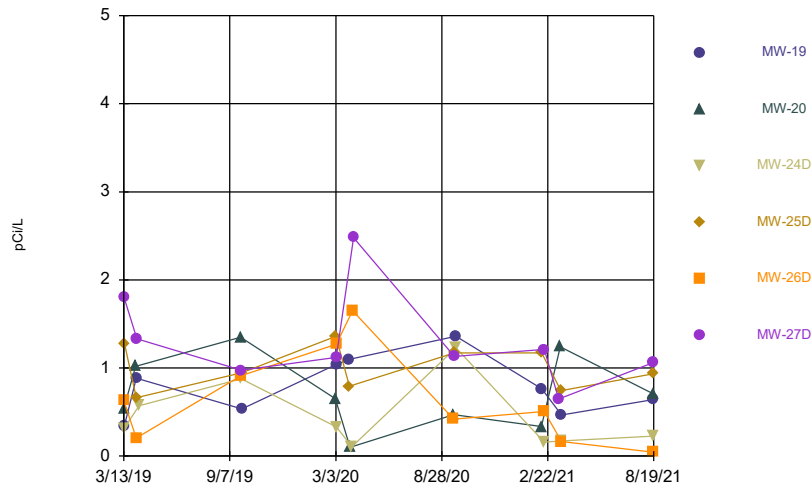
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Time Series



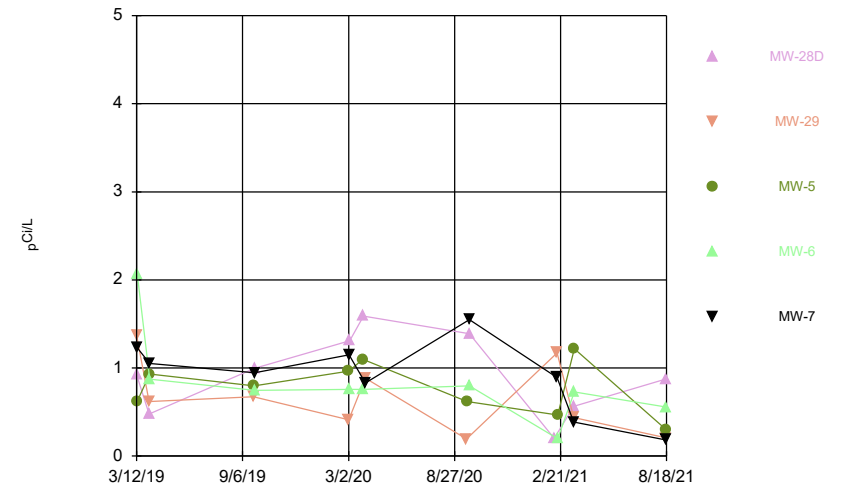
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Time Series



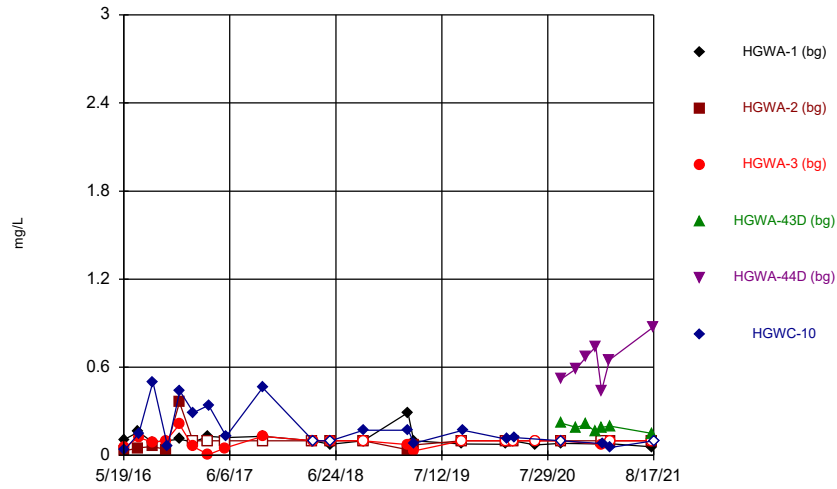
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Time Series



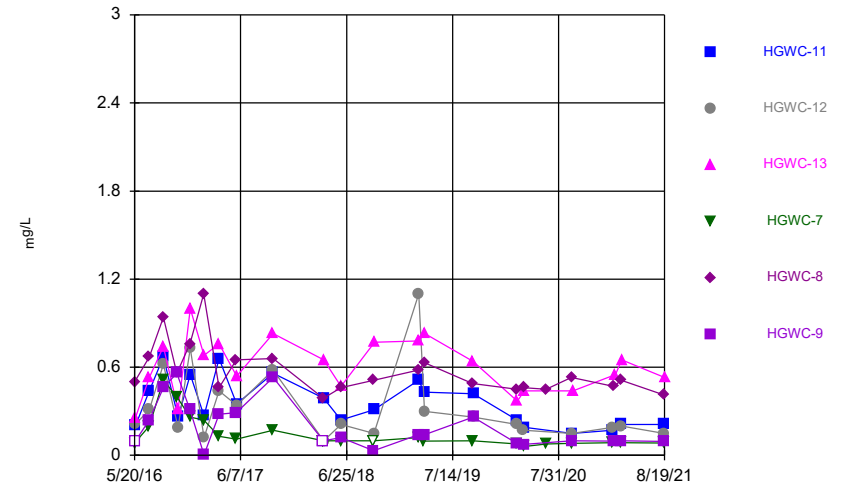
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Time Series



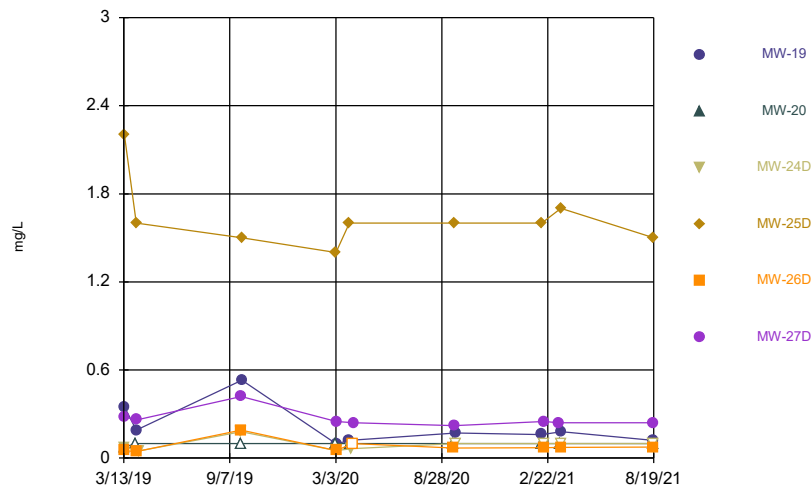
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Time Series



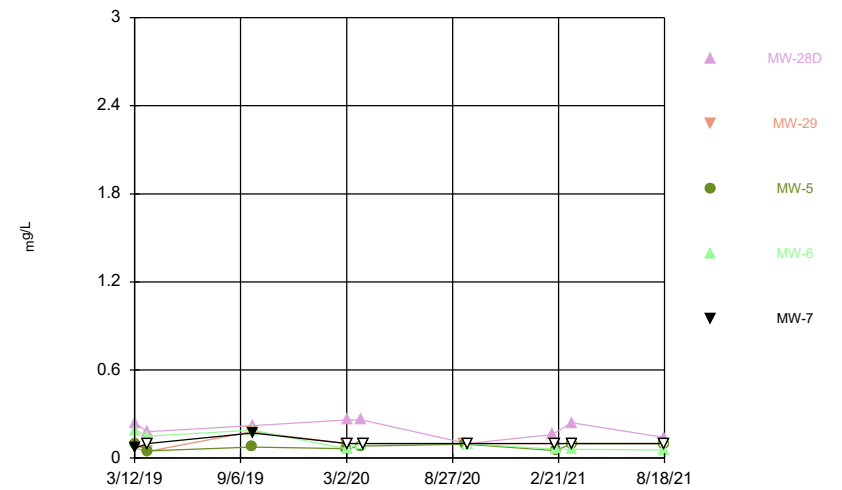
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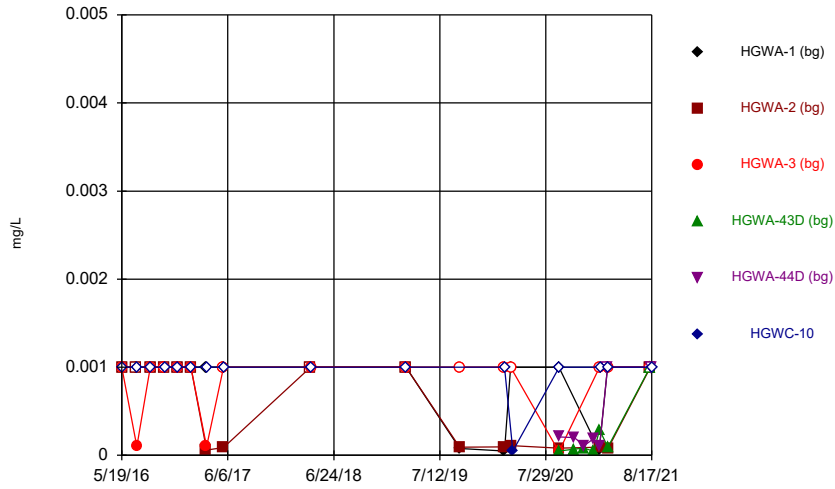
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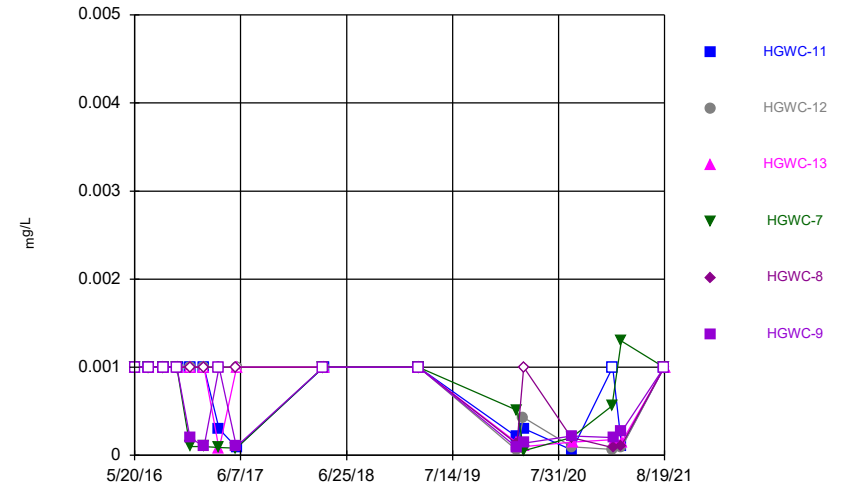
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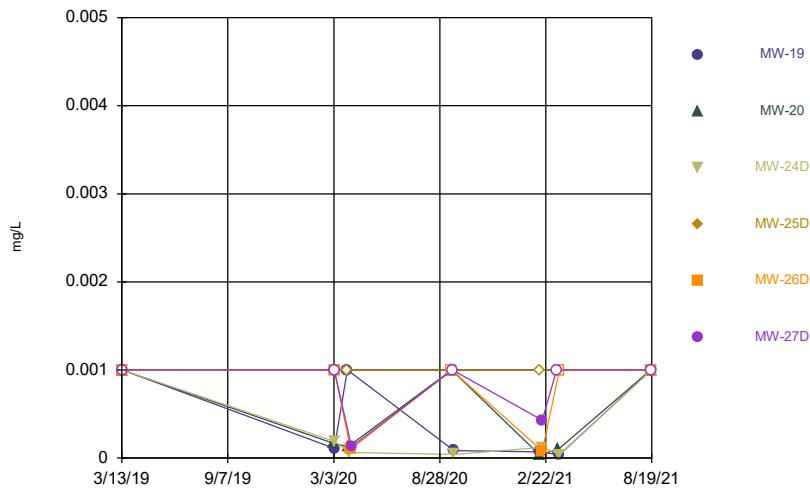
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Time Series



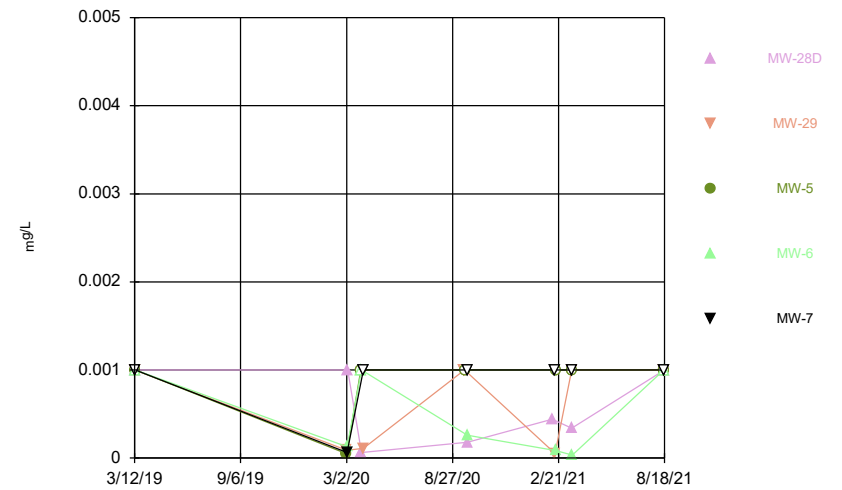
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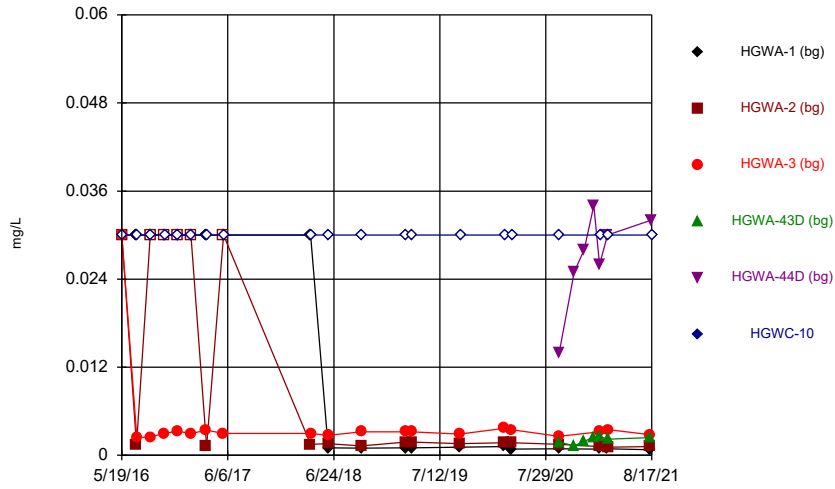
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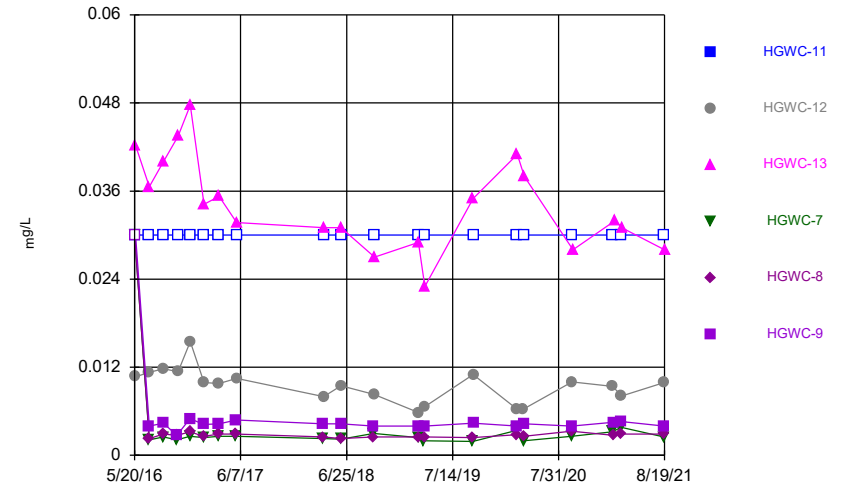
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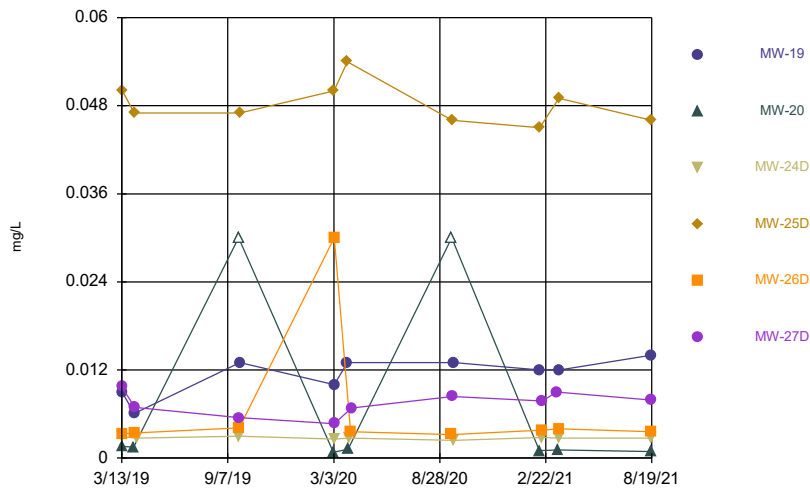
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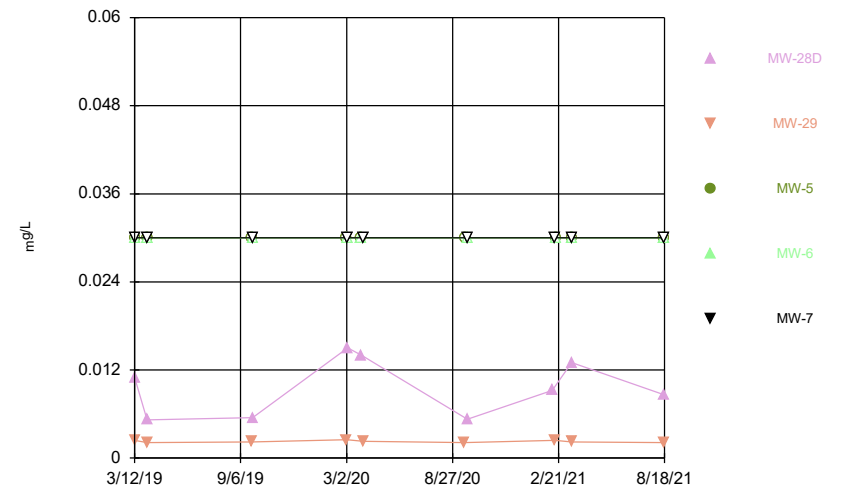
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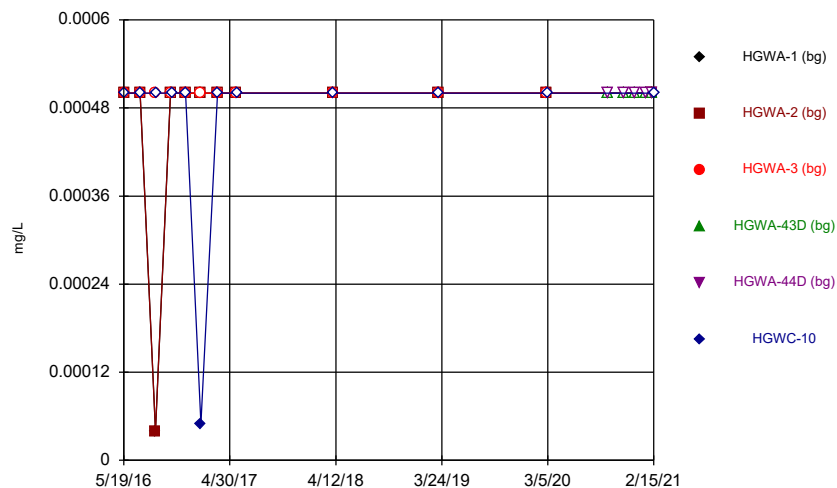
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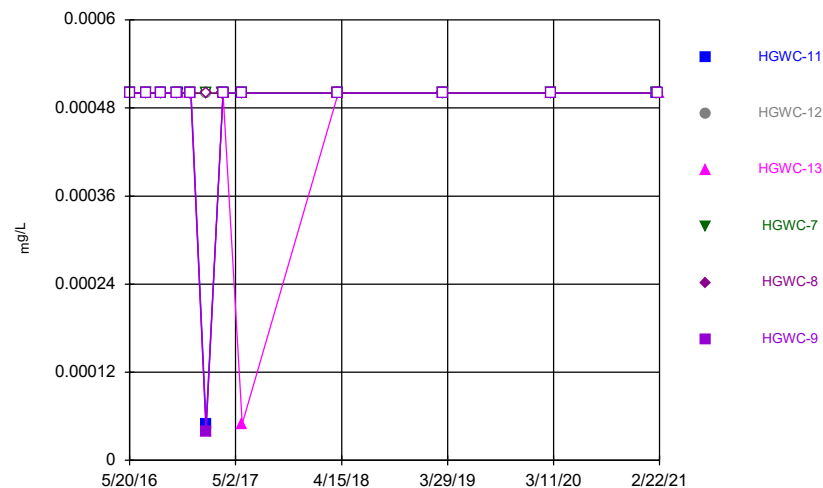
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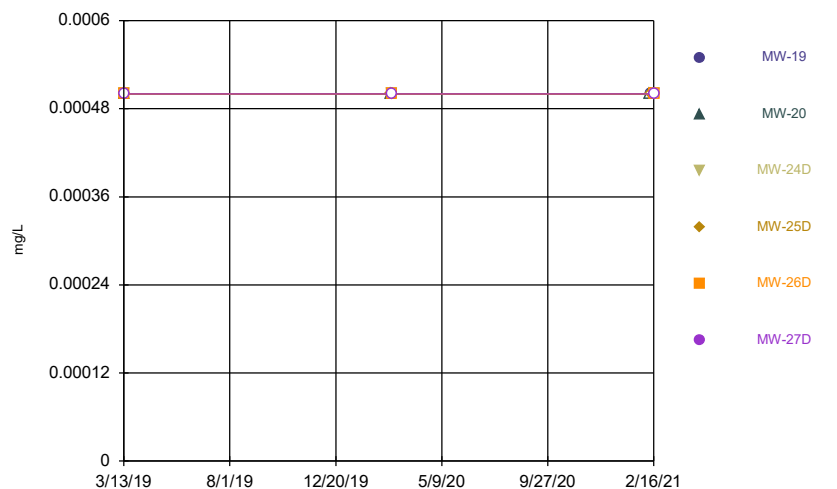
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Time Series



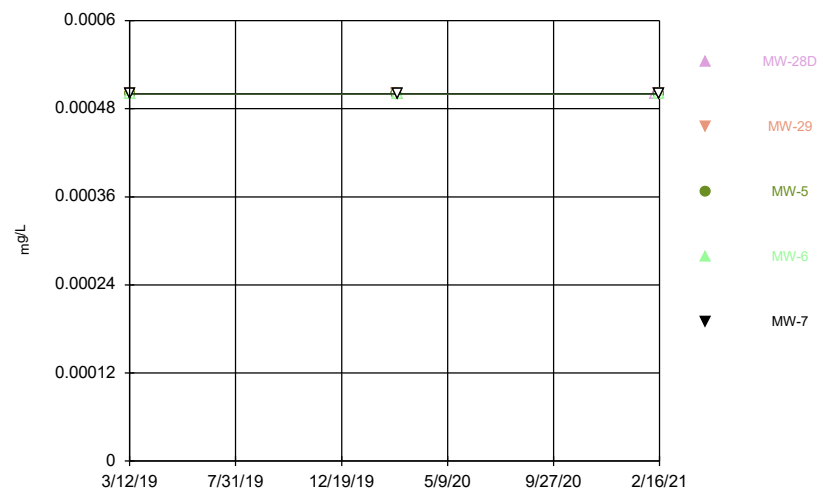
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Time Series



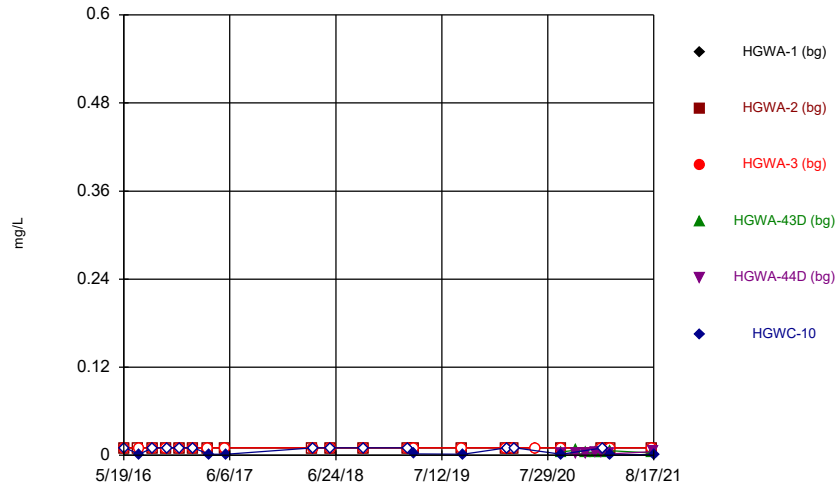
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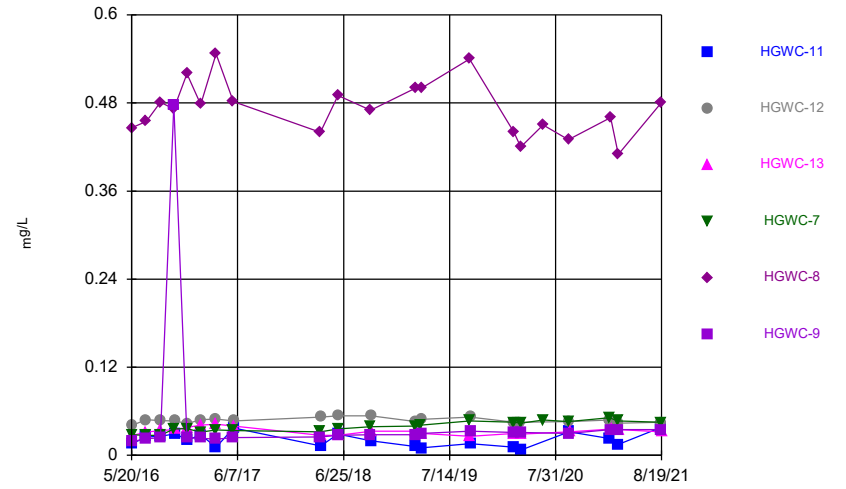
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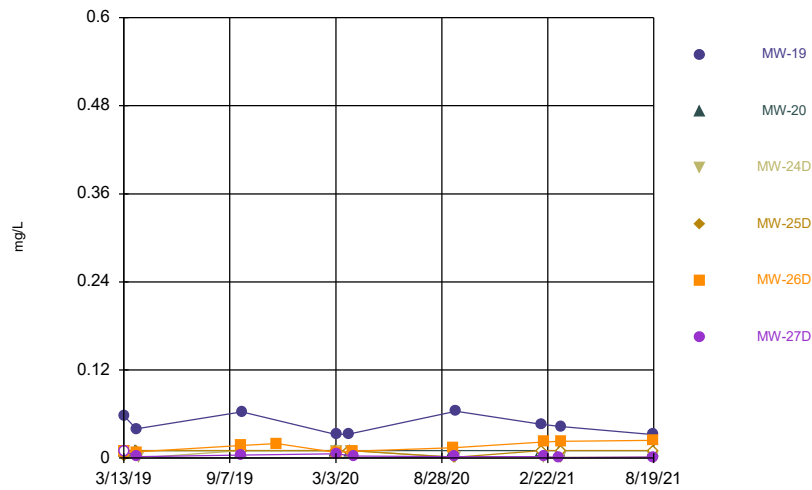
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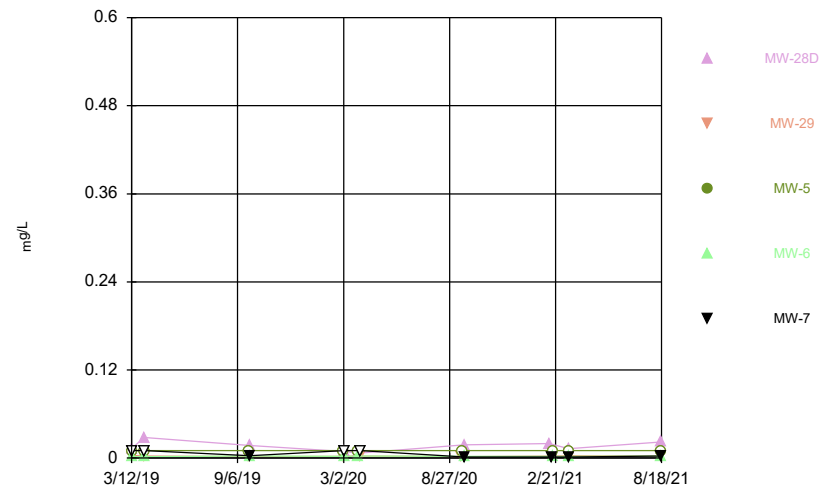
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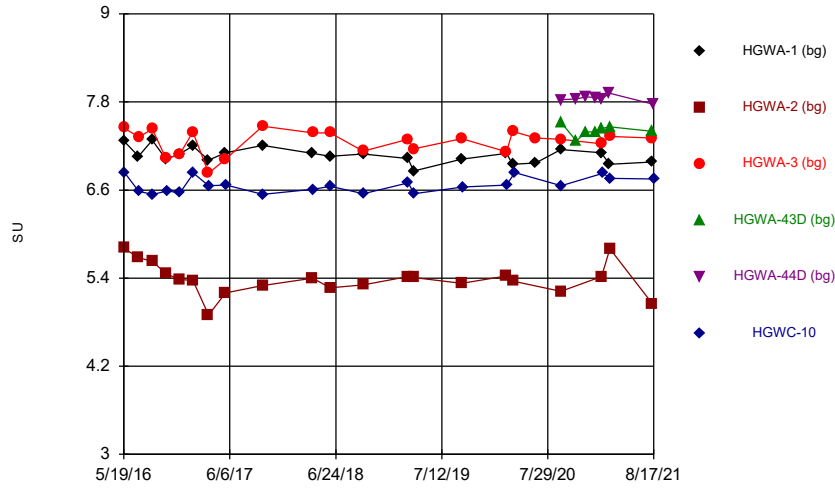
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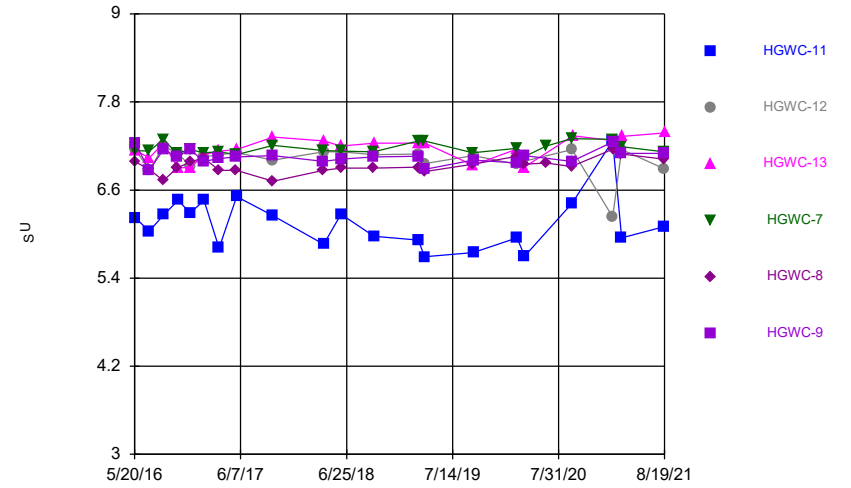
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Time Series



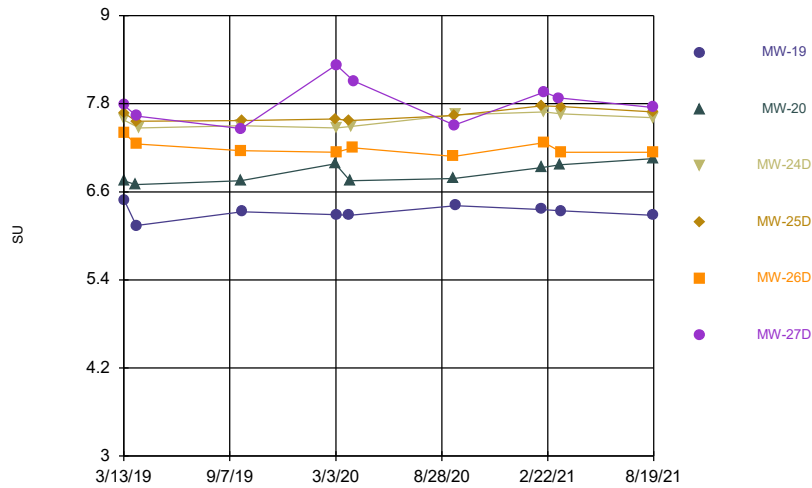
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Time Series



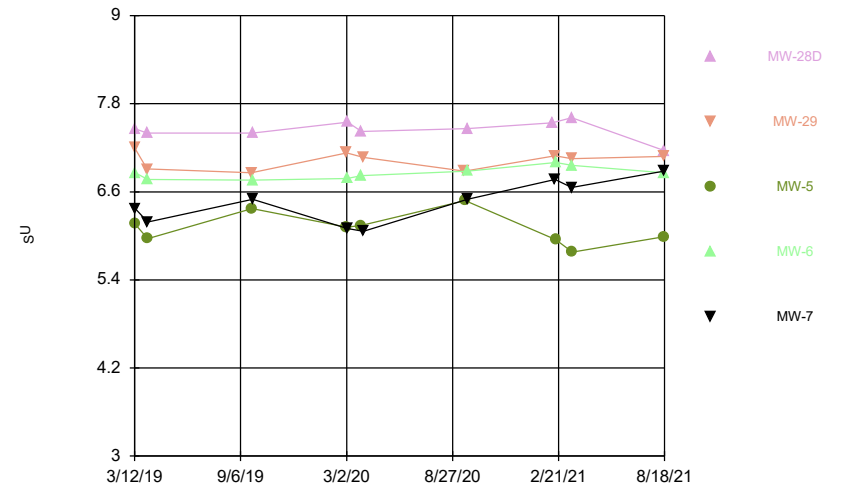
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Time Series



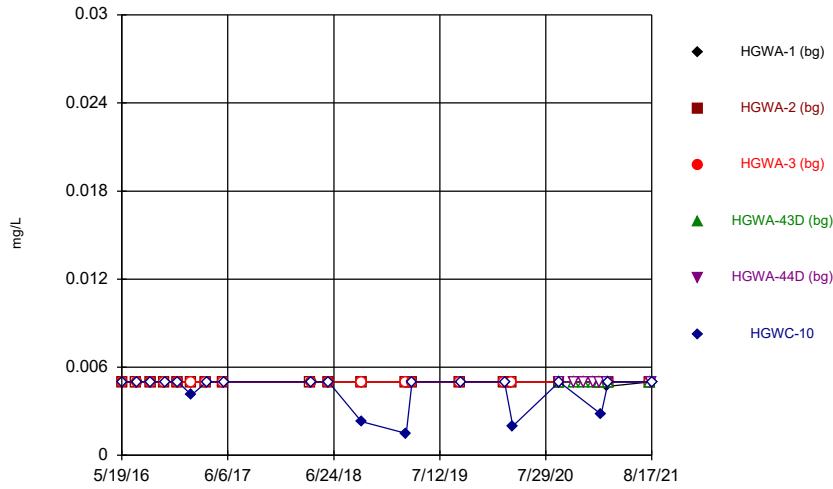
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Time Series



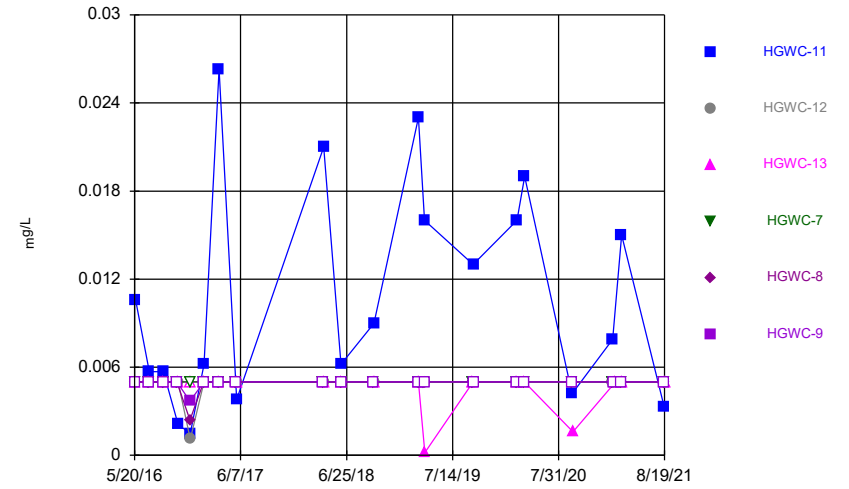
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Time Series



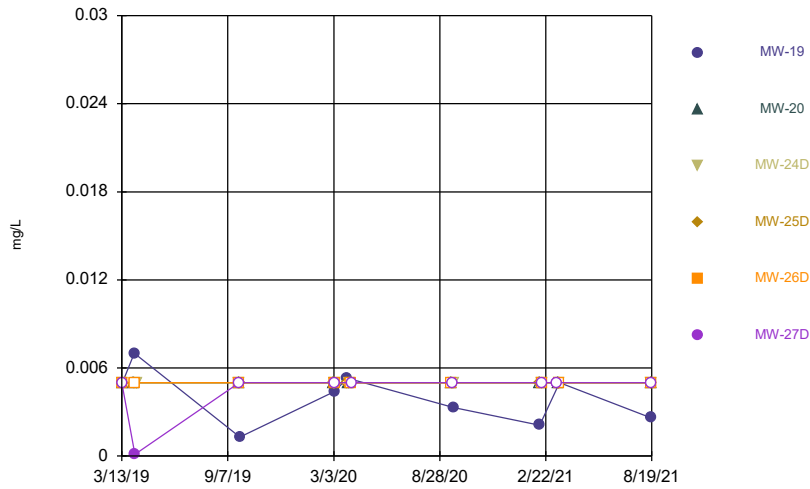
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Time Series



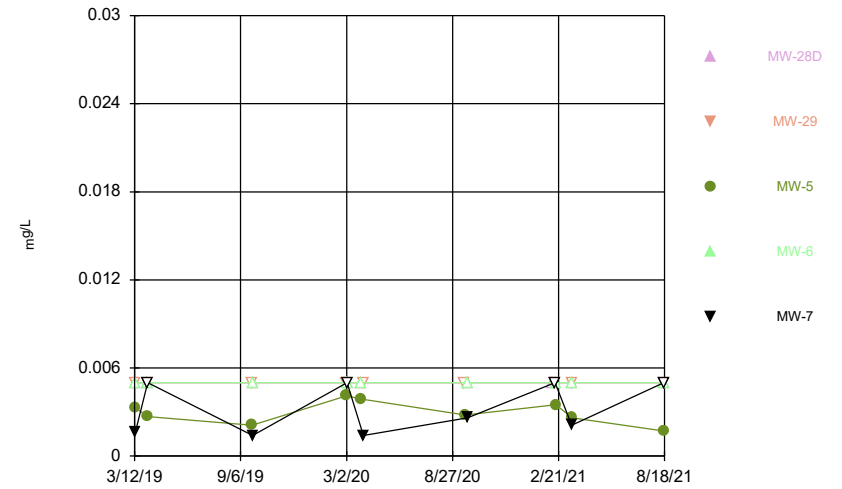
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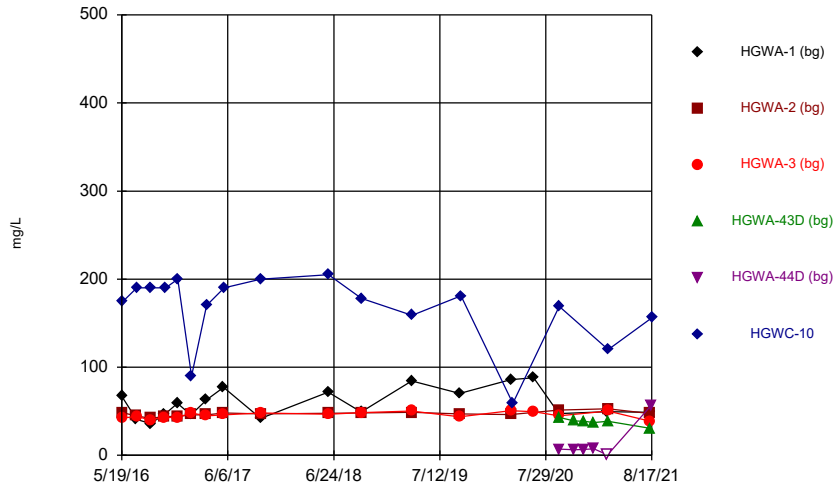
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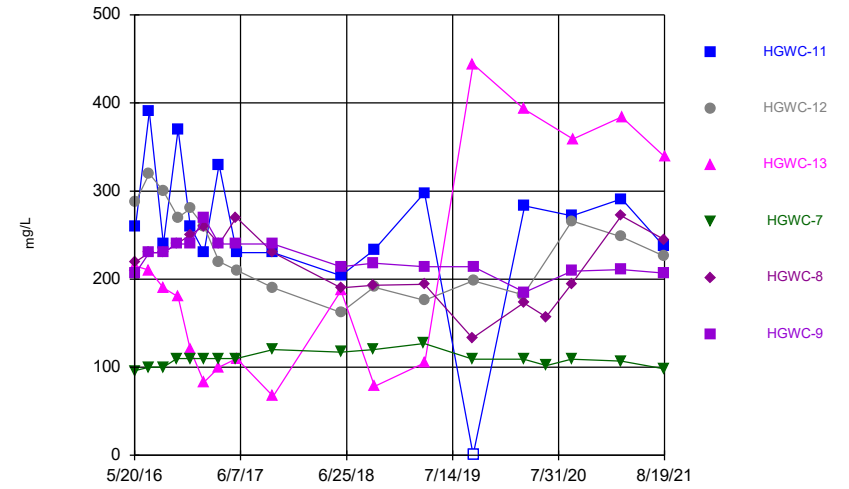
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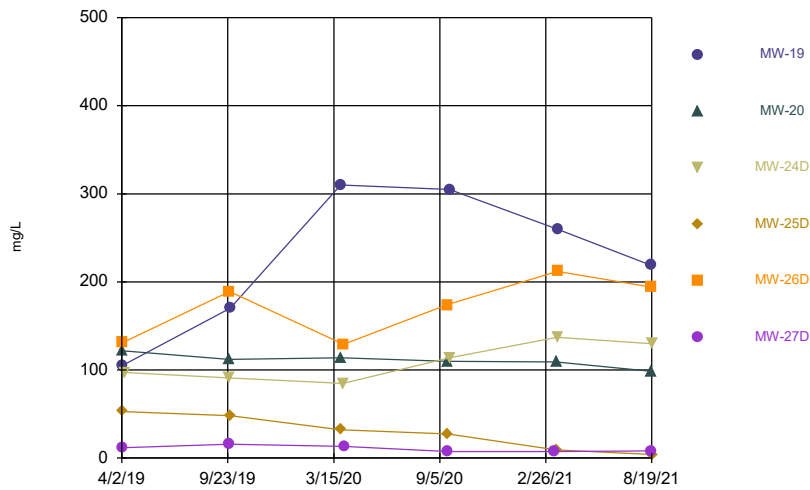
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



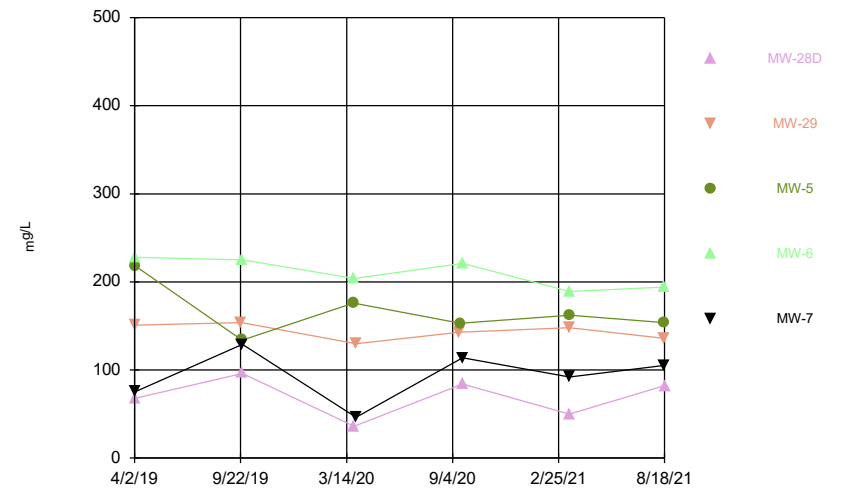
Constituent: Sulfate Analysis Run 10/21/2021 3:30 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



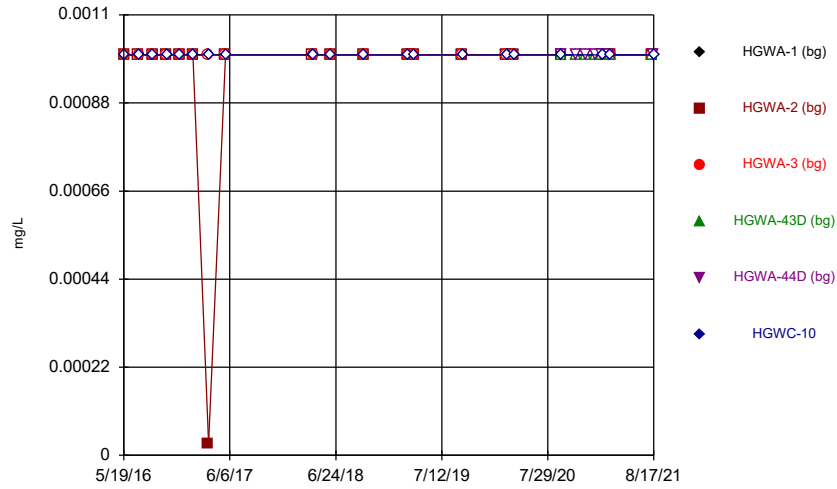
Constituent: Sulfate Analysis Run 10/21/2021 3:30 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



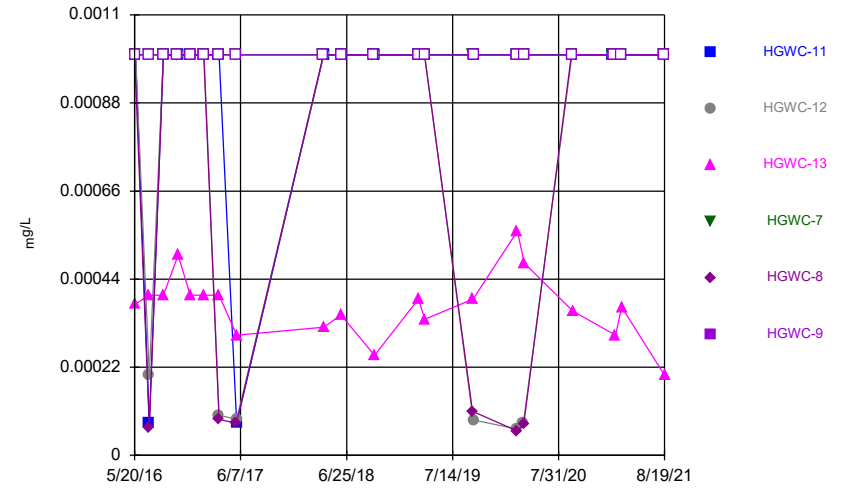
Constituent: Sulfate Analysis Run 10/21/2021 3:30 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



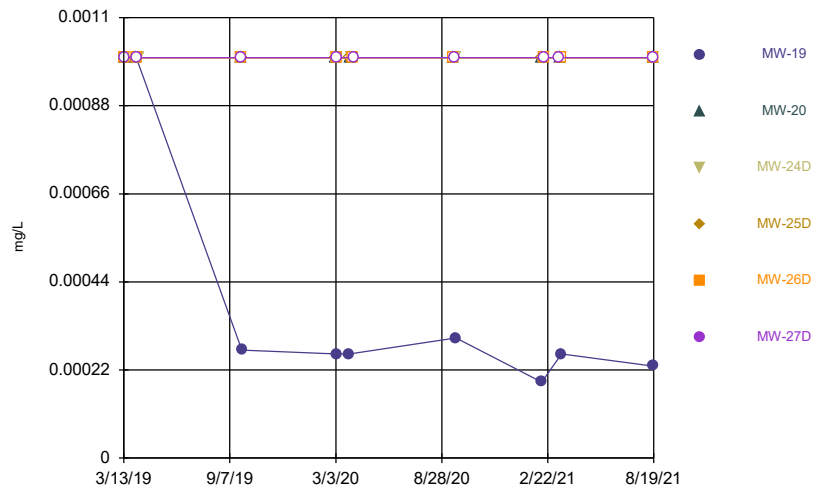
Constituent: Thallium Analysis Run 10/21/2021 3:30 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



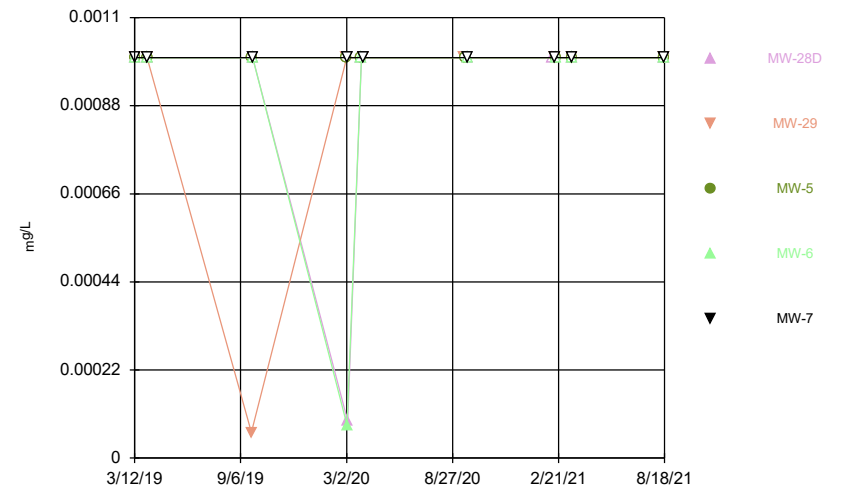
Constituent: Thallium Analysis Run 10/21/2021 3:30 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



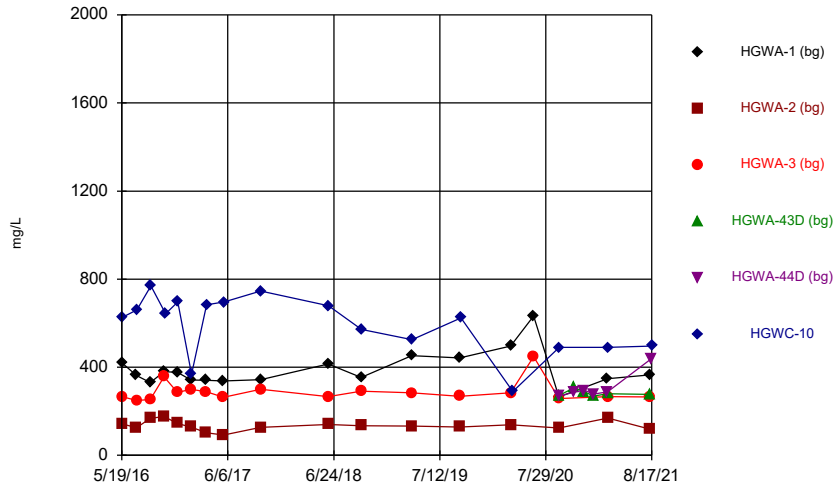
Constituent: Thallium Analysis Run 10/21/2021 3:30 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



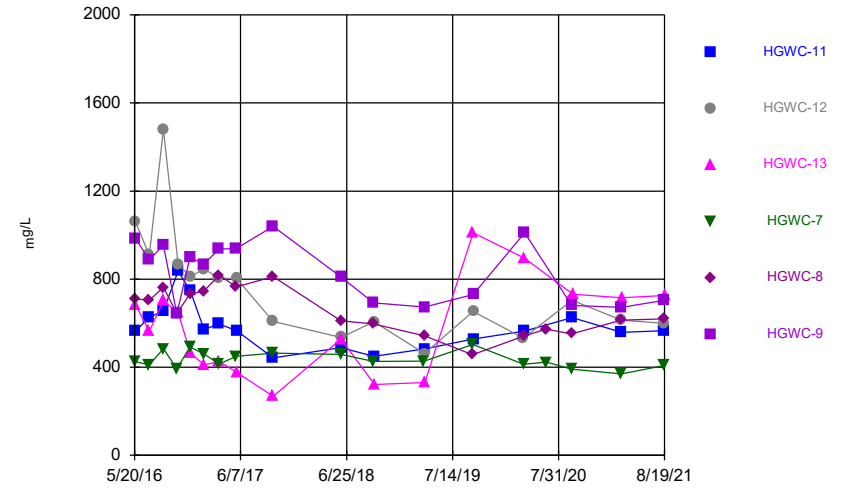
Constituent: Thallium Analysis Run 10/21/2021 3:30 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



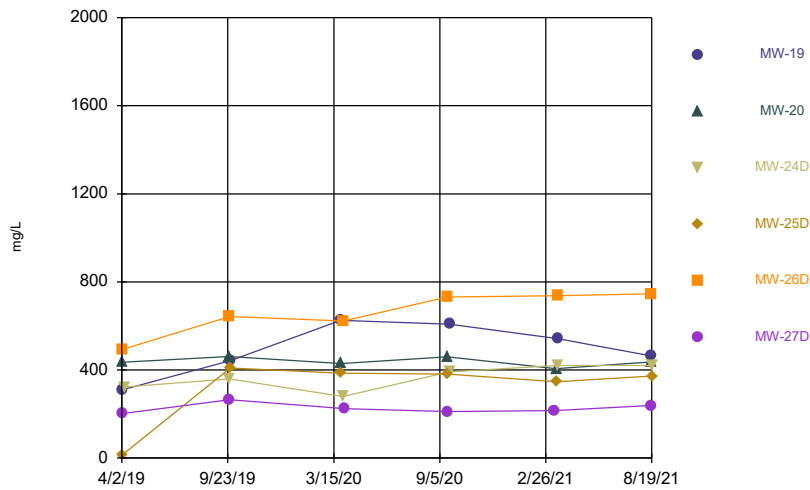
Constituent: Total Dissolved Solids Analysis Run 10/21/2021 3:30 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



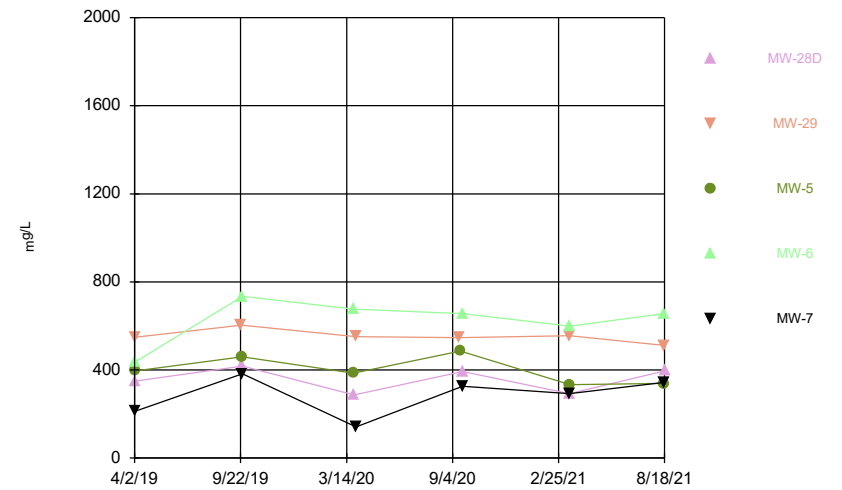
Constituent: Total Dissolved Solids Analysis Run 10/21/2021 3:30 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



Constituent: Total Dissolved Solids Analysis Run 10/21/2021 3:30 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series



Constituent: Total Dissolved Solids Analysis Run 10/21/2021 3:30 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Time Series

Constituent: Antimony (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	<0.003	<0.003	<0.003			
5/23/2016						<0.003
7/11/2016	<0.003	<0.003				
7/12/2016			0.0003 (J)			<0.003
8/30/2016	<0.003	<0.003	<0.003			
9/1/2016						<0.003
10/19/2016	0.0014 (J)	<0.003	<0.003			
10/24/2016						<0.003
12/6/2016	<0.003	<0.003	<0.003			
12/7/2016						<0.003
1/24/2017	<0.003	<0.003	<0.003			
1/26/2017						<0.003
3/21/2017	<0.003	<0.003	<0.003			
3/22/2017						<0.003
5/22/2017	<0.003	<0.003	<0.003			
5/24/2017						<0.003
4/2/2018	<0.003	<0.003				
4/3/2018			<0.003			
4/4/2018						<0.003
3/12/2019	<0.003	<0.003	<0.003			
3/13/2019						<0.003
4/1/2019			<0.003			
4/2/2019	<0.003	<0.003				
4/3/2019						<0.003
9/23/2019	<0.003	<0.003	<0.003			
9/27/2019						<0.003
3/2/2020	<0.003	<0.003	<0.003			
3/3/2020						<0.003
3/25/2020	<0.003	<0.003	<0.003			
4/1/2020						<0.003
9/15/2020	<0.003	<0.003	<0.003			
9/16/2020				0.00051 (J)	0.00049 (J)	<0.003
11/10/2020				0.00043 (J)	<0.003	
12/15/2020				0.00031 (J)	0.00047 (J)	
1/19/2021				0.00029 (J)	0.00067 (JB)	
2/8/2021	<0.003					
2/9/2021		0.00062 (JB)	0.00031 (JB)	0.00037 (JB)	0.00042 (J)	
2/15/2021						0.00065 (J)
3/10/2021	<0.003				0.00037 (J)	
3/11/2021		<0.003	<0.003	0.00057 (J)		
3/12/2021						<0.003
8/11/2021	<0.003			<0.003		
8/12/2021		<0.003	<0.003			
8/13/2021					<0.003	
8/17/2021						<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				<0.003	<0.003	
5/23/2016	<0.003	<0.003	<0.003			<0.003
7/12/2016	<0.003	<0.003	0.0003 (J)	<0.003	<0.003	<0.003
9/1/2016	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
10/20/2016				<0.003	<0.003	<0.003
10/24/2016	<0.003	<0.003	<0.003			
12/6/2016				<0.003	<0.003	<0.003
12/7/2016	<0.003	<0.003	<0.003			
1/25/2017				<0.003	<0.003	
1/26/2017	<0.003	<0.003	<0.003			<0.003
3/21/2017				<0.003	<0.003	
3/22/2017	<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			
4/3/2018				<0.003	<0.003	<0.003
4/4/2018	<0.003	<0.003	<0.003			
3/12/2019					<0.003	
3/13/2019	<0.003		<0.003	<0.003		<0.003
3/14/2019		<0.003				
4/2/2019				<0.003		
4/3/2019	<0.003	<0.003			<0.003	<0.003
4/5/2019			0.00021 (J)			
9/24/2019					<0.003	
9/25/2019				<0.003		
9/26/2019			<0.003			
9/27/2019	<0.003	<0.003				<0.003
3/3/2020	<0.003	<0.003			<0.003	
3/4/2020			0.00061 (J)	<0.003		0.00032 (J)
3/26/2020		<0.003				
3/27/2020				<0.003	<0.003	
3/30/2020			0.00036 (J)			
3/31/2020	<0.003					0.00042 (J)
9/16/2020				0.00034 (J)	<0.003	
9/17/2020						<0.003
9/18/2020	0.00038 (J)	<0.003				
9/21/2020			0.00029 (J)			
2/10/2021				<0.003		
2/12/2021	<0.003	<0.003				
2/16/2021					0.00064 (J)	0.00043 (J)
2/22/2021			0.00047 (J)			
3/15/2021				<0.003	<0.003	
3/16/2021	<0.003	<0.003				<0.003
3/17/2021			0.00049 (J)			
8/16/2021				0.0017 (J)		
8/17/2021						<0.003
8/18/2021	<0.003	<0.003			<0.003	
8/19/2021			<0.003			

Time Series

Constituent: Antimony (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
3/13/2019		<0.003	<0.003		<0.003	<0.003
3/14/2019	<0.003			<0.003		
4/2/2019		<0.003				
4/3/2019	<0.003			<0.003	<0.003	
4/4/2019						0.00016 (J)
4/8/2019			<0.003			
9/25/2019		<0.003				
9/26/2019			<0.003		<0.003	0.0003 (J)
9/27/2019	<0.003			<0.003		
3/2/2020		<0.003				
3/3/2020				<0.003		
3/4/2020	<0.003		0.0017 (J)		0.002 (J)	0.00037 (J)
3/26/2020	<0.003			<0.003		
3/27/2020		<0.003				
3/30/2020			<0.003			
3/31/2020					0.0013 (J)	
4/2/2020						0.0003 (J)
9/17/2020		<0.003			<0.003	
9/18/2020				<0.003		0.00031 (J)
9/21/2020	<0.003		<0.003			
2/11/2021		<0.003				
2/12/2021	<0.003			<0.003		
2/16/2021			<0.003		<0.003	0.00038 (J)
3/12/2021						<0.003
3/15/2021		<0.003				
3/16/2021				<0.003		
3/17/2021	<0.003		<0.003		<0.003	
8/17/2021		<0.003			<0.003	<0.003
8/18/2021	<0.003					
8/19/2021			<0.003	<0.003		

Time Series

Constituent: Antimony (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
3/12/2019	<0.003	<0.003			
3/13/2019			<0.003	<0.003	0.00086 (J)
4/2/2019	<0.003	<0.003			
4/3/2019			<0.003	<0.003	<0.003
9/24/2019		<0.003			
9/25/2019			<0.003		
9/26/2019	<0.003			<0.003	<0.003
3/2/2020		<0.003	<0.003		
3/3/2020				<0.003	0.0013 (J)
3/4/2020	<0.003				
3/26/2020			<0.003		
3/27/2020	<0.003			<0.003	
3/30/2020		<0.003			<0.003
9/16/2020		<0.003			
9/17/2020			<0.003		
9/21/2020	<0.003			0.0014 (J)	0.00051 (J)
2/10/2021	0.0019 (J)				
2/15/2021		0.00094 (J)			0.0021 (J)
2/16/2021			<0.003	<0.003	
3/15/2021	<0.003	<0.003			<0.003
3/16/2021			<0.003	<0.003	
8/16/2021		<0.003			
8/17/2021			<0.003	<0.003	<0.003
8/18/2021	<0.003				

Time Series

Constituent: Arsenic (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	<0.005	0.00127 (J)	<0.005			
5/23/2016						<0.005
7/11/2016	<0.005	0.002 (J)				
7/12/2016			0.0008 (J)			<0.005
8/30/2016	<0.005	0.0017 (J)	<0.005			
9/1/2016						<0.005
10/19/2016	<0.005	<0.005	<0.005			
10/24/2016						<0.005
12/6/2016	<0.005	<0.005	<0.005			
12/7/2016						<0.005
1/24/2017	<0.005	<0.005	<0.005			
1/26/2017						<0.005
3/21/2017	0.0005 (J)	<0.005	0.0007 (J)			
3/22/2017						<0.005
5/22/2017	<0.005	0.0006 (J)	0.0006 (J)			
5/24/2017						<0.005
4/2/2018	<0.005	<0.005				
4/3/2018			<0.005			
4/4/2018						<0.005
6/4/2018	<0.005	0.00088 (J)	0.0008 (J)			
6/5/2018						<0.005
10/1/2018	<0.005	<0.005	0.0011 (J)			
10/2/2018						<0.005
3/12/2019	<0.005	0.00069 (J)	0.00063 (J)			
3/13/2019						<0.005
4/1/2019			<0.005			
4/2/2019	<0.005	<0.005				
4/3/2019						<0.005
9/23/2019	0.00046 (J)	0.00067 (J)	0.0011 (J)			
9/27/2019						<0.005
3/2/2020	<0.005	0.00043 (J)	0.0004 (J)			
3/3/2020						<0.005
3/25/2020	<0.005	<0.005	<0.005			
4/1/2020						<0.005
9/15/2020	<0.005	<0.005	<0.005			
9/16/2020				<0.005	<0.005	<0.005
11/10/2020				0.0021 (J)	<0.005	
12/15/2020				<0.005	<0.005	
1/19/2021				0.0011 (J)	<0.005	
2/8/2021	<0.005					
2/9/2021		<0.005	<0.005	0.0017 (JB)	0.00083 (J)	
2/15/2021						<0.005
3/10/2021	<0.005				<0.005	
3/11/2021		<0.005	<0.005	0.0013 (J)		
3/12/2021						<0.005
8/11/2021	<0.005			0.0015 (J)		
8/12/2021		<0.005	<0.005			
8/13/2021					<0.005	
8/17/2021						<0.005

Time Series

Constituent: Arsenic (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				<0.005	<0.005	
5/23/2016	<0.005	0.0046 (J)	0.329			<0.005
7/12/2016	0.0015 (J)	0.005	0.297	<0.005	<0.005	<0.005
9/1/2016	<0.005	0.0043 (J)	0.314	<0.005	<0.005	<0.005
10/20/2016				<0.005	<0.005	<0.005
10/24/2016	<0.005	0.0049 (J)	0.334			
12/6/2016				<0.005	<0.005	<0.005
12/7/2016	<0.005	0.0046 (J)	0.35			
1/25/2017				<0.005	<0.005	
1/26/2017	<0.005	<0.005	0.424			<0.005
3/21/2017				<0.005	<0.005	
3/22/2017	0.0053	0.0019 (J)	0.419			0.0008 (J)
5/23/2017				<0.005	<0.005	<0.005
5/24/2017	<0.005	0.0022 (J)	0.393			
4/3/2018				<0.005	<0.005	<0.005
4/4/2018	<0.005	<0.005	0.49			
6/5/2018	0.0012 (J)		0.38	<0.005		
6/6/2018		0.0048 (J)			<0.005	<0.005
10/2/2018				0.0019 (J)	<0.005	<0.005
10/3/2018	<0.005	0.0037 (J)				
10/5/2018			0.34			
3/12/2019					<0.005	
3/13/2019	0.0024 (J)		0.42	<0.005		0.00075 (J)
3/14/2019		0.0026 (J)				
4/2/2019				<0.005		
4/3/2019	0.00094 (J)	0.0022 (J)			<0.005	<0.005
4/5/2019			0.36			
9/24/2019					<0.005	
9/25/2019				<0.005		
9/26/2019			0.44			
9/27/2019	0.0018 (J)	0.0061				0.00037 (J)
3/3/2020	0.0022 (J)	0.0023 (J)			<0.005	
3/4/2020			0.52	<0.005		<0.005
3/26/2020		0.0028 (J)				
3/27/2020				<0.005	<0.005	
3/30/2020			0.47			
3/31/2020	0.0022 (J)					<0.005
9/16/2020				<0.005	<0.005	
9/17/2020						<0.005
9/18/2020	0.00081 (J)	0.0031 (J)				
9/21/2020			0.39			
2/10/2021				<0.005		
2/12/2021	0.002 (J)	0.0045 (J)				
2/16/2021					<0.005	<0.005
2/22/2021			0.45			
3/15/2021				<0.005	<0.005	
3/16/2021	0.0017 (J)	0.0038 (J)				<0.005
3/17/2021			0.39			
8/16/2021				<0.005		
8/17/2021						<0.005
8/18/2021	<0.005	0.0028 (J)			<0.005	
8/19/2021			0.31			

Time Series

Constituent: Arsenic (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
3/13/2019		0.0023 (J)	<0.005		<0.005	<0.005
3/14/2019	<0.005			0.0019 (J)		
4/2/2019		<0.005				
4/3/2019	<0.005			<0.005	<0.005	
4/4/2019						0.0002 (J)
4/8/2019			<0.005			
9/25/2019		<0.005				
9/26/2019			<0.005		<0.005	<0.005
9/27/2019	<0.005			0.0011 (J)		
3/2/2020		0.00038 (J)				
3/3/2020				0.001 (J)		
3/4/2020	0.00045 (J)		<0.005		0.0006 (J)	0.00069 (J)
3/26/2020	<0.005			0.00075 (J)		
3/27/2020		<0.005				
3/30/2020			<0.005			
3/31/2020					<0.005	
4/2/2020						<0.005
9/17/2020		<0.005			<0.005	
9/18/2020				<0.005		<0.005
9/21/2020	<0.005		<0.005			
2/11/2021		0.00094 (J)				
2/12/2021	<0.005			<0.005		
2/16/2021			<0.005		0.0008 (J)	0.001 (J)
3/12/2021						<0.005
3/15/2021		<0.005				
3/16/2021				<0.005		
3/17/2021	<0.005		<0.005		<0.005	
8/17/2021		<0.005			<0.005	<0.005
8/18/2021	<0.005					
8/19/2021			<0.005	<0.005		

Time Series

Constituent: Arsenic (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
3/12/2019	<0.005	<0.005			
3/13/2019			<0.005	<0.005	<0.005
4/2/2019	<0.005	<0.005			
4/3/2019			<0.005	<0.005	<0.005
9/24/2019		<0.005			
9/25/2019			<0.005		
9/26/2019	<0.005			<0.005	<0.005
3/2/2020		<0.005	<0.005		
3/3/2020				<0.005	<0.005
3/4/2020	<0.005				
3/26/2020			<0.005		
3/27/2020	<0.005			<0.005	
3/30/2020		0.00037 (J)			<0.005
9/16/2020		<0.005			
9/17/2020			<0.005		
9/21/2020	<0.005			<0.005	<0.005
2/10/2021	0.0011 (J)				
2/15/2021		<0.005			<0.005
2/16/2021			<0.005	<0.005	
3/15/2021	<0.005	<0.005			<0.005
3/16/2021			<0.005	<0.005	
8/16/2021		<0.005			
8/17/2021			<0.005	<0.005	<0.005
8/18/2021	<0.005				

Time Series

Constituent: Barium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	0.0346	0.114	0.111			
5/23/2016						0.0877
7/11/2016	0.0311	0.112				
7/12/2016			0.115			0.0926
8/30/2016	0.0293	0.131	0.113			
9/1/2016						0.0994
10/19/2016	0.0293	0.111	0.123			
10/24/2016						0.101
12/6/2016	0.0304	0.108	0.127			
12/7/2016						0.107
1/24/2017	0.028	0.102	0.126			
1/26/2017						0.0538
3/21/2017	0.0275	0.095	0.12			
3/22/2017						0.0962
5/22/2017	0.0281	0.103	0.117			
5/24/2017						0.0996
4/2/2018	0.026	0.099				
4/3/2018			0.11			
4/4/2018						0.084
6/4/2018	0.035	0.11	0.12			
6/5/2018						0.086
10/1/2018	0.029	0.11	0.14			
10/2/2018						0.076
3/12/2019	0.042	0.12	0.13			
3/13/2019						0.044
4/1/2019			0.13			
4/2/2019	0.04	0.13				
4/3/2019						0.076
9/23/2019	0.042	0.13	0.13			
9/27/2019						0.078
3/2/2020	0.034	0.11	0.14			
3/3/2020						0.048
3/25/2020	0.043	0.12	0.13			
4/1/2020						0.058
9/15/2020	0.035	0.12	0.12			
9/16/2020				0.26	0.24	0.068
11/10/2020				0.25	0.38	
12/15/2020				0.29	0.39	
1/19/2021				0.32	0.41	
2/8/2021	0.032					
2/9/2021		0.12	0.13	0.34	0.46	
2/15/2021						0.06
3/10/2021	0.03				0.26	
3/11/2021		0.07	0.13	0.32		
3/12/2021						0.058
8/11/2021	0.03			0.28		
8/12/2021		0.12	0.11			
8/13/2021					0.22	
8/17/2021						0.055

Time Series

Constituent: Barium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				0.0687	0.0808	
5/23/2016	0.0466	0.133	0.0779			0.117
7/12/2016	0.0616	0.135	0.0697	0.0731	0.083	0.13
9/1/2016	0.0497	0.123	0.07	0.0747	0.0829	0.13
10/20/2016				0.072	0.0811	0.0806
10/24/2016	0.0794	0.135	0.0882			
12/6/2016				0.0752	0.0845	0.128
12/7/2016	0.1	0.13	0.0798			
1/25/2017				0.0747	0.078	
1/26/2017	0.0696	0.127	0.0738			0.142
3/21/2017				0.0722	0.0791	
3/22/2017	0.0346	0.112	0.0755			0.122
5/23/2017				0.0794	0.0846	0.127
5/24/2017	0.0437	0.106	0.0627			
4/3/2018				0.075	0.065	0.1
4/4/2018	0.029	0.083	0.099			
6/5/2018	0.039		0.13	0.071		
6/6/2018		0.09			0.063	0.11
10/2/2018				0.078	0.061	0.11
10/3/2018	0.033	0.087				
10/5/2018			0.076			
3/12/2019					0.062	
3/13/2019	0.024		0.1	0.083		0.1
3/14/2019		0.081				
4/2/2019				0.072		
4/3/2019	0.023	0.077			0.066	0.12
4/5/2019			0.079			
9/24/2019					0.053	
9/25/2019				0.061		
9/26/2019			0.11			
9/27/2019	0.033	0.096				0.11
3/3/2020	0.022	0.092			0.052	
3/4/2020			0.1	0.068		0.11
3/26/2020		0.089				
3/27/2020				0.059	0.059	
3/30/2020			0.08			
3/31/2020	0.026					0.11
9/16/2020				0.068	0.06	
9/17/2020						0.11
9/18/2020	0.043	0.086				
9/21/2020			0.052			
2/10/2021				0.069		
2/12/2021	0.039	0.09				
2/16/2021					0.069	0.11
2/22/2021			0.061			
3/15/2021				0.074	0.063	
3/16/2021	0.035	0.084				0.11
3/17/2021			0.056			
8/16/2021				0.068		
8/17/2021						0.095
8/18/2021	0.04	0.083			0.062	
8/19/2021			0.049			

Time Series

Constituent: Barium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
3/13/2019		0.087	0.053		0.099	1.5
3/14/2019	0.06			0.44		
4/2/2019		0.08				
4/3/2019	0.05			0.38	0.12	
4/4/2019						1.2
4/8/2019			0.043			
9/25/2019		0.085				
9/26/2019			0.12		0.12	0.95
9/27/2019	0.068			0.39		
3/2/2020		0.099				
3/3/2020				0.42		
3/4/2020	0.069		0.081		0.17	0.95
3/26/2020	0.067			0.45		
3/27/2020		0.093				
3/30/2020			0.056			
3/31/2020					0.11	
4/2/2020						1
9/17/2020		0.096			0.099	
9/18/2020				0.44		1
9/21/2020	0.056		0.053			
2/11/2021		0.093				
2/12/2021	0.051			0.46		
2/16/2021			0.062		0.093	1
3/12/2021						1.1
3/15/2021		0.096				
3/16/2021				0.51		
3/17/2021	0.049		0.055		0.094	
8/17/2021		0.089			0.072	1.1
8/18/2021	0.045					
8/19/2021			0.048	0.58		

Time Series

Constituent: Barium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
3/12/2019	0.82	0.089			
3/13/2019			0.056	0.1	0.063
4/2/2019	0.37	0.078			
4/3/2019			0.049	0.09	0.058
9/24/2019		0.081			
9/25/2019			0.046		
9/26/2019	0.15			0.089	0.066
3/2/2020		0.088	0.049		
3/3/2020				0.09	0.043
3/4/2020	0.77				
3/26/2020			0.046		
3/27/2020	0.64			0.086	
3/30/2020		0.08			0.05
9/16/2020		0.076			
9/17/2020			0.043		
9/21/2020	0.18			0.083	0.065
2/10/2021	0.26				
2/15/2021		0.081			0.048
2/16/2021			0.05	0.085	
3/15/2021	0.45	0.078			0.053
3/16/2021			0.046	0.081	
8/16/2021		0.074			
8/17/2021			0.045	0.081	0.057
8/18/2021	0.53				

Time Series

Constituent: Beryllium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	<0.0005	<0.0005	<0.0005			
5/23/2016						<0.0005
7/11/2016	<0.0005	0.0001 (J)				
7/12/2016			<0.0005			<0.0005
8/30/2016	<0.0005	<0.0005	<0.0005			
9/1/2016						<0.0005
10/19/2016	<0.0005	0.0001 (J)	<0.0005			
10/24/2016						<0.0005
12/6/2016	<0.0005	0.0002 (J)	<0.0005			
12/7/2016						<0.0005
1/24/2017	<0.0005	0.0001 (J)	<0.0005			
1/26/2017						<0.0005
3/21/2017	<0.0005	0.0001 (J)	<0.0005			
3/22/2017						<0.0005
5/22/2017	<0.0005	0.0001 (J)	<0.0005			
5/24/2017						<0.0005
4/2/2018	<0.0005	<0.0005				
4/3/2018			<0.0005			
4/4/2018						<0.0005
3/12/2019	<0.0005	0.00017 (J)	<0.0005			
3/13/2019						<0.0005
4/1/2019			<0.0005			
4/2/2019	<0.0005	0.00015 (J)				
4/3/2019						<0.0005
9/23/2019	<0.0005	0.00011 (J)	<0.0005			
9/27/2019						<0.0005
3/2/2020	<0.0005	0.00014 (J)	<0.0005			
3/3/2020						<0.0005
3/25/2020	<0.0005	0.00016 (J)	<0.0005			
4/1/2020						<0.0005
9/15/2020	<0.0005	0.00013 (J)	<0.0005			
9/16/2020				<0.0005	<0.0005	<0.0005
11/10/2020				<0.0005	<0.0005	
12/15/2020				<0.0005	<0.0005	
1/19/2021				<0.0005	<0.0005	
2/8/2021	<0.0005					
2/9/2021		0.00014 (J)	<0.0005	<0.0005	<0.0005	
2/15/2021						<0.0005
3/10/2021	<0.0005				<0.0005	
3/11/2021		8.6E-05 (J)	<0.0005	<0.0005		
3/12/2021						<0.0005
8/11/2021	<0.0005			<0.0005		
8/12/2021		0.00014 (J)	<0.0005			
8/13/2021					<0.0005	
8/17/2021						<0.0005

Time Series

Constituent: Beryllium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				<0.0005	<0.0005	
5/23/2016	<0.0005	<0.0005	<0.0005			<0.0005
7/12/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
9/1/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10/20/2016				<0.0005	<0.0005	<0.0005
10/24/2016	<0.0005	<0.0005	<0.0005			
12/6/2016				<0.0005	<0.0005	<0.0005
12/7/2016	<0.0005	<0.0005	<0.0005			
1/25/2017				<0.0005	<0.0005	
1/26/2017	<0.0005	<0.0005	<0.0005			<0.0005
3/21/2017				<0.0005	<0.0005	
3/22/2017	9E-05 (J)	<0.0005	<0.0005			<0.0005
5/23/2017				<0.0005	<0.0005	<0.0005
5/24/2017	<0.0005	<0.0005	<0.0005			
4/3/2018				<0.0005	<0.0005	<0.0005
4/4/2018	<0.0005	<0.0005	<0.0005			
3/12/2019					<0.0005	
3/13/2019	0.0001 (J)		6.2E-05 (J)	<0.0005		<0.0005
3/14/2019		<0.0005				
4/2/2019				<0.0005		
4/3/2019	0.00017 (J)	<0.0005			7.4E-05 (J)	<0.0005
4/5/2019			<0.0005			
9/24/2019					<0.0005	
9/25/2019				<0.0005		
9/26/2019			0.00011 (J)			
9/27/2019	8.6E-05 (J)	<0.0005				<0.0005
3/3/2020	0.00012 (J)	<0.0005			<0.0005	
3/4/2020			9.3E-05 (J)	7.7E-05 (J)		<0.0005
3/26/2020		<0.0005				
3/27/2020				<0.0005	<0.0005	
3/30/2020			9.9E-05 (J)			
3/31/2020	0.00015 (J)					<0.0005
9/16/2020				<0.0005	0.0001 (J)	
9/17/2020						<0.0005
9/18/2020	<0.0005	<0.0005				
9/21/2020			0.00011 (J)			
2/10/2021				8.1E-05 (J)		
2/12/2021	<0.0005	<0.0005				
2/16/2021					7.1E-05 (J)	<0.0005
2/22/2021			9.7E-05 (J)			
3/15/2021				0.00019 (J)	7.8E-05 (J)	
3/16/2021	8.1E-05 (J)	<0.0005				<0.0005
3/17/2021			9E-05 (J)			
8/16/2021				<0.0005		
8/17/2021						<0.0005
8/18/2021	<0.0005	<0.0005			8.7E-05 (J)	
8/19/2021			7.3E-05 (J)			

Time Series

Constituent: Beryllium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
3/13/2019		<0.0005	<0.0005		<0.0005	<0.0005
3/14/2019	<0.0005			<0.0005		
4/2/2019		<0.0005				
4/3/2019	<0.0005			<0.0005	<0.0005	
4/4/2019						<0.0005
4/8/2019			<0.0005			
9/25/2019		<0.0005				
9/26/2019			<0.0005		<0.0005	<0.0005
9/27/2019	<0.0005			<0.0005		
3/2/2020		<0.0005				
3/3/2020				<0.0005		
3/4/2020	<0.0005		<0.0005		<0.0005	<0.0005
3/26/2020	<0.0005			<0.0005		
3/27/2020		<0.0005				
3/30/2020			<0.0005			
3/31/2020					<0.0005	
4/2/2020						<0.0005
9/17/2020		<0.0005			<0.0005	
9/18/2020				<0.0005		<0.0005
9/21/2020	<0.0005		<0.0005			
2/11/2021		<0.0005				
2/12/2021	<0.0005			<0.0005		
2/16/2021			<0.0005		<0.0005	<0.0005
3/12/2021						<0.0005
3/15/2021		<0.0005				
3/16/2021				<0.0005		
3/17/2021	<0.0005		<0.0005		<0.0005	
8/17/2021		<0.0005			<0.0005	<0.0005
8/18/2021	5.8E-05 (J)					
8/19/2021			<0.0005	<0.0005		

Time Series

Constituent: Beryllium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
3/12/2019	<0.0005	<0.0005			
3/13/2019			<0.0005	<0.0005	<0.0005
4/2/2019	<0.0005	<0.0005			
4/3/2019			<0.0005	<0.0005	5.1E-05 (J)
9/24/2019		<0.0005			
9/25/2019			<0.0005		
9/26/2019	<0.0005			<0.0005	<0.0005
3/2/2020		<0.0005	<0.0005		
3/3/2020				<0.0005	<0.0005
3/4/2020	0.00014 (J)				
3/26/2020			<0.0005		
3/27/2020	<0.0005			<0.0005	
3/30/2020		<0.0005			<0.0005
9/16/2020		<0.0005			
9/17/2020			<0.0005		
9/21/2020	<0.0005			<0.0005	<0.0005
2/10/2021	5.4E-05 (J)				
2/15/2021		<0.0005			<0.0005
2/16/2021			<0.0005	<0.0005	
3/15/2021	4.8E-05 (J)	<0.0005			<0.0005
3/16/2021			<0.0005	<0.0005	
8/16/2021		<0.0005			
8/17/2021			<0.0005	<0.0005	<0.0005
8/18/2021	<0.0005				

Time Series

Constituent: Boron (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	0.0214 (J)	0.0321 (J)	<0.04			
5/23/2016						0.72
7/11/2016	0.0142 (J)	0.0337 (J)				
7/12/2016			0.0074 (J)			0.778
8/30/2016	0.0074 (J)	0.0173 (J)	<0.04			
9/1/2016						0.786
10/19/2016	0.0224 (J)	0.0341 (J)	0.0085 (J)			
10/24/2016						0.831
12/6/2016	0.0211 (J)	0.0326 (J)	0.0085 (J)			
12/7/2016						1.01
1/24/2017	0.0165 (J)	0.0365 (J)	0.01 (J)			
1/26/2017						0.108
3/21/2017	0.0187 (J)	0.0349 (J)	0.0079 (J)			
3/22/2017						0.788
5/22/2017	0.0782	0.0475	0.0131 (J)			
5/24/2017						0.814
10/3/2017	0.0198 (J)	0.0386 (J)	0.0097 (J)			0.871
6/4/2018	0.02 (J)	0.036 (J)	0.017 (J)			
6/5/2018						1.2
10/1/2018	0.013 (J)	0.035 (J)	0.0061 (J)			
10/2/2018						0.62
4/1/2019			0.0066 (J)			
4/2/2019	0.016 (J)	0.034 (J)				
4/3/2019						0.66
9/23/2019	0.021 (J)	0.04 (J)	0.0081 (J)			
9/27/2019						1
3/25/2020	0.025 (J)	0.039 (J)	0.0096 (J)			
4/1/2020						0.23
6/16/2020	0.021 (J)		0.01 (J)			
9/15/2020	0.017 (J)	0.044 (J)	0.0071 (J)			
9/16/2020				0.061 (J)	0.23	1.1
11/10/2020				0.057 (J)	0.29	
12/15/2020				0.052 (J)	0.31	
1/19/2021				0.049 (J)	0.4	
3/10/2021	0.015 (J)				0.39	
3/11/2021		0.056	0.015 (J)	0.06		
3/12/2021						0.64
8/11/2021	0.02 (J)			0.042		
8/12/2021		0.044	<0.04			
8/13/2021					0.31	
8/17/2021						0.88

Time Series

Constituent: Boron (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				0.885	1.71	
5/23/2016	0.787	2.2	2.15			1.76
7/12/2016	1.17	1.98	1.91	0.857	1.43	1.56
9/1/2016	1.49	2.28	2.3	0.904	1.91	2
10/20/2016				0.936	1.72	1.68
10/24/2016	2.54	2.75	4.01			
12/6/2016				1.06	2.06	2.15
12/7/2016	2.96	3.35	3.85			
1/25/2017				0.764	2.01	
1/26/2017	2.23	3.07	2.45			1.87
3/21/2017				0.857	2.08	
3/22/2017	0.84	3.04	1.99			1.99
5/23/2017				0.91	2.32	2.29
5/24/2017	2.29	2.95	1.74			
10/3/2017	1.47	2.35	1.43	0.967	2.84	2.05
6/5/2018	1.3		1.3	0.86		
6/6/2018		2.5			2.6	2.3
10/2/2018				0.98	2.7	2.5
10/3/2018	0.91	2.3				
10/5/2018			1.6			
4/2/2019				0.99		
4/3/2019	0.23	1.8			2.8	2.3
4/5/2019			0.86 (J)			
9/24/2019					2.8	
9/25/2019				1.1		
9/26/2019			1.7			
9/27/2019	0.53	2.1				2.9
3/26/2020		1.6				
3/27/2020				1.2	2.4	
3/30/2020			1.8			
3/31/2020	0.17					2.2
6/16/2020					2.2	
6/17/2020				1		
9/16/2020				1.1	1.9	
9/17/2020						2
9/18/2020	0.91	1.6				
9/21/2020			1.6			
3/15/2021				1.1	1.7	
3/16/2021	0.53	1.9				2.2
3/17/2021			0.89			
8/16/2021				1.1		
8/17/2021						2.3
8/18/2021	0.91	1.9			1.8	
8/19/2021			0.73			

Time Series

Constituent: Boron (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
4/2/2019		0.11				
4/3/2019	0.63			0.37	1.5	
4/4/2019						0.12 (J)
4/8/2019			0.47 (J)			
9/25/2019		0.091				
9/26/2019			0.49		2	0.14
9/27/2019	0.58			0.36		
3/26/2020	1			0.44		
3/27/2020		0.12				
3/30/2020			0.51			
3/31/2020					1.8	
4/2/2020						0.13
9/17/2020		0.11			2	
9/18/2020				0.36		0.12
9/21/2020	0.89		0.45			
3/12/2021						0.13
3/15/2021		0.12				
3/16/2021				0.4		
3/17/2021	0.69		0.49		2.1	
8/17/2021		0.11			2.2	0.14
8/18/2021	0.55					
8/19/2021			0.52	0.4		

Time Series

Constituent: Boron (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
4/2/2019	0.17	1.2			
4/3/2019			0.03 (J)	0.67	0.094
9/24/2019		1.2			
9/25/2019			0.11		
9/26/2019	0.6			0.93	0.26
3/26/2020			0.041 (J)		
3/27/2020	0.14			0.77	
3/30/2020		1.3			0.051 (J)
9/16/2020		1.7			
9/17/2020			0.067 (J)		
9/21/2020	0.45			0.82	0.2
3/15/2021	0.36	1.2			0.16
3/16/2021			0.037 (J)	0.81	
8/16/2021		1.1			
8/17/2021			0.026 (J)	0.85	0.2
8/18/2021	0.72				

Time Series

Constituent: Cadmium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	<0.0005	<0.0005	<0.0005			
5/23/2016						0.000115 (J)
7/11/2016	<0.0005	<0.0005				
7/12/2016			<0.0005			<0.0005
8/30/2016	<0.0005	<0.0005	<0.0005			
9/1/2016						0.0001 (J)
10/19/2016	<0.0005	<0.0005	<0.0005			
10/24/2016						0.0001 (J)
12/6/2016	<0.0005	<0.0005	<0.0005			
12/7/2016						0.0001 (J)
1/24/2017	<0.0005	0.0001 (J)	<0.0005			
1/26/2017						<0.0005
3/21/2017	<0.0005	7E-05 (J)	<0.0005			
3/22/2017						0.0001 (J)
5/22/2017	<0.0005	0.0001 (J)	<0.0005			
5/24/2017						0.0002 (J)
4/2/2018	<0.0005	<0.0005				
4/3/2018			<0.0005			
4/4/2018						<0.0005
3/12/2019	<0.0005	0.00013 (J)	<0.0005			
3/13/2019						<0.0005
4/1/2019			<0.0005			
4/2/2019	<0.0005	0.00015 (J)				
4/3/2019						0.0001 (J)
9/23/2019	<0.0005	<0.0005	<0.0005			
9/27/2019						<0.0005
3/2/2020	<0.0005	<0.0005	<0.0005			
3/3/2020						<0.0005
3/25/2020	<0.0005	0.00014 (J)	<0.0005			
4/1/2020						<0.0005
9/15/2020	<0.0005	0.00012 (J)	<0.0005			
9/16/2020				<0.0005	<0.0005	<0.0005
11/10/2020				<0.0005	<0.0005	
12/15/2020				<0.0005	<0.0005	
1/19/2021				<0.0005	<0.0005	
2/8/2021	<0.0005					
2/9/2021		0.00016 (J)	<0.0005	<0.0005	<0.0005	
2/15/2021						<0.0005
3/10/2021	<0.0005				<0.0005	
3/11/2021		<0.0005	<0.0005	<0.0005		
3/12/2021						<0.0005
8/11/2021	<0.0005			<0.0005		
8/12/2021		0.00014 (J)	<0.0005			
8/13/2021					<0.0005	
8/17/2021						<0.0005

Time Series

Constituent: Cadmium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				<0.0005	0.00024 (J)	
5/23/2016	<0.0005	<0.0005	<0.0005			<0.0005
7/12/2016	<0.0005	<0.0005	<0.0005	<0.0005	0.0002 (J)	<0.0005
9/1/2016	<0.0005	<0.0005	<0.0005	<0.0005	0.0001 (J)	<0.0005
10/20/2016				<0.0005	0.0001 (J)	0.0002 (J)
10/24/2016	<0.0005	<0.0005	<0.0005			
12/6/2016				0.0002 (J)	0.0017	0.0001 (J)
12/7/2016	0.0001 (J)	0.0002 (J)	<0.0005			
1/25/2017				0.0002 (J)	0.0002 (J)	
1/26/2017	<0.0005	<0.0005	<0.0005			<0.0005
3/21/2017				0.0002 (J)	0.0002 (J)	
3/22/2017	0.0001 (J)	0.0003 (J)	<0.0005			7E-05 (J)
5/23/2017				0.0001 (J)	0.0003 (J)	<0.0005
5/24/2017	<0.0005	9E-05 (J)	<0.0005			
4/3/2018				<0.0005	<0.0005	<0.0005
4/4/2018	<0.0005	<0.0005	<0.0005			
3/12/2019					0.0002 (J)	
3/13/2019	<0.0005		<0.0005	<0.0005		<0.0005
3/14/2019		<0.0005				
4/2/2019				<0.0005		
4/3/2019	9.6E-05 (J)	<0.0005			0.00032 (J)	<0.0005
4/5/2019			<0.0005			
9/24/2019					0.0002 (J)	
9/25/2019				<0.0005		
9/26/2019			<0.0005			
9/27/2019	<0.0005	<0.0005				<0.0005
3/3/2020	<0.0005	0.00015 (J)			0.00017 (J)	
3/4/2020			<0.0005	<0.0005		<0.0005
3/26/2020		<0.0005				
3/27/2020				<0.0005	0.00014 (J)	
3/30/2020			<0.0005			
3/31/2020	<0.0005					<0.0005
9/16/2020				<0.0005	0.00023 (J)	
9/17/2020						<0.0005
9/18/2020	<0.0005	<0.0005				
9/21/2020			<0.0005			
2/10/2021				<0.0005		
2/12/2021	<0.0005	<0.0005				
2/16/2021					0.00037 (J)	<0.0005
2/22/2021			<0.0005			
3/15/2021				<0.0005	0.00017 (J)	
3/16/2021	<0.0005	<0.0005				<0.0005
3/17/2021			<0.0005			
8/16/2021				<0.0005		
8/17/2021						<0.0005
8/18/2021	<0.0005	<0.0005			0.0002 (J)	
8/19/2021			<0.0005			

Time Series

Constituent: Cadmium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
3/13/2019		<0.0005	<0.0005		<0.0005	<0.0005
3/14/2019	<0.0005			<0.0005		
4/2/2019		<0.0005				
4/3/2019	<0.0005			<0.0005	<0.0005	
4/4/2019						<0.0005
4/8/2019			<0.0005			
9/25/2019		<0.0005				
9/26/2019			<0.0005		<0.0005	<0.0005
9/27/2019	0.00013 (J)			<0.0005		
3/2/2020		<0.0005				
3/3/2020				<0.0005		
3/4/2020	0.00026 (J)		<0.0005		<0.0005	<0.0005
3/26/2020	0.00019 (J)			<0.0005		
3/27/2020		<0.0005				
3/30/2020			<0.0005			
3/31/2020					<0.0005	
4/2/2020						<0.0005
9/17/2020		<0.0005			<0.0005	
9/18/2020				<0.0005		<0.0005
9/21/2020	0.00018 (J)		<0.0005			
2/11/2021		<0.0005				
2/12/2021	0.0002 (J)			<0.0005		
2/16/2021			<0.0005		<0.0005	<0.0005
3/12/2021						<0.0005
3/15/2021		<0.0005				
3/16/2021				<0.0005		
3/17/2021	0.00016 (J)		<0.0005		<0.0005	
8/17/2021		<0.0005			<0.0005	<0.0005
8/18/2021	0.00027 (J)					
8/19/2021			<0.0005	<0.0005		

Time Series

Constituent: Cadmium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
3/12/2019	<0.0005	<0.0005			
3/13/2019			<0.0005	<0.0005	<0.0005
4/2/2019	<0.0005	<0.0005			
4/3/2019			<0.0005	<0.0005	<0.0005
9/24/2019		<0.0005			
9/25/2019			<0.0005		
9/26/2019	<0.0005			<0.0005	<0.0005
3/2/2020		<0.0005	<0.0005		
3/3/2020				<0.0005	<0.0005
3/4/2020	<0.0005				
3/26/2020			<0.0005		
3/27/2020	<0.0005			<0.0005	
3/30/2020		<0.0005			<0.0005
9/16/2020		<0.0005			
9/17/2020			<0.0005		
9/21/2020	<0.0005			<0.0005	<0.0005
2/10/2021	<0.0005				
2/15/2021		<0.0005			<0.0005
2/16/2021			<0.0005	<0.0005	
3/15/2021	<0.0005	<0.0005			<0.0005
3/16/2021			<0.0005	<0.0005	
8/16/2021		<0.0005			
8/17/2021			<0.0005	<0.0005	<0.0005
8/18/2021	<0.0005				

Time Series

Constituent: Calcium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	138	22.9	76.2			
5/23/2016						167
7/11/2016	97.2	22.3				
7/12/2016			61.5			143
8/30/2016	97.5	26.4	65.1			
9/1/2016						156
10/19/2016	99.2	21.7	73.2			
10/24/2016						156
12/6/2016	105	18.2	74.9			
12/7/2016						183
1/24/2017	95.7	18.5	69.6			
1/26/2017						82.6
3/21/2017	106	18.6	75.7			
3/22/2017						154
5/22/2017	107	17.8	71.5			
5/24/2017						171
10/3/2017	102	20.2	76.3			162
6/4/2018	124	19.1	73.4			
6/5/2018						167
10/1/2018	108	20.5 (J)	80.9			
10/2/2018						144
4/1/2019			80.5			
4/2/2019	132	22.5 (J)				
4/3/2019						137
9/23/2019	118	19.5	71			
9/27/2019						157
3/25/2020	127	23	89.8			
4/1/2020						96.2
6/16/2020	130		85.1			
9/15/2020	103	21.1	73.1			
9/16/2020				56	30	139
11/10/2020				63.3	33.6	
12/15/2020				62.6	28.7	
1/19/2021				60.1	33	
3/10/2021	111				5.9	
3/11/2021		43.8	83.8	59.6		
3/12/2021						146 (M1)
8/11/2021	113			61		
8/12/2021		21.9	84			
8/13/2021					28.9	
8/17/2021						153

Time Series

Constituent: Calcium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				117	159	
5/23/2016	131	195	133			179
7/12/2016	124	181	101	88.8	127	174
9/1/2016	107	179	120	96.3	135	170
10/20/2016				96.9	134	133
10/24/2016	145	193	127			
12/6/2016				104	142	181
12/7/2016	159	193	113			
1/25/2017				94.5	142	
1/26/2017	121	172	77.9			175
3/21/2017				109	148	
3/22/2017	130	162	85.1			183
5/23/2017				93.3	140	181
5/24/2017	117	158	77.1			
10/3/2017	87.7	130	62	108	158	188
6/5/2018	113		110	99.8		
6/6/2018		136			127	184
10/2/2018				108	118	173
10/3/2018	89	125				
10/5/2018			73.6			
4/2/2019				101		
4/3/2019	112	114			125	164
4/5/2019			77.1			
9/24/2019					113	
9/25/2019				105		
9/26/2019			195			
9/27/2019	113	153				175
3/26/2020		145				
3/27/2020				119	133	
3/30/2020			234			
3/31/2020	124					182
6/16/2020					120	
6/17/2020				112		
9/16/2020				98	119	
9/17/2020						164
9/18/2020	122	163				
9/21/2020			173			
3/15/2021				113	156	
3/16/2021	132	166				182
3/17/2021			184			
8/16/2021				112		
8/17/2021						183
8/18/2021	128	163			147	
8/19/2021			179			

Time Series

Constituent: Calcium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
4/2/2019		109				
4/3/2019	74.9			25.4	122	
4/4/2019						26.3
4/8/2019			83			
9/25/2019		113				
9/26/2019			83.1		158	32.1
9/27/2019	90			26.4		
3/26/2020	171			27		
3/27/2020		126				
3/30/2020			84.4			
3/31/2020					155	
4/2/2020						28.4
9/17/2020		110			150	
9/18/2020				25.1		24.8
9/21/2020	135		87.6			
3/12/2021						28
3/15/2021		121				
3/16/2021				24.8		
3/17/2021	130		102		175	
8/17/2021		123			177	28.5
8/18/2021	125					
8/19/2021			99.5	23.8		

Time Series

Constituent: Calcium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
4/2/2019	64.6	131			
4/3/2019			82	178	50.2
9/24/2019		140			
9/25/2019			105		
9/26/2019	84			189	83.9
3/26/2020			89.6		
3/27/2020	53			186	
3/30/2020		148			31.1
9/16/2020		126			
9/17/2020			103		
9/21/2020	76.8			173	75.3
3/15/2021	66.1	145			76.9
3/16/2021			71.8	184	
8/16/2021		140			
8/17/2021			73.3	181	90.7
8/18/2021	82.8				

Time Series

Constituent: Chloride (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	9.94	6.14	5.93			
5/23/2016						56.1
7/11/2016	6.3	5.9				
7/12/2016			6.2			63
8/30/2016	6	6.2	6.4			
9/1/2016						77
10/19/2016	5.8	6.1	6.5			
10/24/2016						99
12/6/2016	5.4	6	7.2			
12/7/2016						96
1/24/2017	5.2	6.1	6.4			
1/26/2017						7
3/21/2017	4.6	5.9	7.5			
3/22/2017						82
5/22/2017	4.6	5.9	6.5			
5/24/2017						81
10/3/2017	5.6	6.3	6.5			100
6/4/2018	13.1	6.1	6.3			
6/5/2018						66.6
10/1/2018	6.6	6.4	6.4			
10/2/2018						48.3
4/1/2019			6.5			
4/2/2019	20.3	5.8				
4/3/2019						49.3
9/23/2019	17.7	5.1	5.9			
9/27/2019						49.9
3/25/2020	20.4	5.2	6.1			
4/1/2020						5.4
6/16/2020	41.1		5.8			
9/15/2020	13.4	5	6			
9/16/2020				4.1	7.2	39.7
11/10/2020				4.4	7.8	
12/15/2020				4.7	9.4	
1/19/2021				4.1	9.5	
3/10/2021	7.4				12.3	
3/11/2021		5.1	5.9	4.5		
3/12/2021						35
8/11/2021	9.6			3.5		
8/12/2021		5.2	4.8			
8/13/2021					39.9	
8/17/2021						28.3

Time Series

Constituent: Chloride (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				50.4	109	
5/23/2016	51.9	160	93.2			152
7/12/2016	100	160	78	50	110	160
9/1/2016	58	140	100	50	110	160
10/20/2016				49	110	110
10/24/2016	220	160	140			
12/6/2016				51	100	150
12/7/2016	180	190	110			
1/25/2017				54	110	
1/26/2017	90	160	70			170
3/21/2017				46	110	
3/22/2017	37	130	59			160
5/23/2017				49	130	150
5/24/2017	69	120	50			
10/3/2017	28	93	29	52	130	160
6/5/2018	56.1		72.3	52.3		
6/6/2018		46.4			44.8	138
10/2/2018				52.6	89.4	142
10/3/2018	24.8	88.4				
10/5/2018			32.3			
4/2/2019				55.5		
4/3/2019	4.6	62.8			91.6	130
4/5/2019			36.4			
9/24/2019					60.2	
9/25/2019				49.8		
9/26/2019			109			
9/27/2019	27.9	81				126
3/26/2020		48				
3/27/2020				48.3	79.8	
3/30/2020			75.1			
3/31/2020	3.2					105
6/16/2020					67.9	
6/17/2020				45.2		
9/16/2020				46.4	74.6	
9/17/2020						105
9/18/2020	34.9	74.6				
9/21/2020			41.2			
3/15/2021				44.5	72.4	
3/16/2021	11.5	56.8				94.7
3/17/2021			31.4			
8/16/2021				40.3		
8/17/2021						88.6
8/18/2021	19.9	47.3			50.9	
8/19/2021			24.4			

Time Series

Constituent: Chloride (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
4/2/2019		27.5				
4/3/2019	19.5			32	90.6	
4/4/2019						26.9
4/8/2019			43.3			
9/25/2019		25.7				
9/26/2019			39.7		118	31.8
9/27/2019	46.2			36.2		
3/26/2020	64			34.6		
3/27/2020		28.8				
3/30/2020			37.4			
3/31/2020					98	
4/2/2020						27.9
9/17/2020		29.7			103	
9/18/2020				33.4		30.4
9/21/2020	35		45.2			
3/12/2021						31.3
3/15/2021		31.1				
3/16/2021				29.2		
3/17/2021	19.8		42.9		95.3	
8/17/2021		28.3			89.2	30
8/18/2021	14.3					
8/19/2021			37.2	30.8		

Time Series

Constituent: Chloride (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
4/2/2019	44	80.9			
4/3/2019			1.8	60.9	5.6
9/24/2019		83.8			
9/25/2019			35.9		
9/26/2019	43.5			64.9	15.6
3/26/2020			0.73 (J)		
3/27/2020	33			48.6	
3/30/2020		71.2			1.5
9/16/2020		75.3			
9/17/2020			28.7		
9/21/2020	42.9			58.1	11.1
3/15/2021	35.8	73.6			6.8
3/16/2021			1.4	49.8	
8/16/2021		68			
8/17/2021			1.4	43.5	8.9
8/18/2021	33.7				

Time Series

Constituent: Chromium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	<0.005	<0.005	<0.005			
5/23/2016						<0.005
7/11/2016	<0.005	<0.005				
7/12/2016			<0.005			<0.005
8/30/2016	<0.005	<0.005	<0.005			
9/1/2016						<0.005
10/19/2016	<0.005	<0.005	<0.005			
10/24/2016						<0.005
12/6/2016	<0.005	<0.005	<0.005			
12/7/2016						<0.005
1/24/2017	<0.005	<0.005	<0.005			
1/26/2017						<0.005
3/21/2017	0.0005 (J)	<0.005	<0.005			
3/22/2017						<0.005
5/22/2017	<0.005	<0.005	0.0007 (J)			
5/24/2017						<0.005
4/2/2018	<0.005	<0.005				
4/3/2018			<0.005			
4/4/2018						<0.005
3/12/2019	<0.005	<0.005	<0.005			
3/13/2019						<0.005
4/1/2019			<0.005			
4/2/2019	<0.005	0.0079 (J)				
4/3/2019						0.02
9/23/2019	<0.005	0.00058 (J)	<0.005			
9/27/2019						<0.005
3/2/2020	<0.005	0.00041 (J)	<0.005			
3/3/2020						<0.005
3/25/2020	0.00072 (J)	<0.005	<0.005			
4/1/2020						<0.005
9/15/2020	<0.005	<0.005	<0.005			
9/16/2020				<0.005	0.0012 (J)	<0.005
11/10/2020				<0.005	0.00089 (J)	
12/15/2020				<0.005	0.00072 (J)	
1/19/2021				<0.005	0.0011 (J)	
2/8/2021	<0.005					
2/9/2021		<0.005	<0.005	0.00095 (J)	0.00066 (J)	
2/15/2021						<0.005
3/10/2021	<0.005				<0.005	
3/11/2021		<0.005	<0.005	<0.005		
3/12/2021						<0.005
8/11/2021	<0.005			<0.005		
8/12/2021		<0.005	<0.005			
8/13/2021					0.0016 (J)	
8/17/2021						<0.005

Time Series

Constituent: Chromium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				<0.005	<0.005	
5/23/2016	<0.005	<0.005	<0.005			<0.005
7/12/2016	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
9/1/2016	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
10/20/2016				<0.005	<0.005	<0.005
10/24/2016	<0.005	<0.005	<0.005			
12/6/2016				<0.005	<0.005	<0.005
12/7/2016	<0.005	<0.005	<0.005			
1/25/2017				<0.005	<0.005	
1/26/2017	<0.005	<0.005	<0.005			<0.005
3/21/2017				<0.005	0.0005 (J)	
3/22/2017	0.0003 (J)	0.0004 (J)	0.0004 (J)			<0.005
5/23/2017				<0.005	<0.005	<0.005
5/24/2017	<0.005	<0.005	<0.005			
4/3/2018				<0.005	<0.005	<0.005
4/4/2018	<0.005	<0.005	<0.005			
3/12/2019					<0.005	
3/13/2019	<0.005		<0.005	<0.005		<0.005
3/14/2019		0.0025 (J)				
4/2/2019				<0.005		
4/3/2019	<0.005	<0.005			<0.005	<0.005
4/5/2019			<0.005			
9/24/2019					<0.005	
9/25/2019				0.071		
9/26/2019			<0.005			
9/27/2019	<0.005	<0.005				<0.005
3/3/2020	0.00061 (J)	<0.005			0.0007 (J)	
3/4/2020			<0.005	0.0016 (J)		<0.005
3/26/2020		<0.005				
3/27/2020				0.0004 (J)	<0.005	
3/30/2020			0.00059 (J)			
3/31/2020	<0.005					0.00052 (J)
9/16/2020				0.00074 (J)	0.0015 (J)	
9/17/2020						<0.005
9/18/2020	<0.005	0.00091 (J)				
9/21/2020			0.00056 (J)			
2/10/2021				0.0014 (J)		
2/12/2021	<0.005	<0.005				
2/16/2021					<0.005	0.00067 (J)
2/22/2021			<0.005			
3/15/2021				0.0021 (J)	0.00082 (J)	
3/16/2021	<0.005	<0.005				<0.005
3/17/2021			<0.005			
8/16/2021				<0.005		
8/17/2021						<0.005
8/18/2021	<0.005	<0.005			<0.005	
8/19/2021			<0.005			

Time Series

Constituent: Chromium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
3/13/2019		<0.005	<0.005		<0.005	<0.005
3/14/2019	<0.005			<0.005		
4/2/2019		<0.005				
4/3/2019	<0.005			<0.005	<0.005	
4/4/2019						<0.005
4/8/2019			<0.005			
9/25/2019		<0.005				
9/26/2019			0.00042 (J)		0.00076 (J)	<0.005
9/27/2019	<0.005			<0.005		
3/2/2020		0.00071 (J)				
3/3/2020				<0.005		
3/4/2020	0.00066 (J)		<0.005		0.0028 (J)	<0.005
3/26/2020	0.00047 (J)			0.00061 (J)		
3/27/2020		0.00051 (J)				
3/30/2020			<0.005			
3/31/2020					0.001 (J)	
4/2/2020						<0.005
9/17/2020		<0.005			<0.005	
9/18/2020				<0.005		0.0007 (J)
9/21/2020	0.0014 (J)		<0.005			
2/11/2021		<0.005				
2/12/2021	0.00059 (J)			<0.005		
2/16/2021			<0.005		0.001 (J)	0.00082 (J)
3/12/2021						<0.005
3/15/2021		0.00068 (J)				
3/16/2021				<0.005		
3/17/2021	0.0022 (J)		0.0017 (J)		0.0015 (J)	
8/17/2021		<0.005			<0.005	<0.005
8/18/2021	<0.005					
8/19/2021			<0.005	<0.005		

Time Series

Constituent: Chromium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
3/12/2019	<0.005	<0.005			
3/13/2019			0.003 (J)	<0.005	<0.005
4/2/2019	<0.005	<0.005			
4/3/2019			0.003 (J)	<0.005	0.0023 (J)
9/24/2019		<0.005			
9/25/2019			0.0052 (J)		
9/26/2019	0.00081 (J)			<0.005	0.0013 (J)
3/2/2020		<0.005	0.0042 (J)		
3/3/2020				0.00044 (J)	0.0015 (J)
3/4/2020	0.0027 (J)				
3/26/2020			0.0044 (J)		
3/27/2020	<0.005			0.00059 (J)	
3/30/2020		0.001 (J)			0.0021 (J)
9/16/2020		<0.005			
9/17/2020			0.0021 (J)		
9/21/2020	0.00085 (J)			<0.005	0.0017 (J)
2/10/2021	0.0014 (J)				
2/15/2021		<0.005			0.0015 (J)
2/16/2021			0.0032 (J)	<0.005	
3/15/2021	0.00078 (J)	<0.005			0.0018 (J)
3/16/2021			0.0024 (J)	<0.005	
8/16/2021		<0.005			
8/17/2021			0.0018 (J)	<0.005	<0.005
8/18/2021	<0.005				

Time Series

Constituent: Cobalt (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	<0.005	0.0293	<0.005			
5/23/2016						<0.005
7/11/2016	0.0004 (J)	0.0267				
7/12/2016			<0.005			0.0006 (J)
8/30/2016	<0.005	0.028	<0.005			
9/1/2016						0.0007 (J)
10/19/2016	<0.005	0.0201	<0.005			
10/24/2016						0.0009 (J)
12/6/2016	<0.005	0.0184	<0.005			
12/7/2016						0.0012 (J)
1/24/2017	<0.005	0.0206	<0.005			
1/26/2017						<0.005
3/21/2017	<0.005	0.0251	<0.005			
3/22/2017						0.0006 (J)
5/22/2017	<0.005	0.0263	<0.005			
5/24/2017						0.0006 (J)
4/2/2018	<0.005	0.019				
4/3/2018			<0.005			
4/4/2018						<0.005
3/12/2019	<0.005	0.017	<0.005			
3/13/2019						<0.005
4/1/2019			<0.005			
4/2/2019	<0.005	0.019				
4/3/2019						<0.005
9/23/2019	<0.005	0.038	<0.005			
9/27/2019						<0.005
3/2/2020	<0.005	0.019	<0.005			
3/3/2020						<0.005
3/25/2020	<0.005	0.02	<0.005			
4/1/2020						<0.005
9/15/2020	<0.005	0.021	<0.005			
9/16/2020				<0.005	<0.005	<0.005
11/10/2020				<0.005	<0.005	
12/15/2020				<0.005	<0.005	
1/19/2021				<0.005	<0.005	
2/8/2021	<0.005					
2/9/2021		0.02	<0.005	<0.005	<0.005	
2/15/2021						<0.005
3/10/2021	<0.005				<0.005	
3/11/2021		0.013	<0.005	<0.005		
3/12/2021						<0.005
8/11/2021	<0.005			<0.005		
8/12/2021		0.022	<0.005			
8/13/2021					<0.005	
8/17/2021						<0.005

Time Series

Constituent: Cobalt (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				<0.005	0.00207 (J)	
5/23/2016	<0.005	<0.005	0.00361 (J)			<0.005
7/12/2016	0.0021 (J)	0.0018 (J)	0.0032 (J)	0.0003 (J)	0.0019 (J)	0.0006 (J)
9/1/2016	0.0025 (J)	0.0016 (J)	0.0033 (J)	<0.005	0.0023 (J)	0.0007 (J)
10/20/2016				0.0008 (J)	0.002 (J)	0.002 (J)
10/24/2016	0.0032 (J)	0.0017 (J)	0.004 (J)			
12/6/2016				0.0009 (J)	0.0026 (J)	0.0011 (J)
12/7/2016	0.003 (J)	0.0021 (J)	0.0034 (J)			
1/25/2017				0.0005 (J)	0.002 (J)	
1/26/2017	0.0014 (J)	0.0016 (J)	0.0024 (J)			0.0006 (J)
3/21/2017				0.0005 (J)	0.0023 (J)	
3/22/2017	0.0014 (J)	0.0018 (J)	0.0026 (J)			0.0005 (J)
5/23/2017				0.0005 (J)	0.0023 (J)	0.0006 (J)
5/24/2017	0.0008 (J)	0.0015 (J)	0.0022 (J)			
4/3/2018				<0.005	<0.005	<0.005
4/4/2018	<0.005	<0.005	<0.005			
3/12/2019					0.002 (J)	
3/13/2019	0.00098 (J)		0.0022 (J)	0.00067 (J)		0.00065 (J)
3/14/2019		0.0011 (J)				
4/2/2019				0.00069 (J)		
4/3/2019	0.0018 (J)	0.0011 (J)			0.0019 (J)	0.00069 (J)
4/5/2019			0.0017 (J)			
9/24/2019					0.0015 (J)	
9/25/2019				0.0026 (J)		
9/26/2019			0.0042 (J)			
9/27/2019	0.00071 (J)	0.0012 (J)				0.00057 (J)
3/3/2020	0.00087 (J)	0.0013 (J)			0.002 (J)	
3/4/2020			0.0066	0.0011 (J)		0.00053 (J)
3/26/2020		0.0012 (J)				
3/27/2020				0.00074 (J)	0.0018 (J)	
3/30/2020			0.0053			
3/31/2020	0.0014 (J)					0.00051 (J)
9/16/2020				0.00065 (J)	0.0019 (J)	
9/17/2020						0.0007 (J)
9/18/2020	<0.005	0.0014 (J)				
9/21/2020			0.0032 (J)			
2/10/2021				0.00081 (J)		
2/12/2021	<0.005	0.0012 (J)				
2/16/2021					0.002 (J)	0.00061 (J)
2/22/2021			0.003 (J)			
3/15/2021				0.0014 (J)	0.0019 (J)	
3/16/2021	<0.005	0.0012 (J)				0.00069 (J)
3/17/2021			0.0029 (J)			
8/16/2021				0.0012 (J)		
8/17/2021						0.00045 (J)
8/18/2021	<0.005	0.0012 (J)			0.002 (J)	
8/19/2021			0.0024 (J)			

Time Series

Constituent: Cobalt (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
3/13/2019		0.0011 (J)	<0.005		<0.005	<0.005
3/14/2019	0.025			<0.005		
4/2/2019		<0.005				
4/3/2019	0.036			<0.005	<0.005	
4/4/2019						9.1E-05 (J)
4/8/2019			0.00025 (J)			
9/25/2019		<0.005				
9/26/2019			0.0011 (J)		0.00053 (J)	<0.005
9/27/2019	0.033			<0.005		
3/2/2020		<0.005				
3/3/2020				<0.005		
3/4/2020	0.048		0.00056 (J)		<0.005	0.00045 (J)
3/26/2020	0.045			<0.005		
3/27/2020		<0.005				
3/30/2020			<0.005			
3/31/2020					0.0003 (J)	
4/2/2020						<0.005
9/17/2020		<0.005			<0.005	
9/18/2020				<0.005		<0.005
9/21/2020	0.032		<0.005			
2/11/2021		<0.005				
2/12/2021	0.037			<0.005		
2/16/2021			<0.005		0.00045 (J)	0.0004 (J)
3/12/2021						<0.005
3/15/2021		<0.005				
3/16/2021				<0.005		
3/17/2021	0.037		<0.005		0.00044 (J)	
8/17/2021		<0.005			0.00045 (J)	<0.005
8/18/2021	0.039					
8/19/2021			<0.005	<0.005		

Time Series

Constituent: Cobalt (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
3/12/2019	<0.005	0.00057 (J)			
3/13/2019			<0.005	0.00055 (J)	<0.005
4/2/2019	<0.005	0.00084 (J)			
4/3/2019			<0.005	<0.005	<0.005
9/24/2019		0.0015 (J)			
9/25/2019			<0.005		
9/26/2019	<0.005			0.00036 (J)	<0.005
3/2/2020		0.00067 (J)	<0.005		
3/3/2020				0.00094 (J)	<0.005
3/4/2020	0.00093 (J)				
3/26/2020			<0.005		
3/27/2020	<0.005			0.00059 (J)	
3/30/2020		0.00063 (J)			<0.005
9/16/2020		0.0013 (J)			
9/17/2020			<0.005		
9/21/2020	<0.005			0.00041 (J)	<0.005
2/10/2021	<0.005				
2/15/2021		0.00097 (J)			<0.005
2/16/2021			<0.005	0.00045 (J)	
3/15/2021	<0.005	0.0011 (J)			<0.005
3/16/2021			<0.005	0.00042 (J)	
8/16/2021		0.0014 (J)			
8/17/2021			<0.005	<0.005	<0.005
8/18/2021	<0.005				

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	0.397 (U)	0.627 (U)	0.342 (U)			
5/23/2016						0.419 (U)
7/11/2016	0.738 (U)	1.38				
7/12/2016			0.499 (U)			0.855
8/30/2016	0.581 (U)	1.05 (U)	0.976 (U)			
9/1/2016						0.844 (U)
10/19/2016	0.213 (U)	1.11 (U)	0.626 (U)			
10/24/2016						0.917 (U)
12/6/2016	0.444 (U)	0.741 (U)	0.805 (U)			
12/7/2016						0.558 (U)
1/24/2017	0.373 (U)	0.908 (U)	0.336 (U)			
1/26/2017						0.922 (U)
3/21/2017	0.816 (U)	0.567 (U)	0.358 (U)			
3/22/2017						0.751 (U)
5/22/2017	0.554 (U)	0.638 (U)	0.744 (U)			
5/24/2017						0.725 (U)
4/2/2018	0.405 (U)	0.761 (U)				
4/3/2018			0.684 (U)			
4/4/2018						0.715 (U)
6/4/2018	1.13 (U)	0.975 (U)	0.0291 (U)			
6/5/2018						0.718 (U)
10/1/2018	0.132 (U)	0.434 (U)	0.781 (U)			
10/2/2018						0.948
3/12/2019	0.327 (U)	0.454 (U)	1.01 (U)			
3/13/2019						1.19 (U)
4/1/2019			0.76 (U)			
4/2/2019	0.739 (U)	0.651 (U)				
4/3/2019						1.82 (U)
9/27/2019						1.16 (U)
9/30/2019	0.306 (U)	1.04 (U)	0.384 (U)			
3/2/2020	0.61 (U)	1.58	0.249 (U)			
3/3/2020						0.667 (U)
3/25/2020	4.36	0.621 (U)	0.833 (U)			
4/1/2020						0.235 (U)
9/15/2020	0.748 (U)	0.124 (U)	0.161 (U)			
9/16/2020				0.531 (U)	0.422 (U)	0 (U)
11/10/2020				0.788 (U)	0.293 (U)	
12/15/2020				1.04 (U)	0.7 (U)	
1/19/2021				0.685 (U)	0.79 (U)	
2/8/2021	0.223 (U)					
2/9/2021		0.721 (U)	0.447 (U)	0.138 (U)	0.486 (U)	
2/15/2021						1.91
3/10/2021	0 (U)				0.811 (U)	
3/11/2021		0.737 (U)	0.128 (U)	1.51 (U)		
3/12/2021						1.12 (U)
8/11/2021	0.115 (U)			0.394 (U)		
8/12/2021		0.746 (U)	0.389 (U)			
8/13/2021					1.2	
8/17/2021						0.595 (U)

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				0.62 (U)	0.56 (U)	
5/23/2016	0.509 (U)	1.12	0.625 (U)			0.826 (U)
7/12/2016	0.784 (U)	1.61	0.478 (U)	0.283 (U)	0.636 (U)	0.511 (U)
9/1/2016	0.261 (U)	1.23	0.595 (U)	0.703 (U)	0.818 (U)	0.762 (U)
10/20/2016				1.97	1.04 (U)	1.17
10/24/2016	1.42	1.98	1.54			
12/6/2016				2	0.771 (U)	0.126 (U)
12/7/2016	0.781 (U)	0.319 (U)	0.657 (U)			
1/25/2017				1.06 (U)	0.859 (U)	
1/26/2017	0.842 (U)	0.54 (U)	1.22			0.515 (U)
3/21/2017				0.668 (U)	0.851 (U)	
3/22/2017	0.318 (U)	0.635 (U)	0.285 (U)			0.451 (U)
5/23/2017				0.621 (U)	0.705 (U)	0.924 (U)
5/24/2017	0.687 (U)	1.01	0.655 (U)			
4/3/2018				0.538 (U)	0.311 (U)	0.732 (U)
4/4/2018	1.5	0.956	0.882 (U)			
6/5/2018	0.549 (U)		1.1 (U)	0.985 (U)		
6/6/2018		0.424 (U)			0.896 (U)	0.813 (U)
10/2/2018				0.837 (U)	1.21	0.61 (U)
10/3/2018	1.48	0.57 (U)				
10/5/2018			0.558 (U)			
3/12/2019					0.544 (U)	
3/13/2019	0.584 (U)		0.39 (U)	0.403 (U)		1 (U)
3/14/2019		0.992 (U)				
4/2/2019				0.865 (U)		
4/3/2019	0.36 (U)	0.734 (U)			0.885 (U)	0.156 (U)
4/5/2019			0.422 (U)			
9/24/2019					1.3	
9/25/2019				0.884 (U)		
9/26/2019			0.939 (U)			
9/27/2019	1.78	0.958 (U)				0.428 (U)
3/3/2020	0.716 (U)	0.971 (U)			0.835 (U)	
3/4/2020			0.708 (U)	0.624 (U)		1.03
3/26/2020		0.209 (U)				
3/27/2020				0.485 (U)	1.04 (U)	
3/30/2020			0.602 (U)			
3/31/2020	1.3 (U)					1.2 (U)
9/16/2020				0.135 (U)	0.526 (U)	
9/17/2020						1.38 (U)
9/18/2020	1.24 (U)	0.916 (U)				
9/21/2020			1.53			
2/10/2021				0.281 (U)		
2/12/2021	1.1	0.236 (U)				
2/16/2021					0.764 (U)	1.17 (U)
2/22/2021			1.02			
3/15/2021				0.666 (U)	1.3 (U)	
3/16/2021	1.71	0.245 (U)				0.446 (U)
3/17/2021			1.45 (U)			
8/16/2021				0.143 (U)		
8/17/2021						0.771 (U)
8/18/2021	0.919 (U)	0.919 (U)			1.02 (U)	
8/19/2021			0.764 (U)			

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
3/13/2019		0.538 (U)	0.311 (U)		0.627 (U)	1.81
3/14/2019	0.347 (U)			1.28 (U)		
4/2/2019		1.02 (U)				
4/3/2019	0.884 (U)			0.662 (U)	0.205 (U)	
4/4/2019						1.33
4/8/2019			0.573 (U)			
9/25/2019		1.35 (U)				
9/26/2019			0.878 (U)		0.912 (U)	0.974 (U)
9/27/2019	0.534 (U)			0.945 (U)		
3/2/2020		0.653 (U)				
3/3/2020				1.36		
3/4/2020	1.04		0.333 (U)		1.27 (U)	1.12
3/26/2020	1.1 (U)			0.793 (U)		
3/27/2020		0.1 (U)				
3/30/2020			0.107 (U)			
3/31/2020					1.65	
4/2/2020						2.48
9/17/2020		0.469 (U)			0.42 (U)	
9/18/2020				1.17 (U)		1.13 (U)
9/21/2020	1.36 (U)		1.23 (U)			
2/11/2021		0.334 (U)				
2/12/2021	0.764 (U)			1.17		
2/16/2021			0.156 (U)		0.505 (U)	1.21
3/12/2021						0.649 (U)
3/15/2021		1.24 (U)				
3/16/2021				0.742 (U)		
3/17/2021	0.466 (U)		0.174 (U)		0.165 (U)	
8/17/2021		0.709 (U)			0.0468 (U)	1.06 (U)
8/18/2021	0.642 (U)					
8/19/2021			0.227 (U)	0.935 (U)		

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
3/12/2019	0.926 (U)	1.37			
3/13/2019			0.621 (U)	2.07	1.23
4/2/2019	0.479 (U)	0.62 (U)			
4/3/2019			0.932 (U)	0.872 (U)	1.05 (U)
9/24/2019		0.675 (U)			
9/25/2019			0.798 (U)		
9/26/2019	0.997 (U)			0.745 (U)	0.947 (U)
3/2/2020		0.413 (U)	0.964 (U)		
3/3/2020				0.757 (U)	1.15
3/4/2020	1.31				
3/26/2020			1.1		
3/27/2020	1.59			0.758 (U)	
3/30/2020		0.885 (U)			0.83 (U)
9/16/2020		0.193 (U)			
9/17/2020			0.618 (U)		
9/21/2020	1.39 (U)			0.796 (U)	1.55 (U)
2/10/2021	0.201 (U)				
2/15/2021		1.17 (U)			0.892 (U)
2/16/2021			0.466 (U)	0.198 (U)	
3/15/2021	0.564 (U)	0.436 (U)			0.386 (U)
3/16/2021			1.22	0.727 (U)	
8/16/2021		0.208 (U)			
8/17/2021			0.304 (U)	0.557 (U)	0.183 (U)
8/18/2021	0.876 (U)				

Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	0.105 (J)	0.0303 (J)	0.0513 (J)			
5/23/2016						0.0394 (J)
7/11/2016	0.16 (J)	0.05 (J)				
7/12/2016			0.12 (J)			0.15 (J)
8/30/2016	0.09 (J)	0.06 (J)	0.09 (J)			
9/1/2016						0.5
10/19/2016	0.1 (J)	0.04 (J)	0.1 (J)			
10/24/2016						0.06 (J)
12/6/2016	0.11 (J)	0.36	0.21 (J)			
12/7/2016						0.44
1/24/2017	0.09 (J)	<0.1	0.06 (J)			
1/26/2017						0.29 (J)
3/21/2017	0.13 (J)	<0.1	0.005 (J)			
3/22/2017						0.34
5/22/2017	0.12 (J)	<0.1	0.05 (J)			
5/24/2017						0.13 (J)
10/3/2017	0.13 (J)	<0.1	0.13 (J)			0.46
4/2/2018	<0.1	<0.1				
4/3/2018			<0.1			
4/4/2018						<0.1
6/4/2018	0.074 (J)	<0.1	<0.1			
6/5/2018						<0.1
10/1/2018	<0.1	<0.1	<0.1			
10/2/2018						0.17 (J)
3/12/2019	0.29 (J)	0.038 (J)	0.072 (J)			
3/13/2019						0.17 (J)
4/1/2019			0.029 (J)			
4/2/2019	0.1 (J)	0.071 (J)				
4/3/2019						0.082 (J)
9/23/2019	0.078 (J)	<0.1	<0.1			
9/27/2019						0.17 (J)
3/2/2020	0.076 (J)	<0.1	<0.1			
3/3/2020						0.11 (J)
3/25/2020	0.098 (J)	<0.1	<0.1			
4/1/2020						0.12 (J)
6/16/2020	0.071 (J)		<0.1			
9/15/2020	0.082 (J)	<0.1	<0.1			
9/16/2020				0.22	0.52	<0.1
11/10/2020				0.19	0.59	
12/15/2020				0.21	0.67	
1/19/2021				0.16	0.74	
2/8/2021	0.078 (J)					
2/9/2021		<0.1	0.074 (J)	0.19	0.44	
2/15/2021						0.08 (J)
3/10/2021	0.079 (J)				0.65	
3/11/2021		0.1	<0.1	0.2		
3/12/2021						0.054 (J)
8/11/2021	0.058 (J)			0.15		
8/12/2021		<0.1	<0.1			
8/13/2021					0.87	
8/17/2021						<0.1

Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				0.0828 (J)	0.499	
5/23/2016	0.203 (J)	0.212 (J)	0.2587 (J)			<0.1
7/12/2016	0.44	0.31	0.53	0.2 (J)	0.67	0.24 (J)
9/1/2016	0.67	0.62	0.74	0.51	0.94	0.46
10/20/2016				0.4	0.56	0.56
10/24/2016	0.26 (J)	0.19 (J)	0.31			
12/6/2016				0.26 (J)	0.76	0.31
12/7/2016	0.55	0.73	1			
1/25/2017				0.24 (J)	1.1	
1/26/2017	0.27 (J)	0.12 (J)	0.68			0.004 (J)
3/21/2017				0.13 (J)	0.46	
3/22/2017	0.66	0.44	0.76			0.28 (J)
5/23/2017				0.11 (J)	0.65	0.29 (J)
5/24/2017	0.35	0.34	0.54			
10/3/2017	0.56	0.58	0.83	0.17 (J)	0.66	0.53
4/3/2018				<0.1	0.39	<0.1
4/4/2018	0.39	<0.1	0.65			
6/5/2018	0.24 (J)		0.47	0.099 (J)		
6/6/2018		0.21 (J)			0.46	0.12 (J)
10/2/2018				<0.1	0.51	0.031 (J)
10/3/2018	0.31	0.15 (J)				
10/5/2018			0.77			
3/12/2019					0.58	
3/13/2019	0.51		0.78	0.12 (J)		0.14 (J)
3/14/2019		1.1				
4/2/2019				0.097 (J)		
4/3/2019	0.43	0.3 (J)			0.63	0.14 (J)
4/5/2019			0.83			
9/24/2019					0.49	
9/25/2019				0.1 (J)		
9/26/2019			0.64			
9/27/2019	0.42	0.26 (J)				0.26 (J)
3/3/2020	0.24 (J)	0.21 (J)			0.45	
3/4/2020			0.37	0.077 (J)		0.08 (J)
3/26/2020		0.17 (J)				
3/27/2020				0.059 (J)	0.46	
3/30/2020			0.44			
3/31/2020	0.19 (J)					0.074 (J)
6/16/2020					0.45	
6/17/2020				0.077 (J)		
9/16/2020				0.081 (J)	0.53	
9/17/2020						0.1
9/18/2020	0.15	0.15				
9/21/2020			0.44			
2/10/2021				0.085 (J)		
2/12/2021	0.17	0.19				
2/16/2021					0.47	0.096 (J)
2/22/2021			0.55			
3/15/2021				0.086 (J)	0.51	
3/16/2021	0.21	0.2				0.098 (J)
3/17/2021			0.65			
8/16/2021				0.084 (J)		

Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
8/17/2021						0.095 (J)
8/18/2021	0.21	0.15			0.41	
8/19/2021			0.53			

Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
3/13/2019		0.072 (J)	0.074 (J)		0.052 (J)	0.28 (J)
3/14/2019	0.35			2.2		
4/2/2019		<0.1				
4/3/2019	0.19 (J)			1.6	0.044 (J)	
4/4/2019						0.26 (J)
4/8/2019			0.048 (J)			
9/25/2019		<0.1				
9/26/2019			0.18 (J)		0.19 (J)	0.42
9/27/2019	0.53			1.5		
3/2/2020		<0.1				
3/3/2020				1.4		
3/4/2020	0.096 (J)		0.051 (J)		0.052 (J)	0.25 (J)
3/26/2020	0.12 (J)			1.6		
3/27/2020		<0.1				
3/30/2020			0.064 (J)			
3/31/2020					<0.1	
4/2/2020						0.24 (J)
9/17/2020		<0.1			0.069 (J)	
9/18/2020				1.6		0.22
9/21/2020	0.17		<0.1			
2/11/2021		<0.1				
2/12/2021	0.16			1.6		
2/16/2021			<0.1		0.071 (J)	0.25
3/12/2021						0.24
3/15/2021		<0.1				
3/16/2021				1.7		
3/17/2021	0.18		<0.1		0.072 (J)	
8/17/2021		<0.1			0.075 (J)	0.24
8/18/2021	0.12					
8/19/2021			<0.1	1.5		

Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
3/12/2019	0.24 (J)	0.07 (J)			
3/13/2019			0.1 (J)	0.19 (J)	0.069 (J)
4/2/2019	0.18 (J)	0.045 (J)			
4/3/2019			0.049 (J)	0.15 (J)	<0.1
9/24/2019		0.18 (J)			
9/25/2019			0.076 (J)		
9/26/2019	0.22 (J)			0.19 (J)	0.17 (J)
3/2/2020		<0.1	0.065 (J)		
3/3/2020				0.062 (J)	<0.1
3/4/2020	0.26 (J)				
3/26/2020			0.082 (J)		
3/27/2020	0.26 (J)			<0.1	
3/30/2020		<0.1			<0.1
9/16/2020		<0.1			
9/17/2020			0.094 (J)		
9/21/2020	0.1			<0.1	<0.1
2/10/2021	0.16				
2/15/2021		<0.1			<0.1
2/16/2021			0.051 (J)	0.059 (J)	
3/15/2021	0.24	<0.1			<0.1
3/16/2021			<0.1	0.06 (J)	
8/16/2021		<0.1			
8/17/2021			<0.1	0.055 (J)	<0.1
8/18/2021	0.14				

Time Series

Constituent: Lead (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	<0.001	<0.001	<0.001			
5/23/2016						<0.001
7/11/2016	<0.001	<0.001				
7/12/2016			0.0001 (J)			<0.001
8/30/2016	<0.001	<0.001	<0.001			
9/1/2016						<0.001
10/19/2016	<0.001	<0.001	<0.001			
10/24/2016						<0.001
12/6/2016	<0.001	<0.001	<0.001			
12/7/2016						<0.001
1/24/2017	<0.001	<0.001	<0.001			
1/26/2017						<0.001
3/21/2017	<0.001	6E-05 (J)	0.0001 (J)			
3/22/2017						<0.001
5/22/2017	<0.001	9E-05 (J)	<0.001			
5/24/2017						<0.001
4/2/2018	<0.001	<0.001				
4/3/2018			<0.001			
4/4/2018						<0.001
3/12/2019	<0.001	<0.001	<0.001			
3/13/2019						<0.001
9/23/2019	7.8E-05 (J)	9.2E-05 (J)	<0.001			
3/2/2020	4.8E-05 (J)	9.5E-05 (J)	<0.001			
3/3/2020						<0.001
3/25/2020	<0.001	0.00011 (J)	<0.001			
4/1/2020						5E-05 (J)
9/15/2020	<0.001	8E-05 (J)	4.2E-05 (J)			
9/16/2020				5E-05 (J)	0.00021 (J)	<0.001
11/10/2020				6.9E-05 (J)	0.0002 (J)	
12/15/2020				8.2E-05 (J)	0.00011 (J)	
1/19/2021				4.4E-05 (J)	0.00019 (J)	
2/8/2021	5.8E-05 (J)					
2/9/2021		9.4E-05 (J)	<0.001	0.00029 (J)	0.0001 (J)	
2/15/2021						<0.001
3/10/2021	<0.001				<0.001	
3/11/2021		7.6E-05 (J)	<0.001	9.4E-05 (J)		
3/12/2021						<0.001
8/11/2021	<0.001			<0.001		
8/12/2021		<0.001	<0.001			
8/13/2021					<0.001	
8/17/2021						<0.001

Time Series

Constituent: Lead (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				<0.001	<0.001	
5/23/2016	<0.001	<0.001	<0.001			<0.001
7/12/2016	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
9/1/2016	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
10/20/2016				<0.001	<0.001	<0.001
10/24/2016	<0.001	<0.001	<0.001			
12/6/2016				0.0001 (J)	<0.001	0.0002 (J)
12/7/2016	<0.001	<0.001	<0.001			
1/25/2017				0.0001 (J)	<0.001	
1/26/2017	<0.001	<0.001	<0.001			0.0001 (J)
3/21/2017				9E-05 (J)	<0.001	
3/22/2017	0.0003 (J)	<0.001	7E-05 (J)			<0.001
5/23/2017				8E-05 (J)	<0.001	0.0001 (J)
5/24/2017	9E-05 (J)	<0.001	<0.001			
4/3/2018				<0.001	<0.001	<0.001
4/4/2018	<0.001	<0.001	<0.001			
3/12/2019					<0.001	
3/13/2019	<0.001		<0.001	<0.001		<0.001
3/14/2019		<0.001				
3/3/2020	0.00021 (J)	5.6E-05 (J)			0.00013 (J)	
3/4/2020			0.00014 (J)	0.00051 (J)		8.4E-05 (J)
3/26/2020		0.00043 (J)				
3/27/2020				5.4E-05 (J)	<0.001	
3/30/2020			0.0001 (J)			
3/31/2020	0.0003 (J)					0.00014 (J)
9/16/2020				0.0002 (J)	0.0002 (J)	
9/17/2020						0.00022 (J)
9/18/2020	6E-05 (J)	9.6E-05 (J)				
9/21/2020			0.00015 (J)			
2/10/2021				0.00056 (J)		
2/12/2021	<0.001	6.7E-05 (J)				
2/16/2021					8.6E-05 (J)	0.0002 (J)
2/22/2021			0.00018 (J)			
3/15/2021				0.0013	0.00011 (J)	
3/16/2021	9.9E-05 (J)	8.9E-05 (J)				0.00027 (J)
3/17/2021			0.00015 (J)			
8/16/2021				<0.001		
8/17/2021						<0.001
8/18/2021	<0.001	<0.001			<0.001	
8/19/2021			<0.001			

Time Series

Constituent: Lead (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
 Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
3/13/2019		<0.001	<0.001		<0.001	<0.001
3/14/2019	<0.001			<0.001		
3/2/2020		0.00017 (J)				
3/3/2020				<0.001		
3/4/2020	0.00011 (J)		0.00019 (J)		<0.001	<0.001
3/26/2020	<0.001			<0.001		
3/27/2020		0.00013 (J)				
3/30/2020			6.4E-05 (J)			
3/31/2020					0.0001 (J)	
4/2/2020						0.00013 (J)
9/17/2020		<0.001			<0.001	
9/18/2020				<0.001		<0.001
9/21/2020	8.5E-05 (J)		4.2E-05 (J)			
2/11/2021		3.9E-05 (J)				
2/12/2021	7.1E-05 (J)			<0.001		
2/16/2021			0.00012 (J)		8E-05 (J)	0.00043 (J)
3/12/2021						<0.001
3/15/2021		0.0001 (J)				
3/16/2021				<0.001		
3/17/2021	3.8E-05 (J)		4E-05 (J)		<0.001	
8/17/2021		<0.001			<0.001	<0.001
8/18/2021	<0.001					
8/19/2021			<0.001	<0.001		

Time Series

Constituent: Lead (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
3/12/2019	<0.001	<0.001			
3/13/2019			<0.001	<0.001	<0.001
3/2/2020		9E-05 (J)	4.7E-05 (J)		
3/3/2020				0.00013 (J)	6.2E-05 (J)
3/4/2020	0.001 (J)				
3/26/2020			<0.001		
3/27/2020	6.2E-05 (J)			<0.001	
3/30/2020		0.00011 (J)			<0.001
9/16/2020		<0.001			
9/17/2020			<0.001		
9/21/2020	0.00018 (J)			0.00026 (J)	<0.001
2/10/2021	0.00044 (J)				
2/15/2021		5.2E-05 (J)			<0.001
2/16/2021			<0.001	8.4E-05 (J)	
3/15/2021	0.00034 (J)	<0.001			<0.001
3/16/2021			<0.001	3.6E-05 (J)	
8/16/2021		<0.001			
8/17/2021			<0.001	<0.001	<0.001
8/18/2021	<0.001				

Time Series

Constituent: Lithium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	<0.03	<0.03	<0.03			
5/23/2016						<0.03
7/11/2016	<0.03	0.0014 (J)				
7/12/2016			0.0024 (J)			<0.03
8/30/2016	<0.03	<0.03	0.0025 (J)			
9/1/2016						<0.03
10/19/2016	<0.03	<0.03	0.003 (J)			
10/24/2016						<0.03
12/6/2016	<0.03	<0.03	0.0033 (J)			
12/7/2016						<0.03
1/24/2017	<0.03	<0.03	0.003 (J)			
1/26/2017						<0.03
3/21/2017	<0.03	0.0012 (J)	0.0034 (J)			
3/22/2017						<0.03
5/22/2017	<0.03	<0.03	0.003 (J)			
5/24/2017						<0.03
4/2/2018	<0.03	0.0015 (J)				
4/3/2018			0.003 (J)			
4/4/2018						<0.03
6/4/2018	0.001 (J)	0.0016 (J)	0.0027 (J)			
6/5/2018						<0.03
10/1/2018	0.00099 (J)	0.0013 (J)	0.0032 (J)			
10/2/2018						<0.03
3/12/2019	0.001 (J)	0.0018 (J)	0.0032 (J)			
3/13/2019						<0.03
4/1/2019			0.0032 (J)			
4/2/2019	0.001 (J)	0.0018 (J)				
4/3/2019						<0.03
9/23/2019	0.0011 (J)	0.0016 (J)	0.0029 (J)			
9/27/2019						<0.03
3/2/2020	0.0012 (J)	0.0017 (J)	0.0037 (J)			
3/3/2020						<0.03
3/25/2020	0.00083 (J)	0.0017 (J)	0.0035 (J)			
4/1/2020						<0.03
9/15/2020	0.00087 (J)	0.0015 (J)	0.0026 (J)			
9/16/2020				0.0018 (J)	0.014 (J)	<0.03
11/10/2020				0.0013 (J)	0.025 (J)	
12/15/2020				0.0019 (J)	0.028 (J)	
1/19/2021				0.0025 (J)	0.034	
2/8/2021	0.00086 (J)					
2/9/2021		0.0012 (J)	0.0032 (J)	0.0026 (J)	0.026 (J)	
2/15/2021						<0.03
3/10/2021	0.0009 (J)				0.03	
3/11/2021		0.0011 (J)	0.0035 (J)	0.0022 (J)		
3/12/2021						<0.03
8/11/2021	0.00078 (J)			0.0024 (J)		
8/12/2021		0.0012 (J)	0.0028 (J)			
8/13/2021					0.032	
8/17/2021						<0.03

Time Series

Constituent: Lithium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				<0.03	<0.03	
5/23/2016	<0.03	0.0107 (J)	0.0422 (J)			<0.03
7/12/2016	<0.03	0.0113 (J)	0.0366 (J)	0.0021 (J)	0.0023 (J)	0.004 (J)
9/1/2016	<0.03	0.0118 (J)	0.04 (J)	0.0025 (J)	0.0029 (J)	0.0044 (J)
10/20/2016				0.0021 (J)	0.0027 (J)	0.0027 (J)
10/24/2016	<0.03	0.0114 (J)	0.0435 (J)			
12/6/2016				0.0026 (J)	0.0032 (J)	0.005 (J)
12/7/2016	<0.03	0.0155 (J)	0.0477 (J)			
1/25/2017				0.0024 (J)	0.0026 (J)	
1/26/2017	<0.03	0.0099 (J)	0.0342 (J)			0.0042 (J)
3/21/2017				0.0026 (J)	0.0029 (J)	
3/22/2017	<0.03	0.0098 (J)	0.0353 (J)			0.0043 (J)
5/23/2017				0.0026 (J)	0.0029 (J)	0.0048 (J)
5/24/2017	<0.03	0.0105 (J)	0.0317 (J)			
4/3/2018				0.0023 (J)	0.0025 (J)	0.0043 (J)
4/4/2018	<0.03	0.008 (J)	0.031 (J)			
6/5/2018	<0.03		0.031 (J)	0.0022 (J)		
6/6/2018		0.0095 (J)			0.0023 (J)	0.0043 (J)
10/2/2018				0.003 (J)	0.0025 (J)	0.004 (J)
10/3/2018	<0.03	0.0083 (J)				
10/5/2018			0.027 (J)			
3/12/2019					0.0025 (J)	
3/13/2019	<0.03		0.029 (J)	0.0024 (J)		0.004 (J)
3/14/2019		0.0058 (J)				
4/2/2019				0.002 (J)		
4/3/2019	<0.03	0.0066 (J)			0.0025 (J)	0.004 (J)
4/5/2019			0.023 (J)			
9/24/2019					0.0024 (J)	
9/25/2019				0.0019 (J)		
9/26/2019			0.035			
9/27/2019	<0.03	0.011 (J)				0.0044 (J)
3/3/2020	<0.03	0.0063 (J)			0.0028 (J)	
3/4/2020			0.041	0.0034 (J)		0.004 (J)
3/26/2020		0.0063 (J)				
3/27/2020				0.002 (J)	0.0026 (J)	
3/30/2020			0.038			
3/31/2020	<0.03					0.0043 (J)
9/16/2020				0.0026 (J)	0.0033 (J)	
9/17/2020						0.004 (J)
9/18/2020	<0.03	0.01 (J)				
9/21/2020			0.028 (J)			
2/10/2021				0.0032 (J)		
2/12/2021	<0.03	0.0094 (J)				
2/16/2021					0.0027 (J)	0.0045 (J)
2/22/2021			0.032			
3/15/2021				0.0038 (J)	0.0029 (J)	
3/16/2021	<0.03	0.0081 (J)				0.0046 (J)
3/17/2021			0.031			
8/16/2021				0.0025 (J)		
8/17/2021						0.004 (J)
8/18/2021	<0.03	0.0099 (J)			0.0029 (J)	
8/19/2021			0.028 (J)			

Time Series

Constituent: Lithium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
3/13/2019		0.0016 (J)	0.0029 (J)		0.0033 (J)	0.0097 (J)
3/14/2019	0.0089 (J)			0.05		
4/2/2019		0.0015 (J)				
4/3/2019	0.0061 (J)			0.047 (J)	0.0034 (J)	
4/4/2019						0.0069 (J)
4/8/2019			0.0027 (J)			
9/25/2019		<0.03				
9/26/2019			0.003 (J)		0.0041 (J)	0.0055 (J)
9/27/2019	0.013 (J)			0.047		
3/2/2020		0.00082 (J)				
3/3/2020				0.05		
3/4/2020	0.01 (J)		0.0026 (J)		0.03 (J)	0.0047 (J)
3/26/2020	0.013 (J)			0.054		
3/27/2020		0.0012 (J)				
3/30/2020			0.0027 (J)			
3/31/2020					0.0036 (J)	
4/2/2020						0.0068 (J)
9/17/2020		<0.03			0.0032 (J)	
9/18/2020				0.046		0.0084 (J)
9/21/2020	0.013 (J)		0.0024 (J)			
2/11/2021		0.001 (J)				
2/12/2021	0.012 (J)			0.045		
2/16/2021			0.0028 (J)		0.0038 (J)	0.0078 (J)
3/12/2021						0.009 (J)
3/15/2021		0.0011 (J)				
3/16/2021				0.049		
3/17/2021	0.012 (J)		0.0027 (J)		0.004 (J)	
8/17/2021		0.00091 (J)			0.0036 (J)	0.0079 (J)
8/18/2021	0.014 (J)					
8/19/2021			0.0027 (J)	0.046		

Time Series

Constituent: Lithium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
3/12/2019	0.011 (J)	0.0024 (J)			
3/13/2019			<0.03	<0.03	<0.03
4/2/2019	0.0052 (J)	0.0021 (J)			
4/3/2019			<0.03	<0.03	<0.03
9/24/2019		0.0022 (J)			
9/25/2019			<0.03		
9/26/2019	0.0055 (J)			<0.03	<0.03
3/2/2020		0.0025 (J)	<0.03		
3/3/2020				<0.03	<0.03
3/4/2020	0.015 (J)				
3/26/2020			<0.03		
3/27/2020	0.014 (J)			<0.03	
3/30/2020		0.0023 (J)			<0.03
9/16/2020		0.0021 (J)			
9/17/2020			<0.03		
9/21/2020	0.0053 (J)			<0.03	<0.03
2/10/2021	0.0092 (J)				
2/15/2021		0.0024 (J)			<0.03
2/16/2021			<0.03	<0.03	
3/15/2021	0.013 (J)	0.0022 (J)			<0.03
3/16/2021			<0.03	<0.03	
8/16/2021		0.0021 (J)			
8/17/2021			<0.03	<0.03	<0.03
8/18/2021	0.0086 (J)				

Time Series

Constituent: Mercury (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	<0.0005	<0.0005	<0.0005			
5/23/2016						<0.0005
7/11/2016	<0.0005	<0.0005				
7/12/2016			<0.0005			<0.0005
8/30/2016	4E-05 (J)	4E-05 (J)	<0.0005			
9/1/2016						<0.0005
10/19/2016	<0.0005	<0.0005	<0.0005			
10/24/2016						<0.0005
12/6/2016	<0.0005	<0.0005	<0.0005			
12/7/2016						<0.0005
1/24/2017	<0.0005	<0.0005	<0.0005			
1/26/2017						5E-05 (J)
3/21/2017	<0.0005	<0.0005	<0.0005			
3/22/2017						<0.0005
5/22/2017	<0.0005	<0.0005	<0.0005			
5/24/2017						<0.0005
4/2/2018	<0.0005	<0.0005				
4/3/2018			<0.0005			
4/4/2018						<0.0005
3/12/2019	<0.0005	<0.0005	<0.0005			
3/13/2019						<0.0005
3/2/2020	<0.0005	<0.0005	<0.0005			
3/3/2020						<0.0005
9/16/2020				<0.0005	<0.0005	
11/10/2020				<0.0005	<0.0005	
12/15/2020				<0.0005	<0.0005	
1/19/2021				<0.0005	<0.0005	
2/8/2021	<0.0005					
2/9/2021		<0.0005	<0.0005	<0.0005	<0.0005	
2/15/2021						<0.0005

Time Series

Constituent: Mercury (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				<0.0005	<0.0005	
5/23/2016	<0.0005	<0.0005	<0.0005			<0.0005
7/12/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
9/1/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10/20/2016				<0.0005	<0.0005	<0.0005
10/24/2016	<0.0005	<0.0005	<0.0005			
12/6/2016				<0.0005	<0.0005	<0.0005
12/7/2016	<0.0005	<0.0005	<0.0005			
1/25/2017				<0.0005	<0.0005	
1/26/2017	5E-05 (J)	<0.0005	4E-05 (J)			4E-05 (J)
3/21/2017				<0.0005	<0.0005	
3/22/2017	<0.0005	<0.0005	<0.0005			<0.0005
5/23/2017				<0.0005	<0.0005	<0.0005
5/24/2017	<0.0005	<0.0005	5E-05 (J)			
4/3/2018				<0.0005	<0.0005	<0.0005
4/4/2018	<0.0005	<0.0005	<0.0005			
3/12/2019					<0.0005	
3/13/2019	<0.0005		<0.0005	<0.0005		<0.0005
3/14/2019		<0.0005				
3/3/2020	<0.0005	<0.0005			<0.0005	
3/4/2020			<0.0005	<0.0005		<0.0005
2/10/2021				<0.0005		
2/12/2021	<0.0005	<0.0005				
2/16/2021					<0.0005	<0.0005
2/22/2021			<0.0005			

Time Series

Constituent: Mercury (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
3/13/2019		<0.0005	<0.0005		<0.0005	<0.0005
3/14/2019	<0.0005			<0.0005		
3/2/2020		<0.0005				
3/3/2020				<0.0005		
3/4/2020	<0.0005		<0.0005		<0.0005	<0.0005
2/11/2021		<0.0005				
2/12/2021	<0.0005			<0.0005		
2/16/2021			<0.0005		<0.0005	<0.0005

Time Series

Constituent: Mercury (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
3/12/2019	<0.0005	<0.0005			
3/13/2019			<0.0005	<0.0005	<0.0005
3/2/2020		<0.0005	<0.0005		
3/3/2020				<0.0005	<0.0005
3/4/2020	<0.0005				
2/10/2021	<0.0005				
2/15/2021		<0.0005			<0.0005
2/16/2021			<0.0005	<0.0005	

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	<0.01	<0.01	<0.01			
5/23/2016						<0.01
7/11/2016	<0.01	<0.01				
7/12/2016			<0.01			0.0013 (J)
8/30/2016	<0.01	<0.01	<0.01			
9/1/2016						<0.01
10/19/2016	<0.01	<0.01	<0.01			
10/24/2016						<0.01
12/6/2016	<0.01	<0.01	<0.01			
12/7/2016						<0.01
1/24/2017	<0.01	<0.01	<0.01			
1/26/2017						<0.01
3/21/2017	<0.01	<0.01	<0.01			
3/22/2017						0.0013 (J)
5/22/2017	<0.01	<0.01	<0.01			
5/24/2017						0.0014 (J)
4/2/2018	<0.01	<0.01				
4/3/2018			<0.01			
4/4/2018						<0.01
6/4/2018	<0.01	<0.01	<0.01			
6/5/2018						<0.01
10/1/2018	<0.01	<0.01	<0.01			
10/2/2018						<0.01
3/12/2019	<0.01	<0.01	<0.01			
3/13/2019						<0.01
4/1/2019			<0.01			
4/2/2019	<0.01	<0.01				
4/3/2019						0.0021 (J)
9/23/2019	<0.01	<0.01	<0.01			
9/27/2019						0.0014 (J)
3/2/2020	<0.01	<0.01	<0.01			
3/3/2020						<0.01
3/25/2020	<0.01	<0.01	<0.01			
4/1/2020						<0.01
6/16/2020	<0.01		<0.01			
9/15/2020	<0.01	<0.01	<0.01			
9/16/2020				0.0044 (J)	0.0019 (J)	0.0014 (J)
11/10/2020				0.0072 (J)	0.0018 (J)	
12/15/2020				0.0044 (J)	0.0019 (J)	
1/19/2021				0.0038 (J)	0.0035 (J)	
2/8/2021	<0.01					
2/9/2021		<0.01	<0.01	0.0045 (J)	0.0038 (J)	
2/15/2021						<0.01
3/10/2021	<0.01				0.0019 (J)	
3/11/2021		<0.01	<0.01	0.0064 (J)		
3/12/2021						0.0007 (J)
8/11/2021	<0.01			0.0034 (J)		
8/12/2021		<0.01	<0.01			
8/13/2021					0.0051 (J)	
8/17/2021						0.0012 (J)

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				0.028	0.446	
5/23/2016	0.0164	0.0413 (J)	0.027			0.0187
7/12/2016	0.0251	0.0484	0.0316	0.0273	0.455	0.0229
9/1/2016	0.0259	0.0474	0.0336	0.0274	0.481	0.0239
10/20/2016				0.036	0.472	0.477
10/24/2016	0.0293	0.047	0.0352			
12/6/2016				0.0365	0.52	0.0236
12/7/2016	0.0209	0.0432	0.0383			
1/25/2017				0.0317	0.478	
1/26/2017	0.0277	0.0484	0.041			0.0234
3/21/2017				0.0346	0.547	
3/22/2017	0.011	0.0494	0.0426			0.0219
5/23/2017				0.0336	0.482	0.0242
5/24/2017	0.0373	0.047	0.04			
4/3/2018				0.032	0.44	0.025
4/4/2018	0.013	0.052	0.027			
6/5/2018	0.029		0.027	0.036		
6/6/2018		0.054			0.49	0.027
10/2/2018				0.039	0.47	0.028
10/3/2018	0.02	0.054				
10/5/2018			0.033			
3/12/2019					0.5	
3/13/2019	0.012		0.033	0.04		0.028
3/14/2019		0.046				
4/2/2019				0.041		
4/3/2019	0.01	0.049			0.5	0.03
4/5/2019			0.03			
9/24/2019					0.54	
9/25/2019				0.047		
9/26/2019			0.026			
9/27/2019	0.016	0.052				0.033
3/3/2020	0.011	0.045			0.44	
3/4/2020			0.03	0.045		0.031
3/26/2020		0.045				
3/27/2020				0.044	0.42	
3/30/2020			0.029			
3/31/2020	0.0074 (J)					0.031
6/16/2020					0.45	
6/17/2020				0.048		
9/16/2020				0.046	0.43	
9/17/2020						0.03
9/18/2020	0.032	0.046				
9/21/2020			0.032			
2/10/2021				0.051		
2/12/2021	0.023	0.048				
2/16/2021					0.46	0.035
2/22/2021			0.036			
3/15/2021				0.047	0.41	
3/16/2021	0.015	0.044				0.035
3/17/2021			0.035			
8/16/2021				0.045		
8/17/2021						0.035

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
8/18/2021	0.038	0.045			0.48	
8/19/2021			0.032			

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
3/13/2019		<0.01	<0.01		<0.01	<0.01
3/14/2019	0.057			0.0022 (J)		
4/2/2019		<0.01				
4/3/2019	0.04			<0.01	0.0083 (J)	
4/4/2019						0.0018 (J)
4/8/2019			0.00027 (J)			
9/25/2019		<0.01				
9/26/2019			<0.01		0.017	0.0042 (J)
9/27/2019	0.063			<0.01		
11/25/2019					0.02	
3/2/2020		<0.01				
3/3/2020				<0.01		
3/4/2020	0.032		<0.01		0.0074 (J)	0.0058 (J)
3/26/2020	0.033			<0.01		
3/27/2020		<0.01				
3/30/2020			<0.01			
3/31/2020					0.0093 (J)	
4/2/2020						0.003 (J)
9/17/2020		<0.01			0.014	
9/18/2020				0.00094 (J)		0.0018 (J)
9/21/2020	0.064		0.00099 (J)			
2/11/2021		<0.01				
2/12/2021	0.046			<0.01		
2/16/2021			0.00096 (J)		0.022	0.0019 (J)
3/12/2021						0.0008 (J)
3/15/2021		<0.01				
3/16/2021				<0.01		
3/17/2021	0.043		0.001 (J)		0.023	
8/17/2021		<0.01			0.024	0.0016 (J)
8/18/2021	0.032					
8/19/2021			0.00087 (J)	<0.01		

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
3/12/2019	0.013	0.0038 (J)			
3/13/2019			<0.01	0.0021 (J)	<0.01
4/2/2019	0.028	0.0028 (J)			
4/3/2019			<0.01	0.0021 (J)	<0.01
9/24/2019		0.0021 (J)			
9/25/2019			<0.01		
9/26/2019	0.017			0.0026 (J)	0.0033 (J)
3/2/2020		0.0025 (J)	<0.01		
3/3/2020				0.0022 (J)	<0.01
3/4/2020	0.009 (J)				
3/26/2020			<0.01		
3/27/2020	0.0068 (J)			0.0026 (J)	
3/30/2020		0.0029 (J)			<0.01
9/16/2020		0.0021 (J)			
9/17/2020			<0.01		
9/21/2020	0.018			0.0025 (J)	0.0015 (J)
2/10/2021	0.02				
2/15/2021		0.0029 (J)			0.0015 (J)
2/16/2021			<0.01	0.0025 (J)	
3/15/2021	0.013	0.0031 (J)			0.0015 (J)
3/16/2021			<0.01	0.0023 (J)	
8/16/2021		0.0027 (J)			
8/17/2021			<0.01	0.0027 (J)	0.003 (J)
8/18/2021	0.022				

Time Series

Constituent: pH, Field (SU) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	7.27	5.81	7.45			
5/23/2016						6.83
7/11/2016	7.06	5.68				
7/12/2016			7.32			6.58
8/30/2016	7.28	5.63	7.43			
9/1/2016						6.54
10/19/2016	7.02	5.46	7.03			
10/24/2016						6.59
12/6/2016	7.09	5.38	7.08			
12/7/2016						6.56
1/24/2017	7.2	5.37	7.39			
1/26/2017						6.83
3/21/2017	7.01	4.9	6.83			
3/22/2017						6.66
5/22/2017	7.11	5.2	7.02			
5/24/2017						6.67
10/3/2017	7.21	5.3	7.47			6.54
4/2/2018	7.1	5.4				
4/3/2018			7.38			
4/4/2018						6.61
6/4/2018	7.06	5.27	7.38			
6/5/2018						6.65
10/1/2018	7.09	5.31	7.13			
10/2/2018						6.55
3/12/2019	7.03	5.42	7.29			
3/13/2019						6.7
4/1/2019			7.16			
4/2/2019	6.86	5.41				
4/3/2019						6.55
9/23/2019	7.02	5.33	7.3			
9/27/2019						6.64
3/2/2020	7.1	5.43	7.12			
3/3/2020						6.67
3/25/2020	6.95	5.36	7.4			
4/1/2020						6.84
6/16/2020	6.97 (D)		7.31 (D)			
9/15/2020	7.15	5.22	7.29			
9/16/2020				7.52	7.83	6.66
11/10/2020				7.27	7.84	
12/15/2020				7.39	7.87	
1/19/2021				7.39	7.86	
2/8/2021	7.11					
2/9/2021		5.42	7.23	7.44	7.84	
2/15/2021						6.83
3/10/2021	6.95				7.92	
3/11/2021		5.8	7.33	7.46		
3/12/2021						6.76
8/11/2021	6.98			7.4		
8/12/2021		5.05	7.31			
8/13/2021					7.77	
8/17/2021						6.75

Time Series

Constituent: pH, Field (SU) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				7.14	6.99	
5/23/2016	6.22	7.15	7.14			7.23
7/12/2016	6.04	6.87	7.04	7.13	6.88	6.87
9/1/2016	6.26	7.2	7.24	7.29	6.73	7.15
10/20/2016				7.1	6.9	7.05
10/24/2016	6.46	7.1	6.9			
12/6/2016				7.15	6.98	7.15
12/7/2016	6.29	6.92	6.91			
1/25/2017				7.11	7.04	
1/26/2017	6.46	7.05	7.08			6.99
3/21/2017				7.12	6.87	
3/22/2017	5.81	7.08	7.13			7.03
5/23/2017				7.08	6.87	7.05
5/24/2017	6.51	7.11	7.15			
10/3/2017	6.25	7.01	7.32	7.21	6.72	7.07
4/3/2018				7.14	6.87	6.99
4/4/2018	5.86	7.12	7.27			
6/5/2018	6.27		7.2	7.13		
6/6/2018		7.12			6.9	7.02
10/2/2018				7.12	6.9	7.05
10/3/2018	5.97	7.08				
10/5/2018			7.24			
3/12/2019					6.91	
3/13/2019	5.92		7.24	7.27		7.06
3/14/2019		7.09				
4/2/2019				7.27		
4/3/2019	5.69	6.96			6.85	6.88
4/5/2019			7.24			
9/24/2019					6.95	
9/25/2019				7.11		
9/26/2019			6.94			
9/27/2019	5.75	7.07				7.01
3/3/2020	5.95	6.95			7.06	
3/4/2020			7.16	7.17		6.97
3/26/2020		6.99				
3/27/2020				7.05	6.95	
3/30/2020			6.91			
3/31/2020	5.7					7.07
6/16/2020					6.97 (D)	
6/17/2020				7.2 (D)		
9/16/2020				7.3	6.92	
9/17/2020						6.99
9/18/2020	6.42	7.15				
9/21/2020			7.34			
2/10/2021				7.29		
2/12/2021	7.27	6.23				
2/16/2021					7.16	7.26
2/22/2021			7.27			
3/15/2021				7.19	7.09	
3/16/2021	5.95	7.15				7.1
3/17/2021			7.33			
8/16/2021				7.12		

Time Series

Constituent: pH, Field (SU) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
8/17/2021						7.1
8/18/2021	6.1	6.89			7.02	
8/19/2021			7.38			

Time Series

Constituent: pH, Field (SU) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
3/13/2019		6.75	7.58		7.4	7.78
3/14/2019	6.48			7.67		
4/2/2019		6.7				
4/3/2019	6.14			7.56	7.25	
4/4/2019						7.63
4/8/2019			7.47			
9/25/2019		6.75				
9/26/2019			7.5		7.16	7.46
9/27/2019	6.33			7.57		
3/2/2020		6.98				
3/3/2020				7.59		
3/4/2020	6.29		7.47		7.14	8.33
3/26/2020	6.28			7.57		
3/27/2020		6.75				
3/30/2020			7.49			
3/31/2020					7.2	
4/2/2020						8.11
9/17/2020		6.78			7.08	
9/18/2020				7.64		7.51
9/21/2020	6.41		7.65			
2/11/2021		6.93				
2/12/2021	6.36			7.77		
2/16/2021			7.69		7.27	7.96
3/12/2021						7.88
3/15/2021		6.97				
3/16/2021				7.76		
3/17/2021	6.34		7.66		7.14	
8/17/2021		7.05			7.14	7.75
8/18/2021	6.28					
8/19/2021			7.61	7.69		

Time Series

Constituent: pH, Field (SU) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
3/12/2019	7.46	7.2			
3/13/2019			6.16	6.86	6.37
4/2/2019	7.4	6.91			
4/3/2019			5.96	6.77	6.19
9/24/2019		6.86			
9/25/2019			6.37		
9/26/2019	7.4			6.76	6.5
3/2/2020		7.13	6.12		
3/3/2020				6.78	6.1
3/4/2020	7.55				
3/26/2020			6.14		
3/27/2020	7.42			6.82	
3/30/2020		7.07			6.06
9/16/2020		6.88			
9/17/2020			6.48		
9/21/2020	7.46			6.88	6.5
2/10/2021	7.54				
2/15/2021		7.09			6.77
2/16/2021			5.95	7	
3/15/2021	7.61	7.05			6.66
3/16/2021			5.78	6.96	
8/16/2021		7.08			
8/17/2021			5.99	6.86	6.88
8/18/2021	7.16				

Time Series

Constituent: Selenium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	<0.005	<0.005	<0.005			
5/23/2016						<0.005
7/11/2016	<0.005	<0.005				
7/12/2016			<0.005			<0.005
8/30/2016	<0.005	<0.005	<0.005			
9/1/2016						<0.005
10/19/2016	<0.005	<0.005	<0.005			
10/24/2016						<0.005
12/6/2016	<0.005	<0.005	<0.005			
12/7/2016						<0.005
1/24/2017	<0.005	<0.005	<0.005			
1/26/2017						0.0041 (J)
3/21/2017	<0.005	<0.005	<0.005			
3/22/2017						<0.005
5/22/2017	<0.005	<0.005	<0.005			
5/24/2017						<0.005
4/2/2018	<0.005	<0.005				
4/3/2018			<0.005			
4/4/2018						<0.005
6/4/2018	<0.005	<0.005	<0.005			
6/5/2018						<0.005
10/1/2018	<0.005	<0.005	<0.005			
10/2/2018						0.0023 (J)
3/12/2019	<0.005	<0.005	<0.005			
3/13/2019						0.0015 (J)
4/1/2019			<0.005			
4/2/2019	<0.005	<0.005				
4/3/2019						<0.005
9/23/2019	<0.005	<0.005	<0.005			
9/27/2019						<0.005
3/2/2020	<0.005	<0.005	<0.005			
3/3/2020						<0.005
3/25/2020	<0.005	<0.005	<0.005			
4/1/2020						0.002 (J)
9/15/2020	<0.005	<0.005	<0.005			
9/16/2020				<0.005	<0.005	<0.005
11/10/2020				<0.005	<0.005	
12/15/2020				<0.005	<0.005	
1/19/2021				<0.005	<0.005	
2/8/2021	<0.005					
2/9/2021		<0.005	<0.005	<0.005	<0.005	
2/15/2021						0.0028 (J)
3/10/2021	0.0047 (J)				<0.005	
3/11/2021		<0.005	<0.005	<0.005		
3/12/2021						<0.005
8/11/2021	<0.005			<0.005		
8/12/2021		<0.005	<0.005			
8/13/2021					<0.005	
8/17/2021						<0.005

Time Series

Constituent: Selenium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				<0.005	<0.005	
5/23/2016	0.0106	<0.005	<0.005			<0.005
7/12/2016	0.0057 (J)	<0.005	<0.005	<0.005	<0.005	<0.005
9/1/2016	0.0057 (J)	<0.005	<0.005	<0.005	<0.005	<0.005
10/20/2016				<0.005	<0.005	<0.005
10/24/2016	0.0021 (J)	<0.005	<0.005			
12/6/2016				<0.005	0.0024 (J)	0.0037 (J)
12/7/2016	0.0015 (J)	0.0011 (J)	<0.005			
1/25/2017				<0.005	<0.005	
1/26/2017	0.0062 (J)	<0.005	<0.005			<0.005
3/21/2017				<0.005	<0.005	
3/22/2017	0.0263	<0.005	<0.005			<0.005
5/23/2017				<0.005	<0.005	<0.005
5/24/2017	0.0038 (J)	<0.005	<0.005			
4/3/2018				<0.005	<0.005	<0.005
4/4/2018	0.021	<0.005	<0.005			
6/5/2018	0.0062 (J)		<0.005	<0.005		
6/6/2018		<0.005			<0.005	<0.005
10/2/2018				<0.005	<0.005	<0.005
10/3/2018	0.009 (J)	<0.005				
10/5/2018			<0.005			
3/12/2019					<0.005	
3/13/2019	0.023		<0.005	<0.005		<0.005
3/14/2019		<0.005				
4/2/2019				<0.005		
4/3/2019	0.016	<0.005			<0.005	<0.005
4/5/2019			0.00018 (J)			
9/24/2019					<0.005	
9/25/2019				<0.005		
9/26/2019			<0.005			
9/27/2019	0.013	<0.005				<0.005
3/3/2020	0.016	<0.005			<0.005	
3/4/2020			<0.005	<0.005		<0.005
3/26/2020		<0.005				
3/27/2020				<0.005	<0.005	
3/30/2020			<0.005			
3/31/2020	0.019					<0.005
9/16/2020				<0.005	<0.005	
9/17/2020						<0.005
9/18/2020	0.0042 (J)	<0.005				
9/21/2020			0.0016 (J)			
2/10/2021				<0.005		
2/12/2021	0.0079 (J)	<0.005				
2/16/2021					<0.005	<0.005
2/22/2021			<0.005			
3/15/2021				<0.005	<0.005	
3/16/2021	0.015	<0.005				<0.005
3/17/2021			<0.005			
8/16/2021				<0.005		
8/17/2021						<0.005
8/18/2021	0.0033 (J)	<0.005			<0.005	
8/19/2021			<0.005			

Time Series

Constituent: Selenium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
3/13/2019		<0.005	<0.005		<0.005	<0.005
3/14/2019	<0.005			<0.005		
4/2/2019		<0.005				
4/3/2019	0.007 (J)			<0.005	<0.005	
4/4/2019						0.00012 (J)
4/8/2019			<0.005			
9/25/2019		<0.005				
9/26/2019			<0.005		<0.005	<0.005
9/27/2019	0.0013 (J)			<0.005		
3/2/2020		<0.005				
3/3/2020				<0.005		
3/4/2020	0.0044 (J)		<0.005		<0.005	<0.005
3/26/2020	0.0053 (J)			<0.005		
3/27/2020		<0.005				
3/30/2020			<0.005			
3/31/2020					<0.005	
4/2/2020						<0.005
9/17/2020		<0.005			<0.005	
9/18/2020				<0.005		<0.005
9/21/2020	0.0033 (J)		<0.005			
2/11/2021		<0.005				
2/12/2021	0.0021 (J)			<0.005		
2/16/2021			<0.005		<0.005	<0.005
3/12/2021						<0.005
3/15/2021		<0.005				
3/16/2021				<0.005		
3/17/2021	<0.005		<0.005		<0.005	
8/17/2021		<0.005			<0.005	<0.005
8/18/2021	0.0026 (J)					
8/19/2021			<0.005	<0.005		

Time Series

Constituent: Selenium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
3/12/2019	<0.005	<0.005			
3/13/2019			0.0033 (J)	<0.005	0.0016 (J)
4/2/2019	<0.005	<0.005			
4/3/2019			0.0027 (J)	<0.005	<0.005
9/24/2019		<0.005			
9/25/2019			0.0021 (J)		
9/26/2019	<0.005			<0.005	0.0014 (J)
3/2/2020		<0.005	0.0041 (J)		
3/3/2020				<0.005	<0.005
3/4/2020	<0.005				
3/26/2020			0.0039 (J)		
3/27/2020	<0.005			<0.005	
3/30/2020		<0.005			0.0014 (J)
9/16/2020		<0.005			
9/17/2020			0.0028 (J)		
9/21/2020	<0.005			<0.005	0.0026 (J)
2/10/2021	<0.005				
2/15/2021		<0.005			<0.005
2/16/2021			0.0035 (J)	<0.005	
3/15/2021	<0.005	<0.005			0.0021 (J)
3/16/2021			0.0026 (J)	<0.005	
8/16/2021		<0.005			
8/17/2021			0.0017 (J)	<0.005	<0.005
8/18/2021	<0.005				

Time Series

Constituent: Sulfate (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	66.9	48.6	42.3			
5/23/2016						175
7/11/2016	41	45				
7/12/2016			44			190
8/30/2016	36	42	40			
9/1/2016						190
10/19/2016	46	44	43			
10/24/2016						190
12/6/2016	59	44	43			
12/7/2016						200
1/24/2017	46	46	48			
1/26/2017						90
3/21/2017	63	46	45			
3/22/2017						170
5/22/2017	77	48	46			
5/24/2017						190
10/3/2017	42	47	48			200
6/4/2018	71.8	47.8	46.6			
6/5/2018						205
10/1/2018	49.1	48.1	48.6			
10/2/2018						178
4/1/2019			50.4			
4/2/2019	84.3	48.7				
4/3/2019						159
9/23/2019	70.2	47.2	43.9			
9/27/2019						181
3/25/2020	85.9	46.3	50.5			
4/1/2020						59
6/16/2020	88.2		49.5			
9/15/2020	47.3	51.5	44.7			
9/16/2020				43	6.9	169
11/10/2020				39	6.3	
12/15/2020				38.8	6.7	
1/19/2021				37.3	7.4	
3/10/2021	49.6				<1	
3/11/2021		52.9	50.4	38.6		
3/12/2021						120
8/11/2021	48.9			30.5		
8/12/2021		47.4	38.6			
8/13/2021					56.1	
8/17/2021						156

Time Series

Constituent: Sulfate (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				96	219	
5/23/2016	260	288	215			207
7/12/2016	390	320	210	100	230	230
9/1/2016	240	300	190	100	230	230
10/20/2016				110	240	240
10/24/2016	370	270	180			
12/6/2016				110	250	240
12/7/2016	260	280	120			
1/25/2017				110	260	
1/26/2017	230	260	83			270
3/21/2017				110	240	
3/22/2017	330	220	100			240
5/23/2017				110	270	240
5/24/2017	230	210	110			
10/3/2017	230	190	67	120	230	240
6/5/2018	204		187	117		
6/6/2018		162			190	214
10/2/2018				120	193	218
10/3/2018	233	191				
10/5/2018			78.3			
4/2/2019				127		
4/3/2019	298	176			194	214
4/5/2019			105			
9/24/2019					133	
9/25/2019				109		
9/26/2019			444			
9/27/2019	<1	198				214
3/26/2020		182				
3/27/2020				109	173	
3/30/2020			393			
3/31/2020	283					185
6/16/2020					157	
6/17/2020				102		
9/16/2020				109	194	
9/17/2020						209
9/18/2020	272	266				
9/21/2020			359			
3/15/2021				107	272	
3/16/2021	291	248				211
3/17/2021			384			
8/16/2021				98.1		
8/17/2021						207
8/18/2021	237	226			245	
8/19/2021			339			

Time Series

Constituent: Sulfate (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
4/2/2019		122				
4/3/2019	105			53	131	
4/4/2019						11.8
4/8/2019			97.3			
9/25/2019		112				
9/26/2019			91		189	15.6
9/27/2019	170			48		
3/26/2020	310			32.3		
3/27/2020		114				
3/30/2020			84.9			
3/31/2020					129	
4/2/2020						13.3
9/17/2020		110			174	
9/18/2020				27.4		7.5
9/21/2020	305		114			
3/12/2021						7.4
3/15/2021		109				
3/16/2021				9.4		
3/17/2021	260		137		212	
8/17/2021		98.6			194	8.2
8/18/2021	219					
8/19/2021			130	4.1		

Time Series

Constituent: Sulfate (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
4/2/2019	67.7	151			
4/3/2019			218	228	75.3
9/24/2019		154			
9/25/2019			134		
9/26/2019	96.2			225	129
3/26/2020			176		
3/27/2020	36			204	
3/30/2020		130			46.2
9/16/2020		143			
9/17/2020			153		
9/21/2020	84.2			221	114
3/15/2021	50.1	148			92.1
3/16/2021			162	189	
8/16/2021		136			
8/17/2021			154	194	105
8/18/2021	82.1				

Time Series

Constituent: Thallium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	<0.001	<0.001	<0.001			
5/23/2016						<0.001
7/11/2016	<0.001	<0.001				
7/12/2016			<0.001			<0.001
8/30/2016	<0.001	<0.001	<0.001			
9/1/2016						<0.001
10/19/2016	<0.001	<0.001	<0.001			
10/24/2016						<0.001
12/6/2016	<0.001	<0.001	<0.001			
12/7/2016						<0.001
1/24/2017	<0.001	<0.001	<0.001			
1/26/2017						<0.001
3/21/2017	<0.001	3E-05 (J)	<0.001			
3/22/2017						<0.001
5/22/2017	<0.001	<0.001	<0.001			
5/24/2017						<0.001
4/2/2018	<0.001	<0.001				
4/3/2018			<0.001			
4/4/2018						<0.001
6/4/2018	<0.001	<0.001	<0.001			
6/5/2018						<0.001
10/1/2018	<0.001	<0.001	<0.001			
10/2/2018						<0.001
3/12/2019	<0.001	<0.001	<0.001			
3/13/2019						<0.001
4/1/2019			<0.001			
4/2/2019	<0.001	<0.001				
4/3/2019						<0.001
9/23/2019	<0.001	<0.001	<0.001			
9/27/2019						<0.001
3/2/2020	<0.001	<0.001	<0.001			
3/3/2020						<0.001
3/25/2020	<0.001	<0.001	<0.001			
4/1/2020						<0.001
9/15/2020	<0.001	<0.001	<0.001			
9/16/2020				<0.001	<0.001	<0.001
11/10/2020				<0.001	<0.001	
12/15/2020				<0.001	<0.001	
1/19/2021				<0.001	<0.001	
2/8/2021	<0.001					
2/9/2021		<0.001	<0.001	<0.001	<0.001	
2/15/2021						<0.001
3/10/2021	<0.001				<0.001	
3/11/2021		<0.001	<0.001	<0.001		
3/12/2021						<0.001
8/11/2021	<0.001			<0.001		
8/12/2021		<0.001	<0.001			
8/13/2021					<0.001	
8/17/2021						<0.001

Time Series

Constituent: Thallium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				<0.001	<0.001	
5/23/2016	<0.001	<0.001	0.000378 (J)			<0.001
7/12/2016	8E-05 (J)	0.0002 (J)	0.0004 (J)	<0.001	7E-05 (J)	<0.001
9/1/2016	<0.001	<0.001	0.0004 (J)	<0.001	<0.001	<0.001
10/20/2016				<0.001	<0.001	<0.001
10/24/2016	<0.001	<0.001	0.0005 (J)			
12/6/2016				<0.001	<0.001	<0.001
12/7/2016	<0.001	<0.001	0.0004 (J)			
1/25/2017				<0.001	<0.001	
1/26/2017	<0.001	<0.001	0.0004 (J)			<0.001
3/21/2017				<0.001	9E-05 (J)	
3/22/2017	<0.001	0.0001 (J)	0.0004 (J)			<0.001
5/23/2017				<0.001	8E-05 (J)	<0.001
5/24/2017	8E-05 (J)	9E-05 (J)	0.0003 (J)			
4/3/2018				<0.001	<0.001	<0.001
4/4/2018	<0.001	<0.001	0.00032 (J)			
6/5/2018	<0.001		0.00035 (J)	<0.001		
6/6/2018		<0.001			<0.001	<0.001
10/2/2018				<0.001	<0.001	<0.001
10/3/2018	<0.001	<0.001				
10/5/2018			0.00025 (J)			
3/12/2019					<0.001	
3/13/2019	<0.001		0.00039 (J)	<0.001		<0.001
3/14/2019		<0.001				
4/2/2019				<0.001		
4/3/2019	<0.001	<0.001			<0.001	<0.001
4/5/2019			0.00034 (J)			
9/24/2019					0.00011 (J)	
9/25/2019				<0.001		
9/26/2019			0.00039 (J)			
9/27/2019	<0.001	8.8E-05 (J)				<0.001
3/3/2020	<0.001	6.6E-05 (J)			6.1E-05 (J)	
3/4/2020			0.00056 (J)	<0.001		<0.001
3/26/2020		8E-05 (J)				
3/27/2020				<0.001	7.7E-05 (J)	
3/30/2020			0.00048 (J)			
3/31/2020	<0.001					<0.001
9/16/2020				<0.001	<0.001	
9/17/2020						<0.001
9/18/2020	<0.001	<0.001				
9/21/2020			0.00036 (J)			
2/10/2021				<0.001		
2/12/2021	<0.001	<0.001				
2/16/2021					<0.001	<0.001
2/22/2021			0.0003 (J)			
3/15/2021				<0.001	<0.001	
3/16/2021	<0.001	<0.001				<0.001
3/17/2021			0.00037 (J)			
8/16/2021				<0.001		
8/17/2021						<0.001
8/18/2021	<0.001	<0.001			<0.001	
8/19/2021			0.0002 (J)			

Time Series

Constituent: Thallium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
3/13/2019		<0.001	<0.001		<0.001	<0.001
3/14/2019	<0.001			<0.001		
4/2/2019		<0.001				
4/3/2019	<0.001			<0.001	<0.001	
4/4/2019						<0.001
4/8/2019			<0.001			
9/25/2019		<0.001				
9/26/2019			<0.001		<0.001	<0.001
9/27/2019	0.00027 (J)			<0.001		
3/2/2020		<0.001				
3/3/2020				<0.001		
3/4/2020	0.00026 (J)		<0.001		<0.001	<0.001
3/26/2020	0.00026 (J)			<0.001		
3/27/2020		<0.001				
3/30/2020			<0.001			
3/31/2020					<0.001	
4/2/2020						<0.001
9/17/2020		<0.001			<0.001	
9/18/2020				<0.001		<0.001
9/21/2020	0.0003 (J)		<0.001			
2/11/2021		<0.001				
2/12/2021	0.00019 (J)			<0.001		
2/16/2021			<0.001		<0.001	<0.001
3/12/2021						<0.001
3/15/2021		<0.001				
3/16/2021				<0.001		
3/17/2021	0.00026 (J)		<0.001		<0.001	
8/17/2021		<0.001			<0.001	<0.001
8/18/2021	0.00023 (J)					
8/19/2021			<0.001	<0.001		

Time Series

Constituent: Thallium (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
3/12/2019	<0.001	<0.001			
3/13/2019			<0.001	<0.001	<0.001
4/2/2019	<0.001	<0.001			
4/3/2019			<0.001	<0.001	<0.001
9/24/2019		6.4E-05 (J)			
9/25/2019			<0.001		
9/26/2019	<0.001			<0.001	<0.001
3/2/2020		<0.001	<0.001		
3/3/2020				8.2E-05 (J)	<0.001
3/4/2020	9.2E-05 (J)				
3/26/2020			<0.001		
3/27/2020	<0.001			<0.001	
3/30/2020		<0.001			<0.001
9/16/2020		<0.001			
9/17/2020			<0.001		
9/21/2020	<0.001			<0.001	<0.001
2/10/2021	<0.001				
2/15/2021		<0.001			<0.001
2/16/2021			<0.001	<0.001	
3/15/2021	<0.001	<0.001			<0.001
3/16/2021			<0.001	<0.001	
8/16/2021		<0.001			
8/17/2021			<0.001	<0.001	<0.001
8/18/2021	<0.001				

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-2 (bg)	HGWA-3 (bg)	HGWA-43D (bg)	HGWA-44D (bg)	HGWC-10
5/19/2016	421	143	267			
5/23/2016						629
7/11/2016	363	125				
7/12/2016			249			661
8/30/2016	330	168	254			
9/1/2016						769
10/19/2016	380	176	357			
10/24/2016						643
12/6/2016	377	145	285			
12/7/2016						697
1/24/2017	342	129	300			
1/26/2017						368
3/21/2017	340	103	288			
3/22/2017						683
5/22/2017	338	92	263			
5/24/2017						696
10/3/2017	343	127	300			746
6/4/2018	415	140	266			
6/5/2018						679
10/1/2018	354	135	291			
10/2/2018						572
4/1/2019			284			
4/2/2019	452	133				
4/3/2019						525
9/23/2019	442	129	268			
9/27/2019						624
3/25/2020	496	138	284			
4/1/2020						290
6/16/2020	632		448			
9/15/2020	265	124	258			
9/16/2020				272	270	490
11/10/2020				307	287	
12/15/2020				289	295	
1/19/2021				270	278	
3/10/2021	348				289	
3/11/2021		169	267	279		
3/12/2021						490 (H1)
8/11/2021	366			277		
8/12/2021		118	265			
8/13/2021					436	
8/17/2021						496

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-11	HGWC-12	HGWC-13	HGWC-7	HGWC-8	HGWC-9
5/20/2016				427	711	
5/23/2016	564	1060	683			984
7/12/2016	627	909	563	410	704	887
9/1/2016	656	1480	702	484	763	956
10/20/2016				393	644	642
10/24/2016	836	868	647			
12/6/2016				492	733	899
12/7/2016	748	811	465			
1/25/2017				461	744	
1/26/2017	571	846	411			869
3/21/2017				415	818	
3/22/2017	597	804	427			936
5/23/2017				450	765	939
5/24/2017	566	803	377			
10/3/2017	443	608	268	464	812	1040
6/5/2018	489		528	459		
6/6/2018		535			611	810
10/2/2018				426	597	693
10/3/2018	449	607				
10/5/2018			322			
4/2/2019				428		
4/3/2019	483	462			543	673
4/5/2019			331			
9/24/2019					457	
9/25/2019				503		
9/26/2019			1010			
9/27/2019	528	653				730
3/26/2020		533				
3/27/2020				413	541	
3/30/2020			895			
3/31/2020	565					1010
6/16/2020					573	
6/17/2020				423		
9/16/2020				392	552	
9/17/2020						680
9/18/2020	626	704				
9/21/2020			732			
3/15/2021				370	614	
3/16/2021	558	614				672
3/17/2021			716			
8/16/2021				407		
8/17/2021						704
8/18/2021	566	600			620	
8/19/2021			726			

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-19	MW-20	MW-24D	MW-25D	MW-26D	MW-27D
4/2/2019		435				
4/3/2019	310			15 (J)	493	
4/4/2019						203
4/8/2019			323			
9/25/2019		461				
9/26/2019			360		643	265
9/27/2019	442			409		
3/26/2020	626			385		
3/27/2020		429				
3/30/2020			280			
3/31/2020					623	
4/2/2020						224
9/17/2020		460			732	
9/18/2020				382		211
9/21/2020	608		391			
3/12/2021						215
3/15/2021		406				
3/16/2021				347		
3/17/2021	543		420		738	
8/17/2021		437			746	239
8/18/2021	464					
8/19/2021			420	373		

Time Series

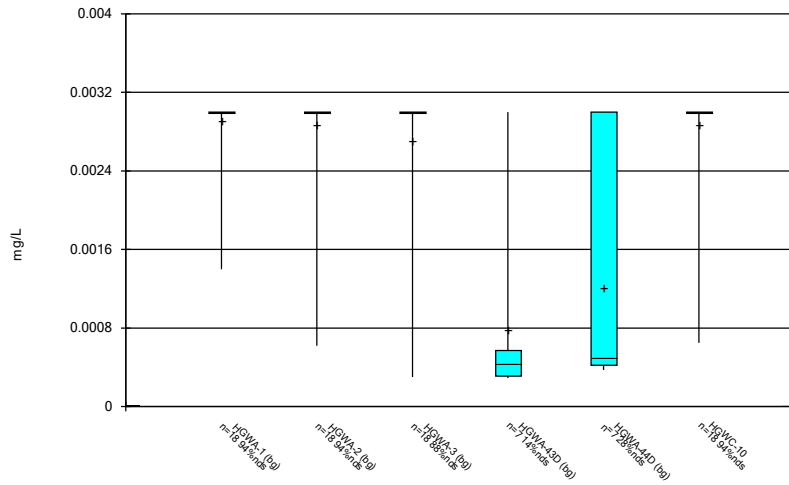
Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/21/2021 3:32 PM View: Constituents View

Plant Hammond Client: Southern Company Data: Hammond AP-1

	MW-28D	MW-29	MW-5	MW-6	MW-7
4/2/2019	350	548			
4/3/2019			396	437	213
9/24/2019		603			
9/25/2019			460		
9/26/2019	418			735	383
3/26/2020			385		
3/27/2020	287			676	
3/30/2020		552			142
9/16/2020		547			
9/17/2020			486		
9/21/2020	393			656	326
3/15/2021	293	555			293
3/16/2021			333	600	
8/16/2021		512			
8/17/2021			339	656	344
8/18/2021	396				

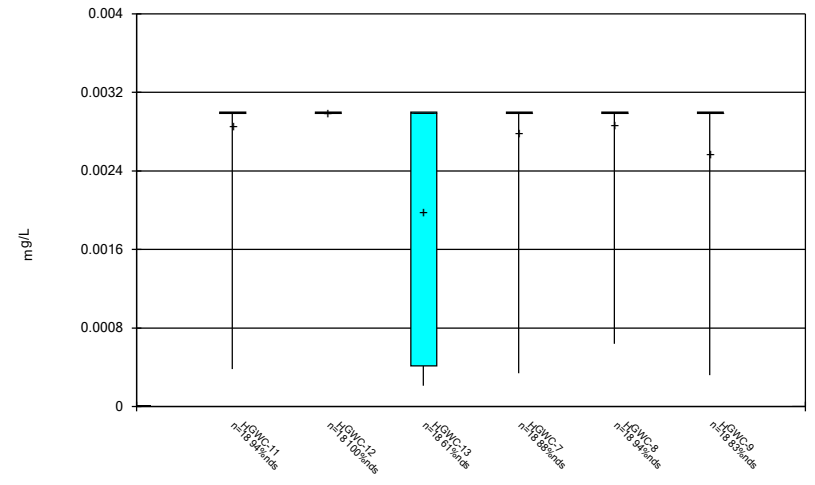
FIGURE B.

Box & Whiskers Plot



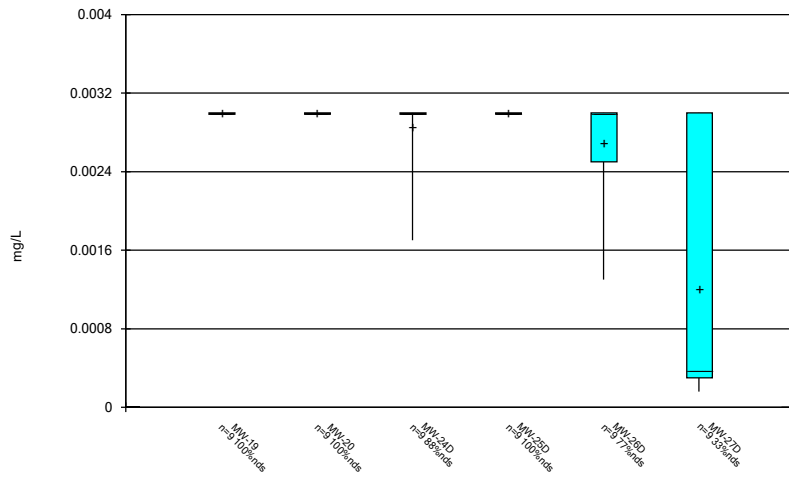
Constituent: Antimony Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



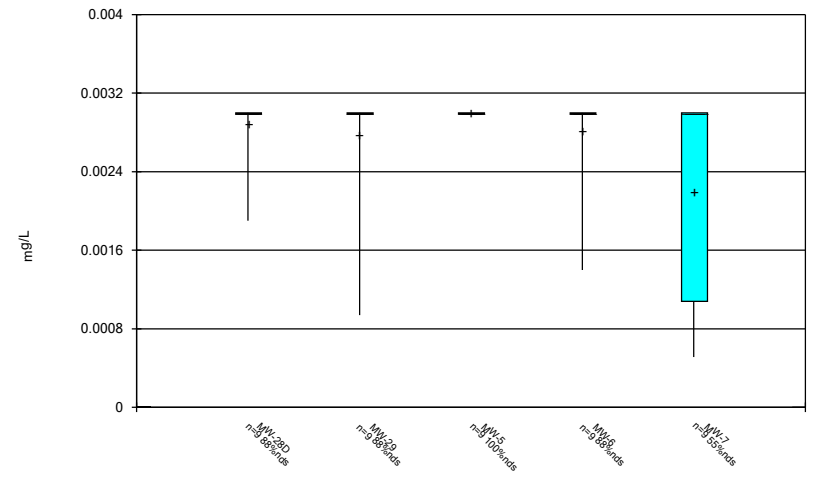
Constituent: Antimony Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



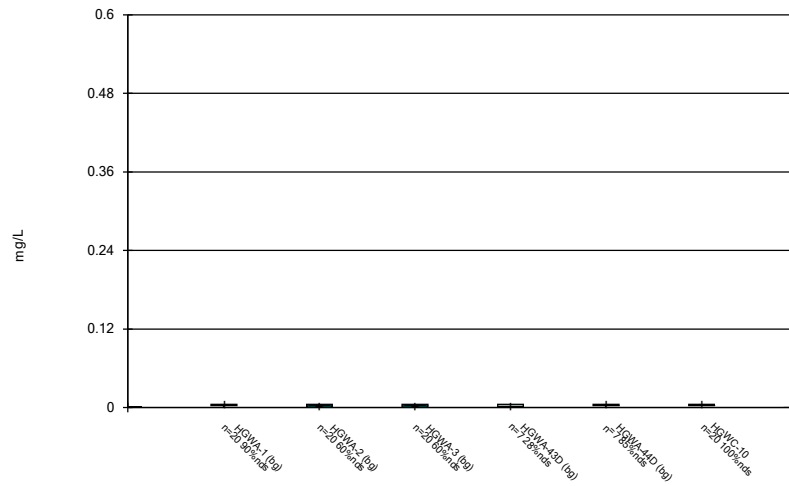
Constituent: Antimony Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



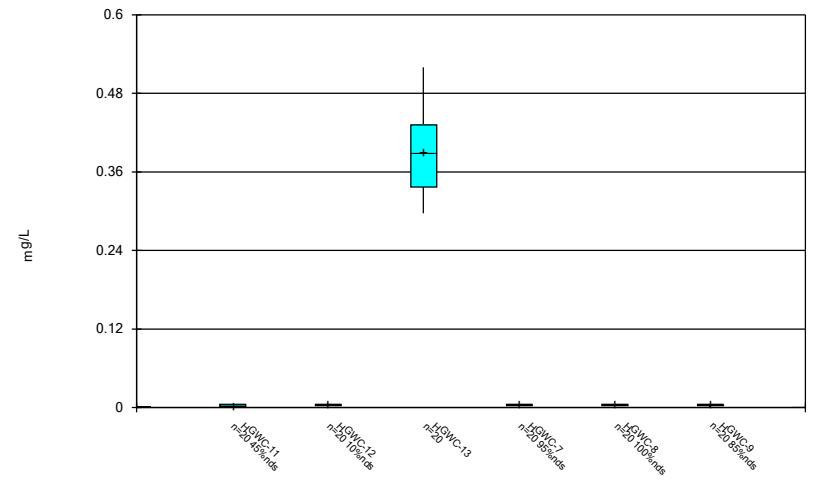
Constituent: Antimony Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



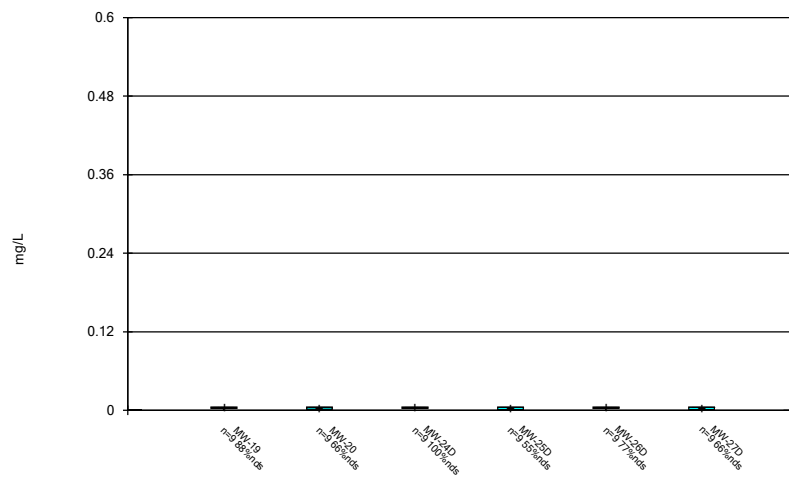
Constituent: Arsenic Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



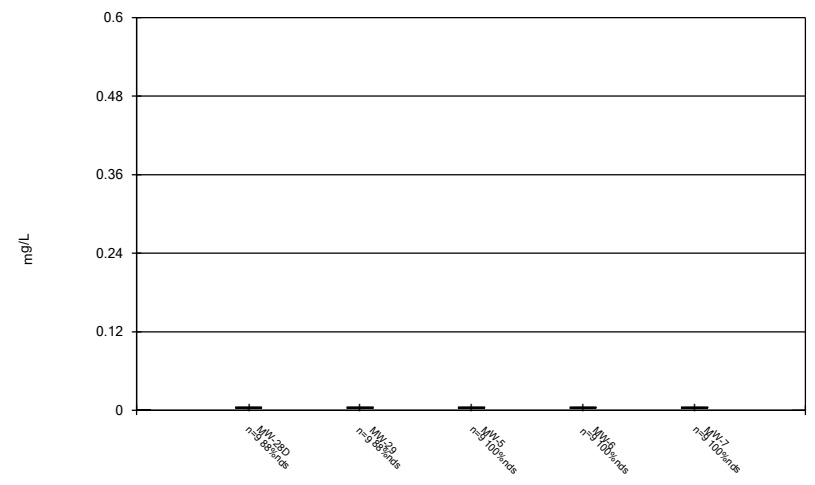
Constituent: Arsenic Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



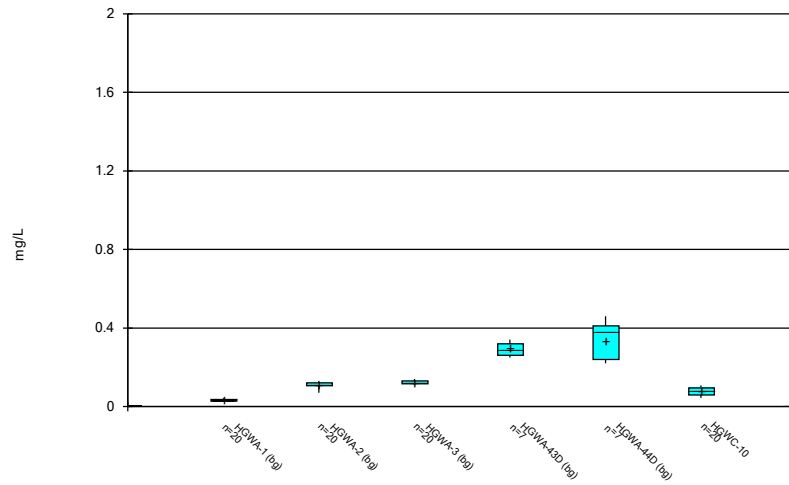
Constituent: Arsenic Analysis Run 10/21/2021 3:32 PM View: Constituents View
Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



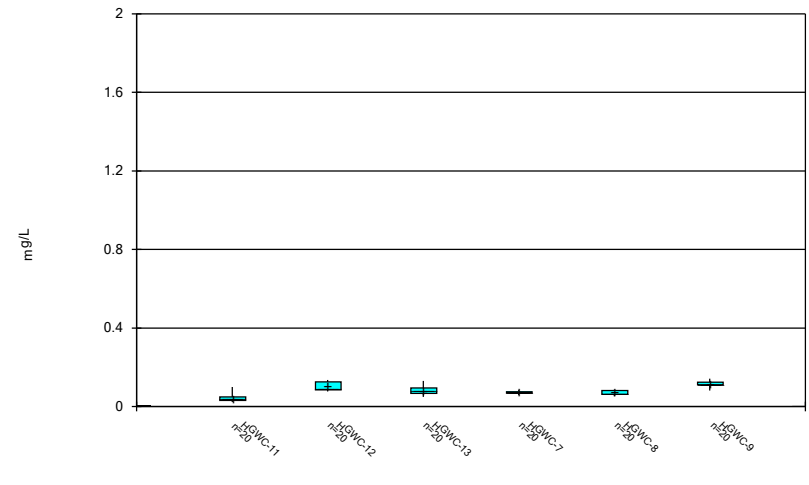
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



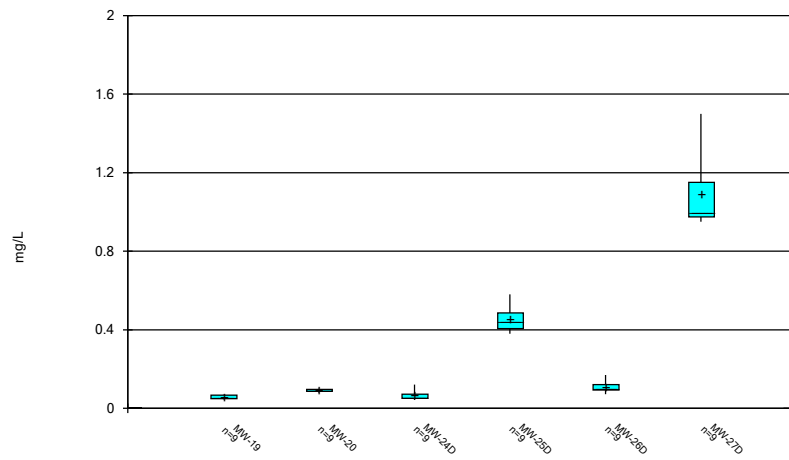
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Box & Whiskers Plot



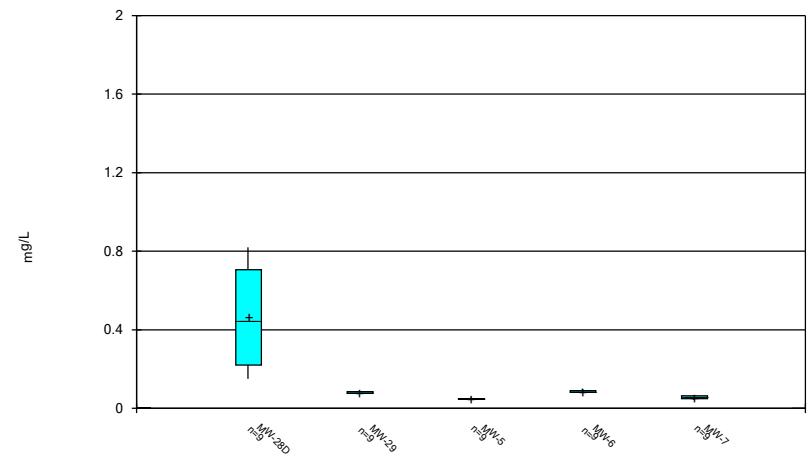
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Box & Whiskers Plot



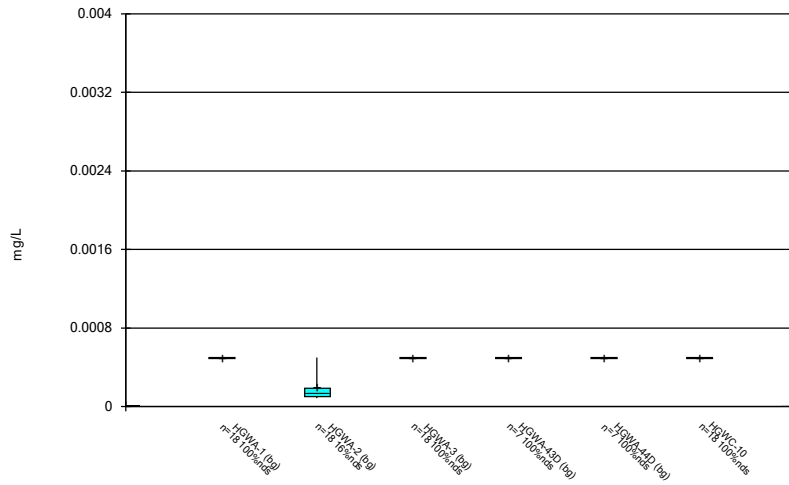
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Box & Whiskers Plot



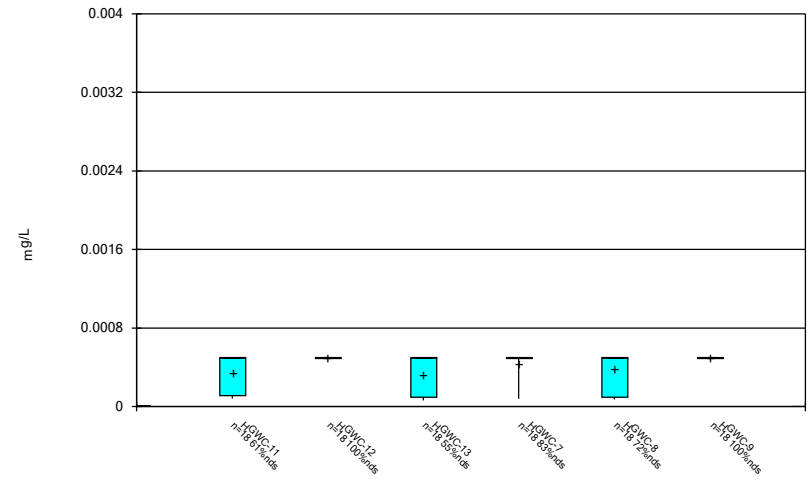
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Box & Whiskers Plot



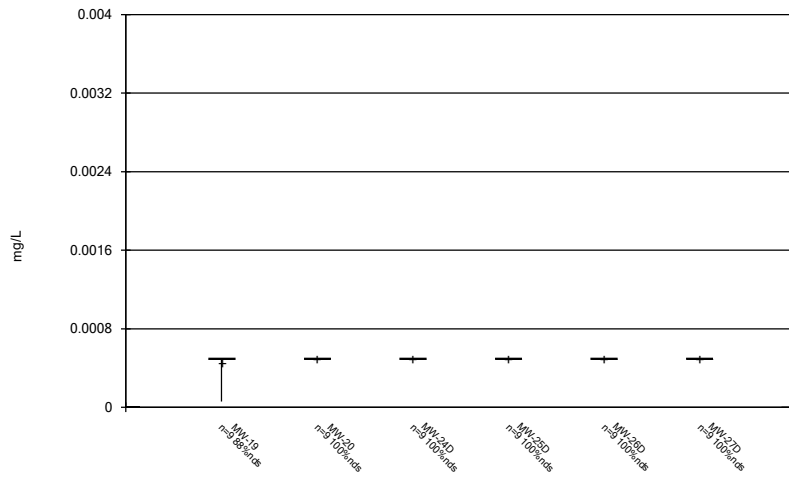
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Box & Whiskers Plot



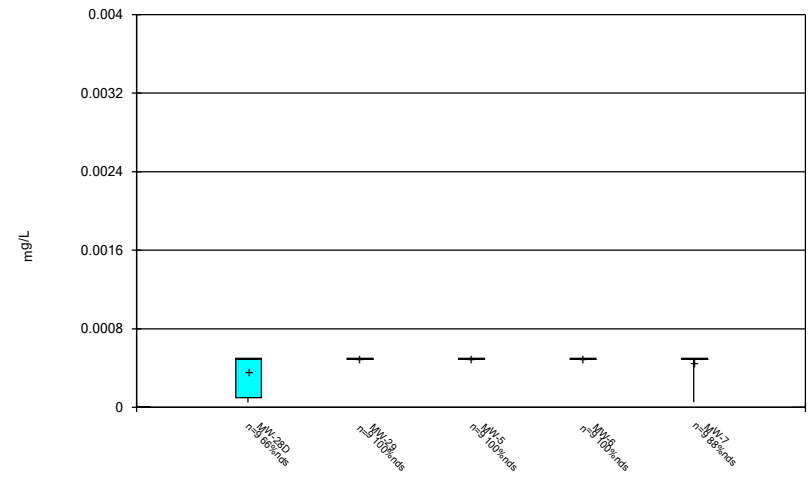
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Box & Whiskers Plot



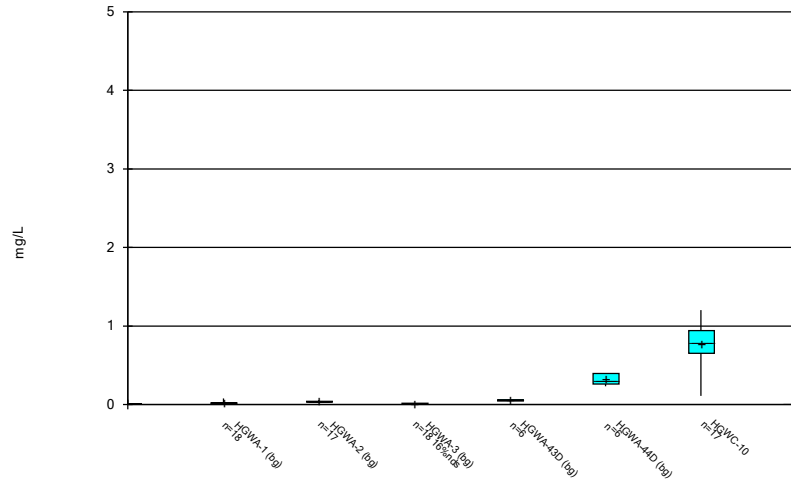
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Box & Whiskers Plot



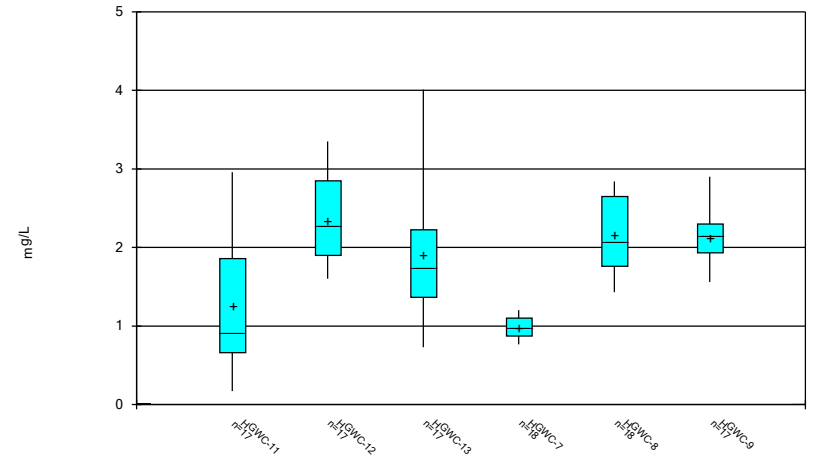
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Box & Whiskers Plot



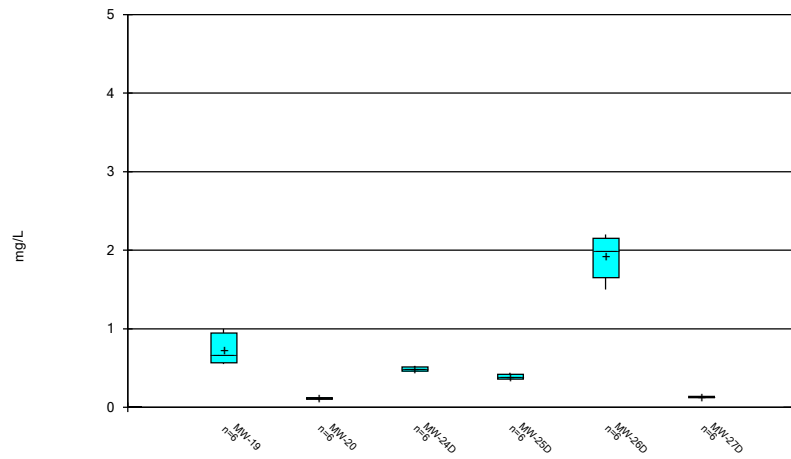
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Box & Whiskers Plot



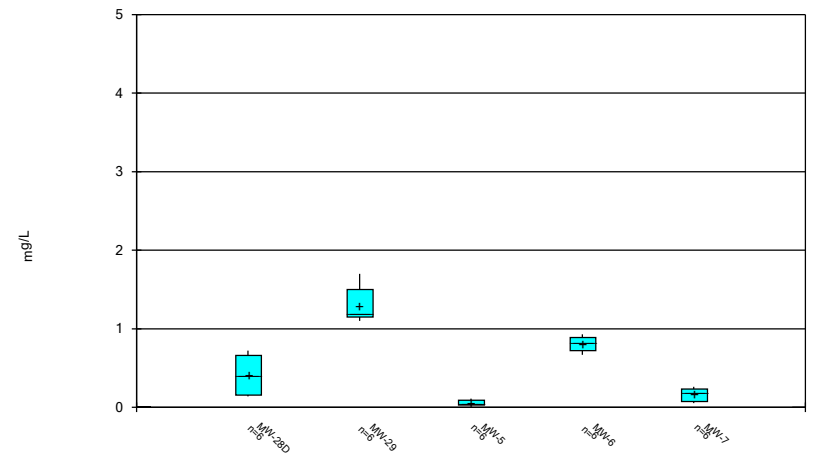
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Box & Whiskers Plot



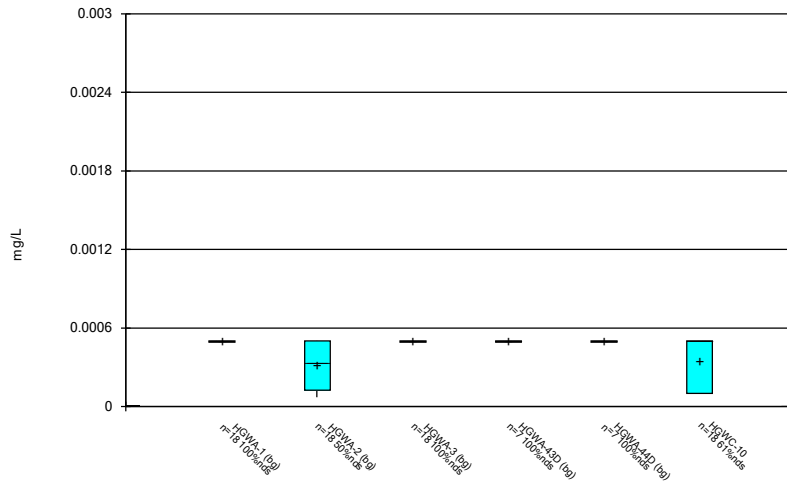
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Box & Whiskers Plot



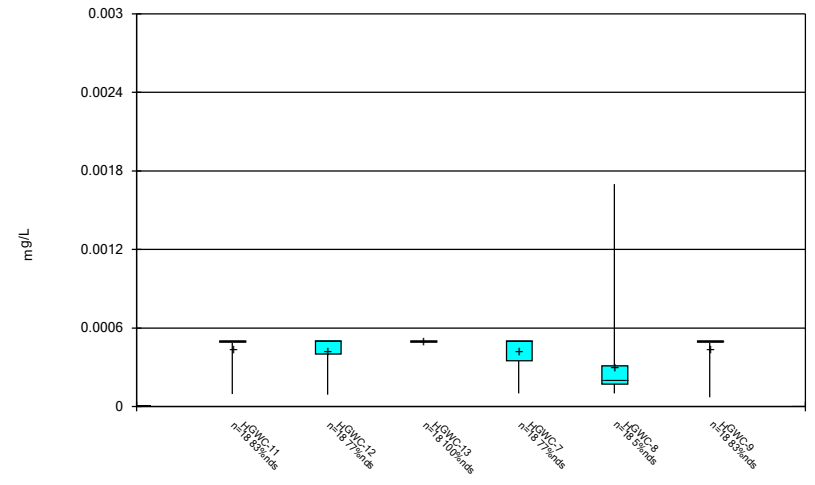
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Box & Whiskers Plot



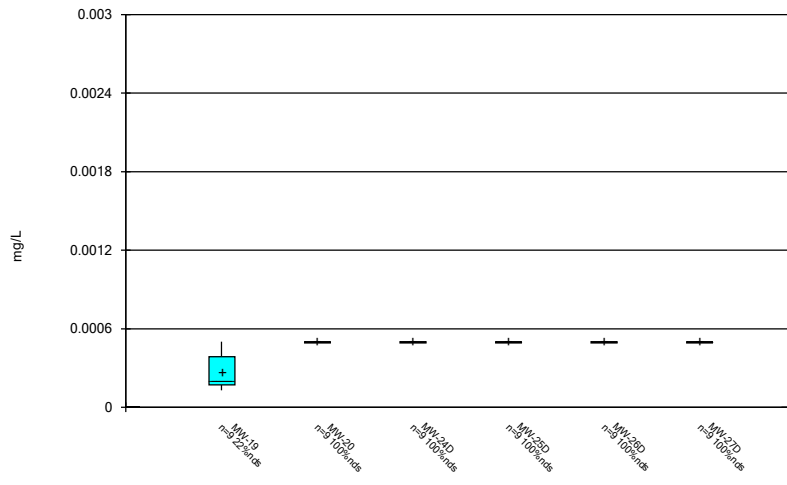
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Box & Whiskers Plot



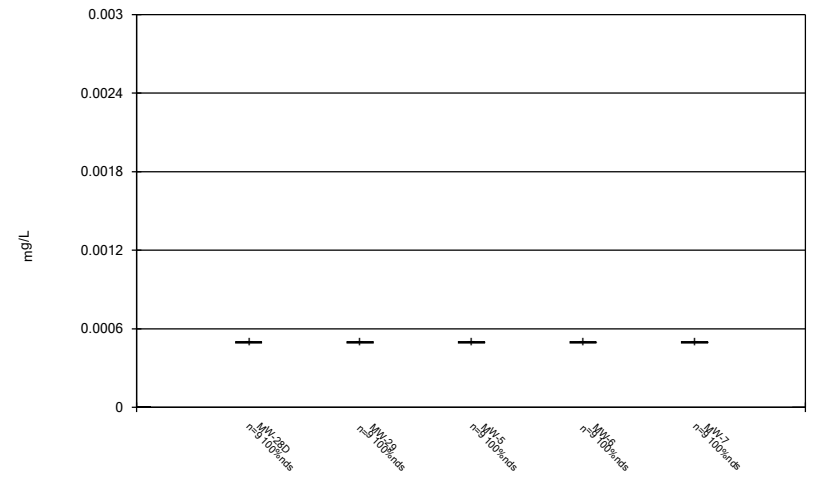
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Box & Whiskers Plot



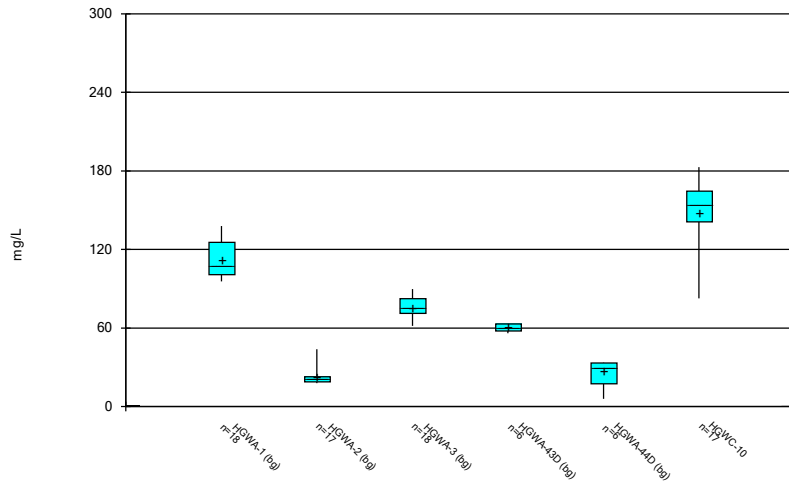
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Box & Whiskers Plot



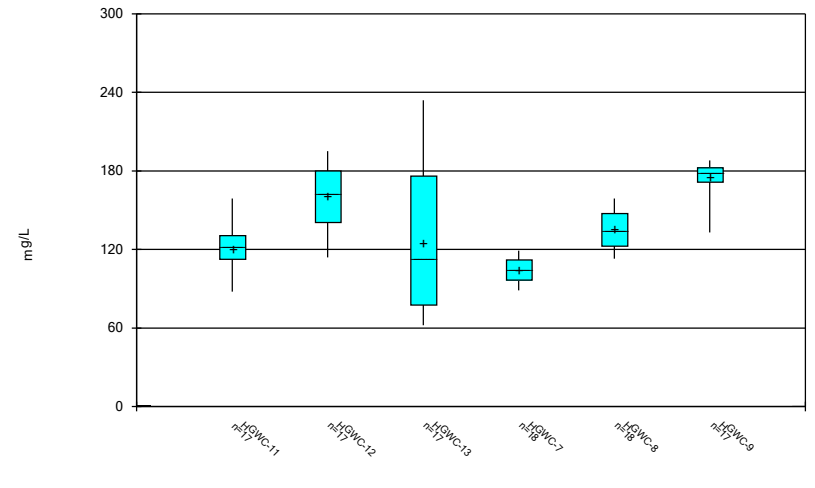
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Box & Whiskers Plot



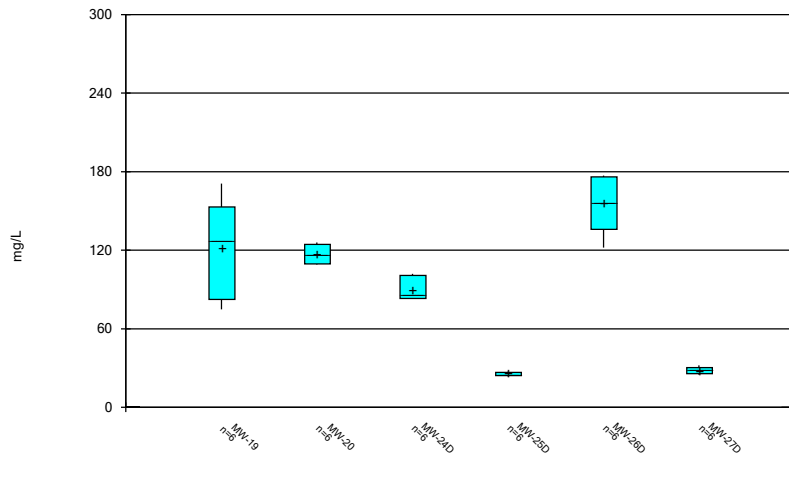
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



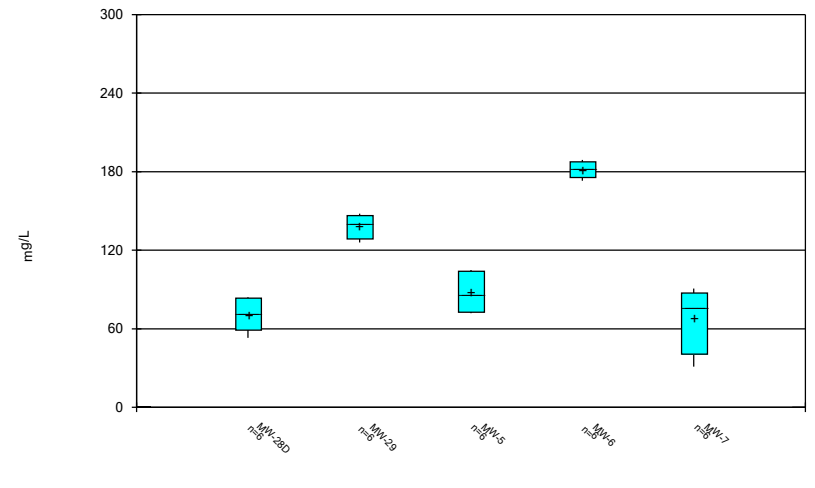
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Box & Whiskers Plot



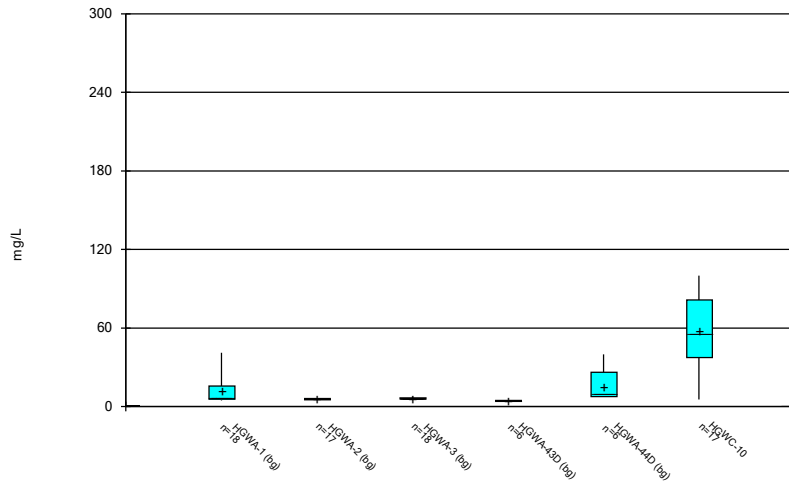
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Box & Whiskers Plot



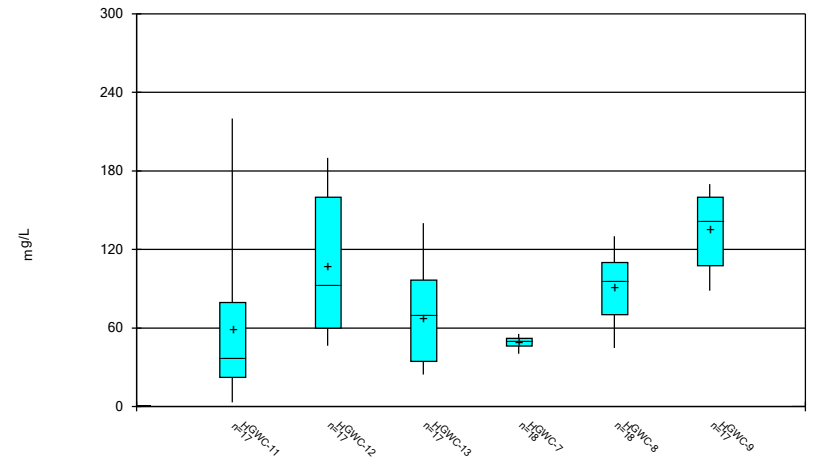
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Box & Whiskers Plot



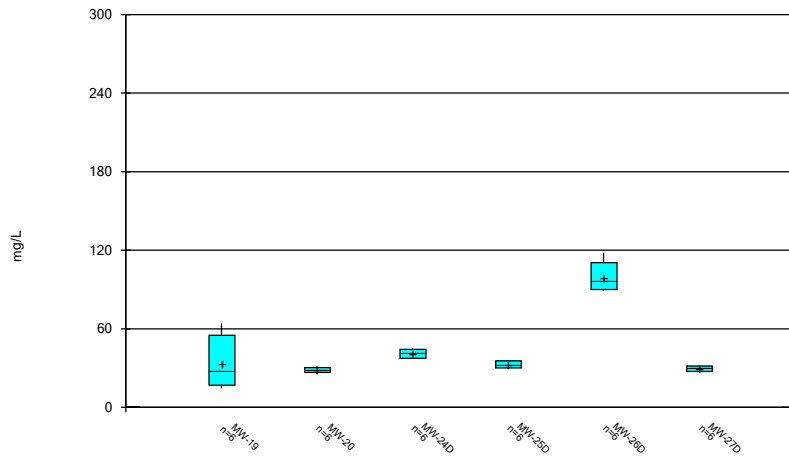
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Box & Whiskers Plot



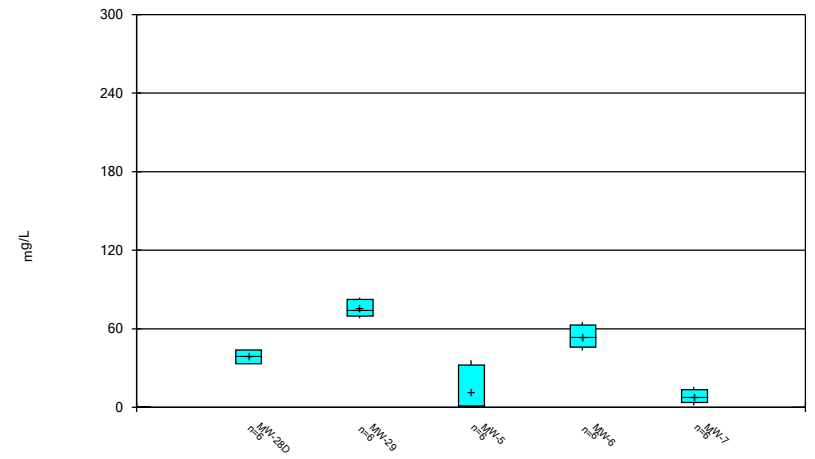
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Box & Whiskers Plot



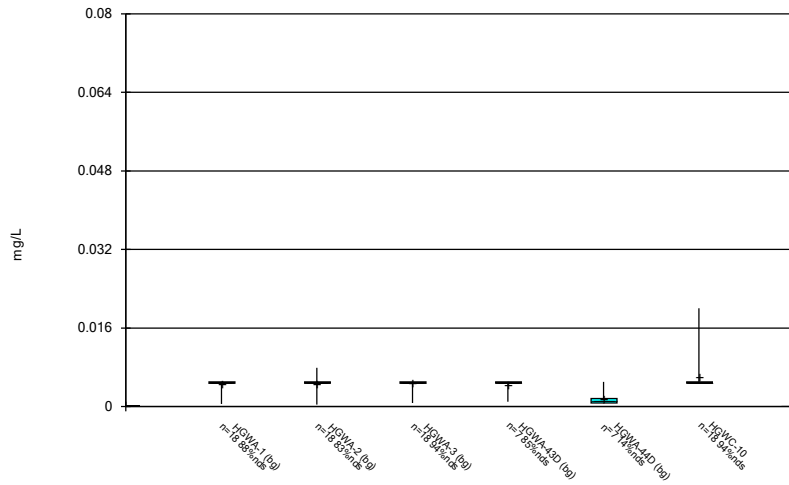
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Box & Whiskers Plot



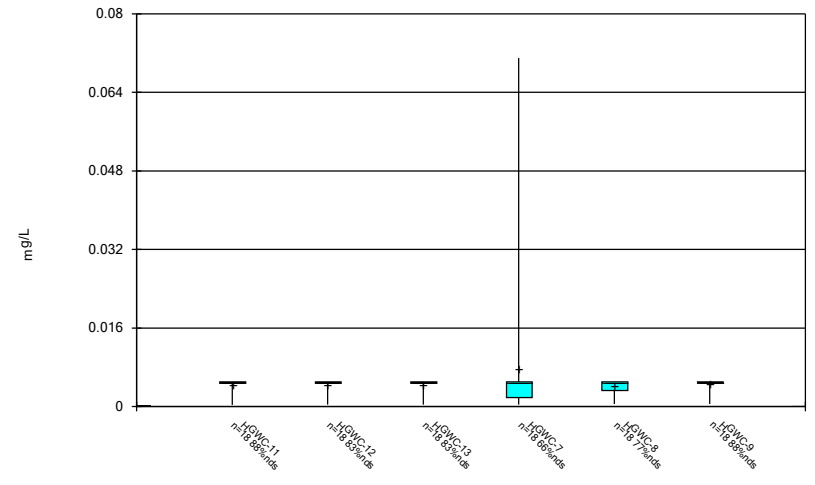
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Box & Whiskers Plot



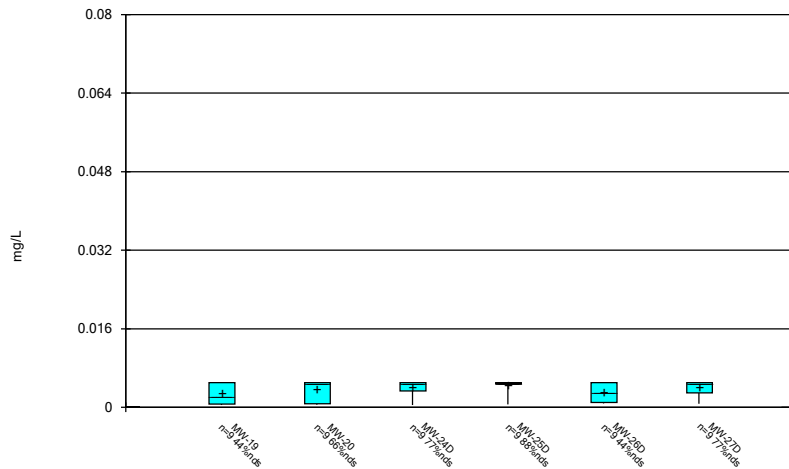
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Box & Whiskers Plot



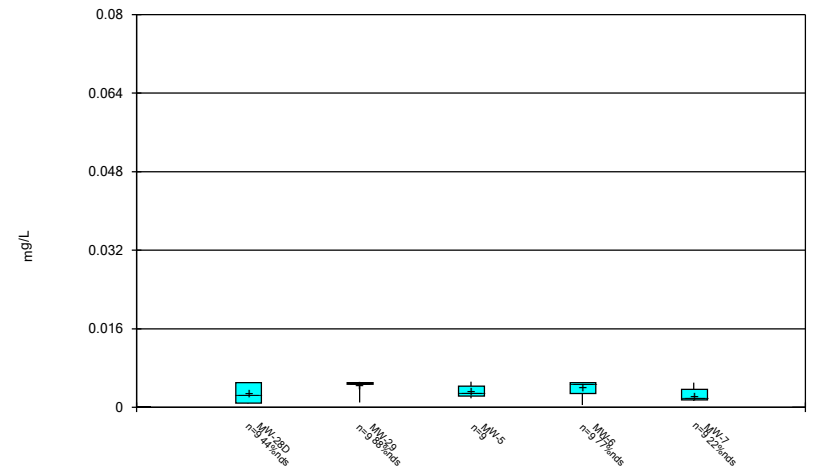
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Box & Whiskers Plot



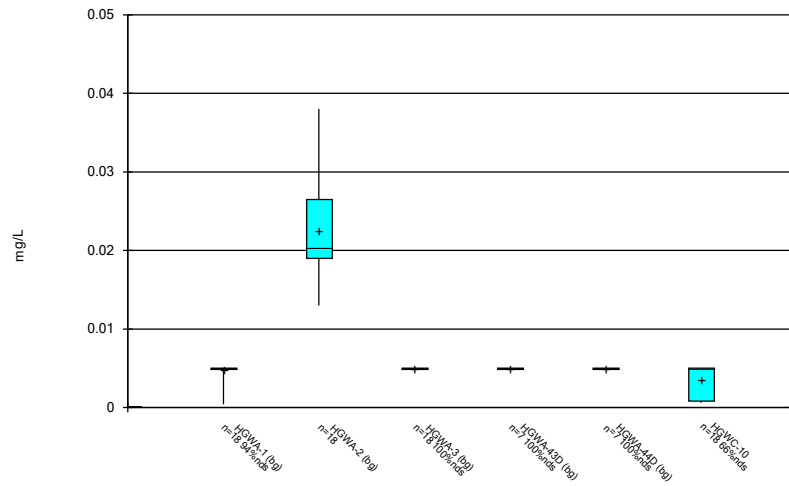
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Box & Whiskers Plot



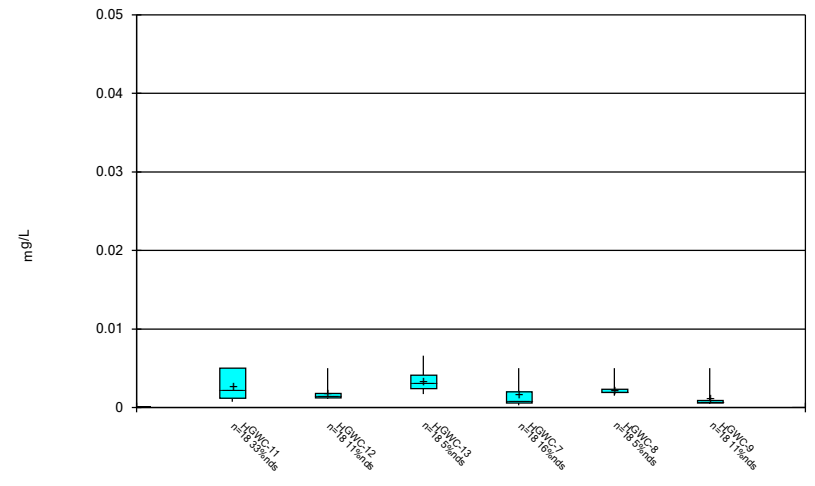
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Box & Whiskers Plot



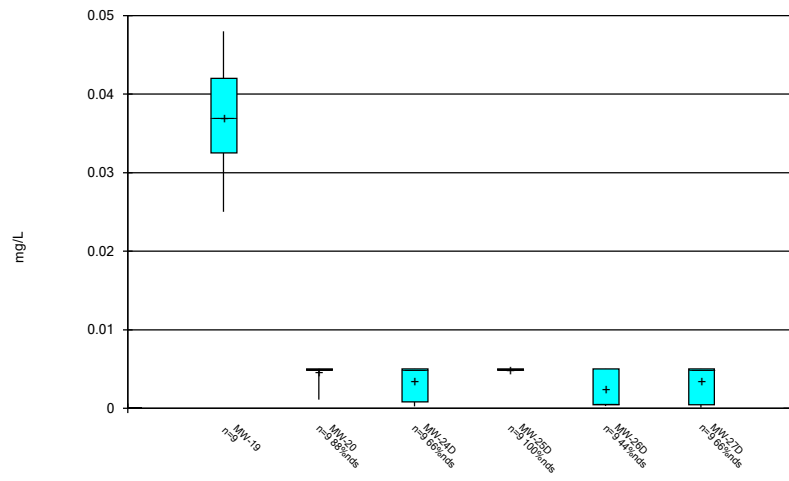
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Box & Whiskers Plot



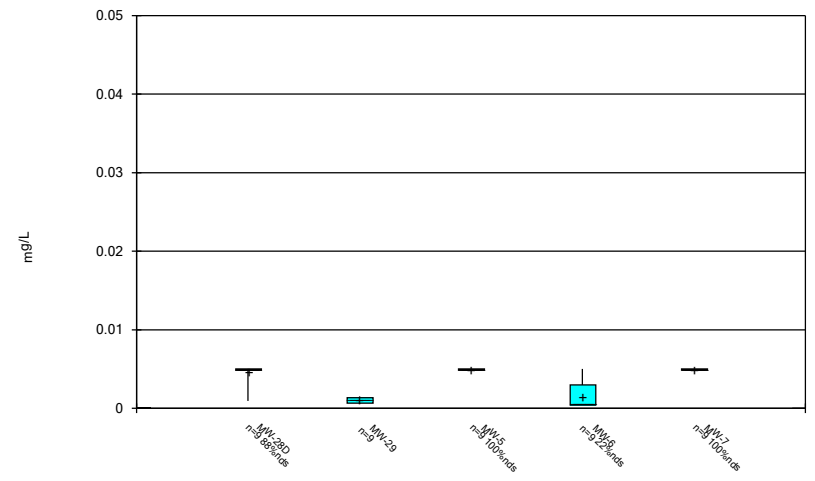
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Box & Whiskers Plot



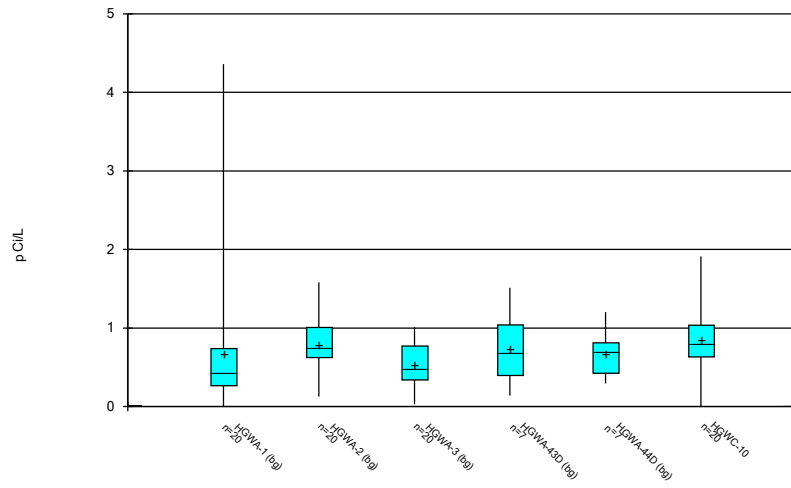
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Box & Whiskers Plot



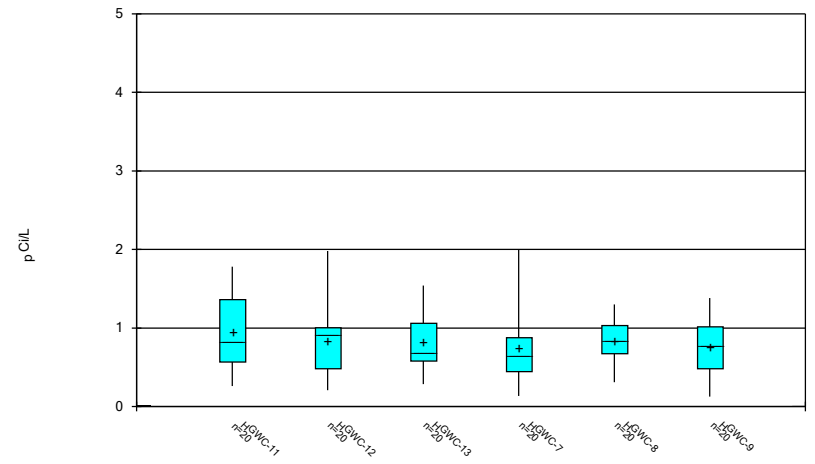
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Box & Whiskers Plot



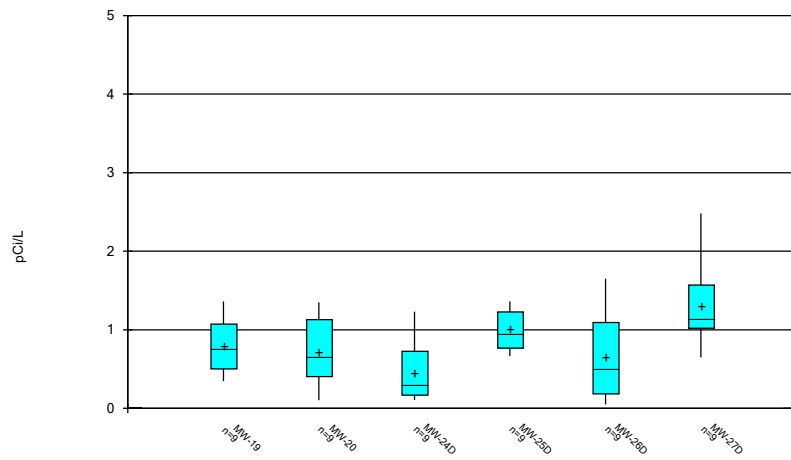
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Box & Whiskers Plot



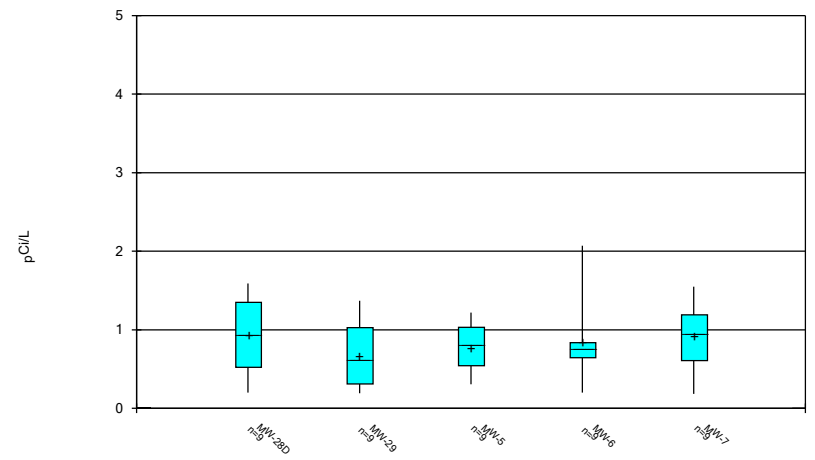
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Box & Whiskers Plot



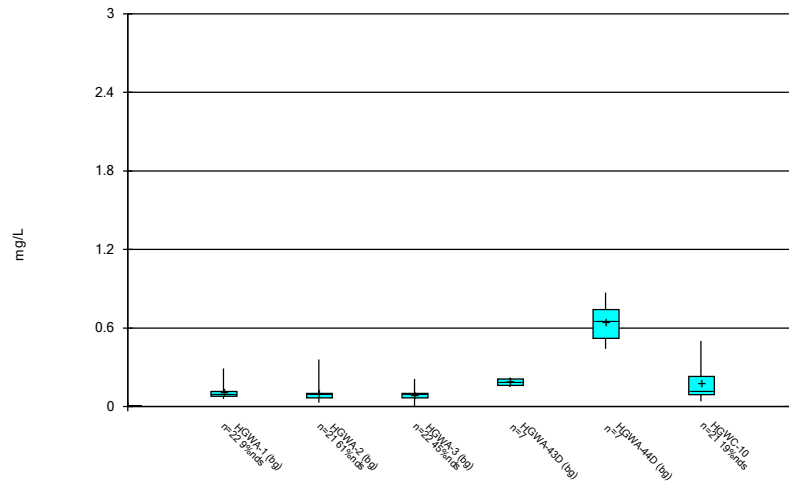
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Box & Whiskers Plot



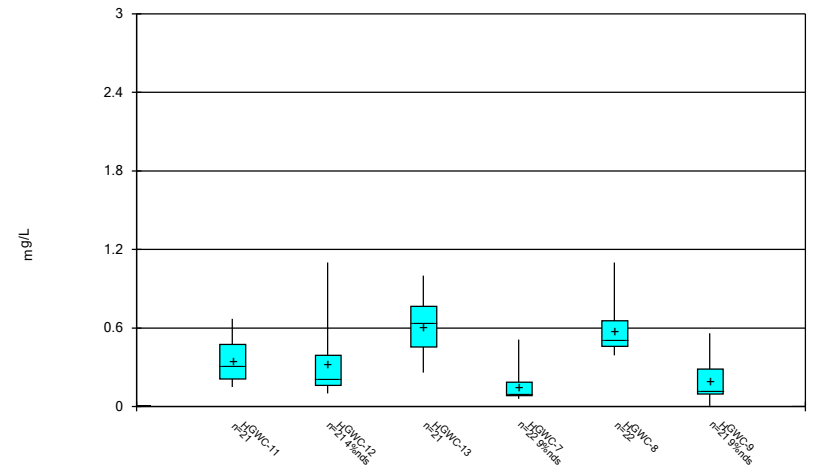
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Box & Whiskers Plot



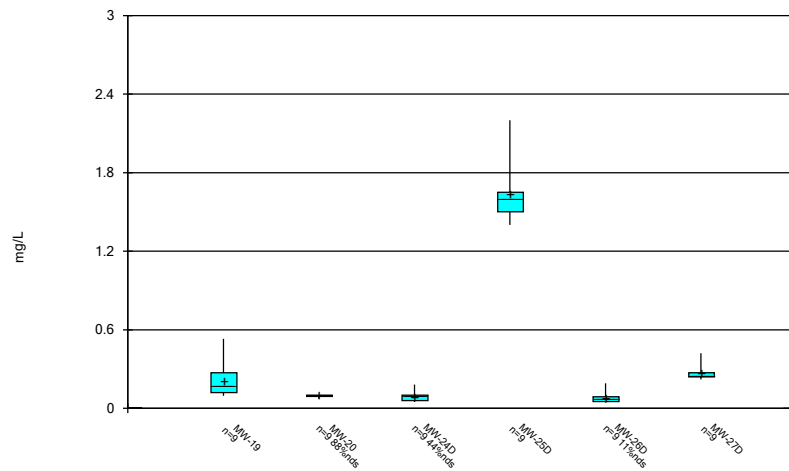
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Box & Whiskers Plot



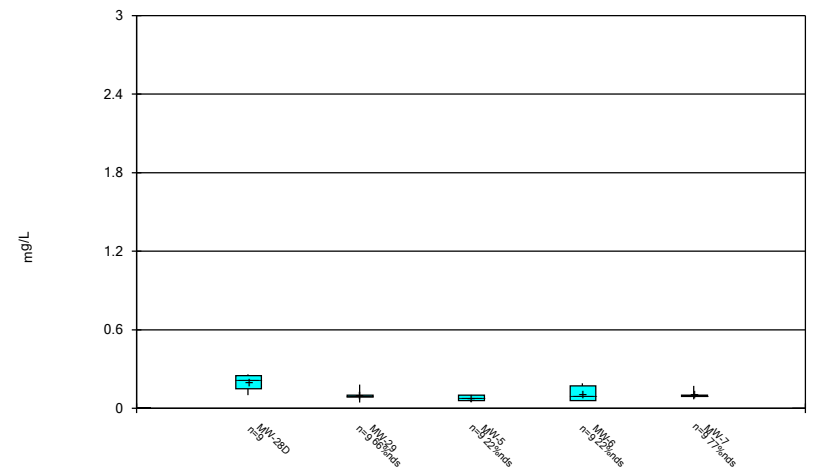
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Box & Whiskers Plot



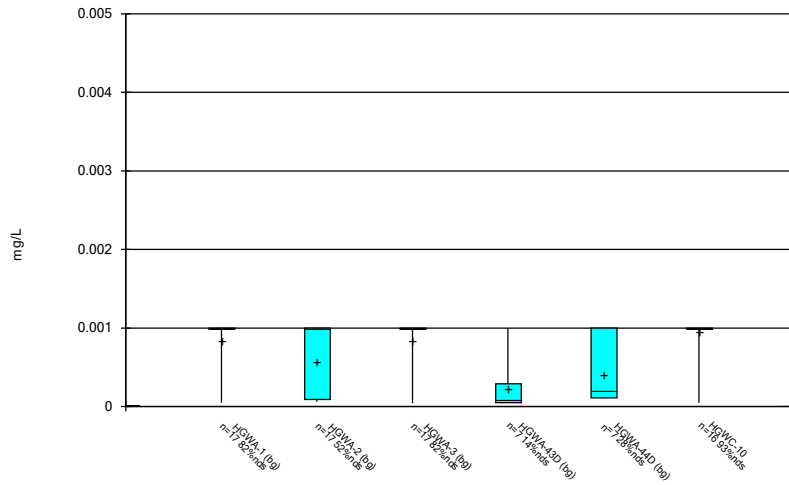
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Box & Whiskers Plot



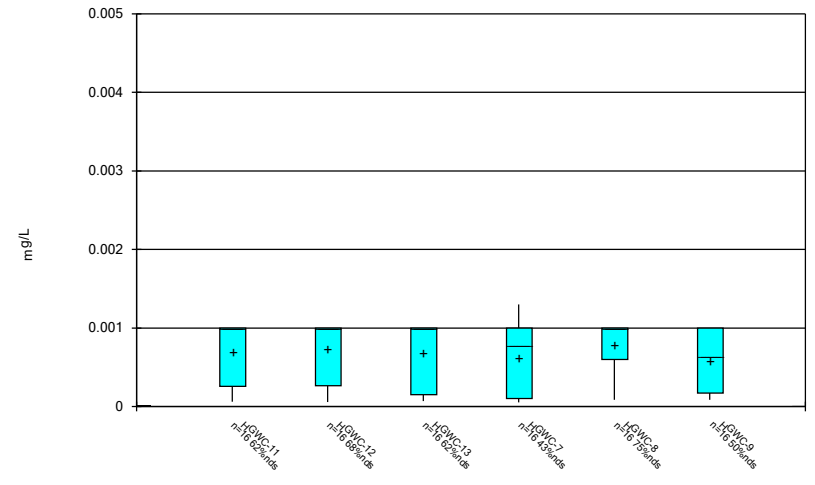
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Box & Whiskers Plot



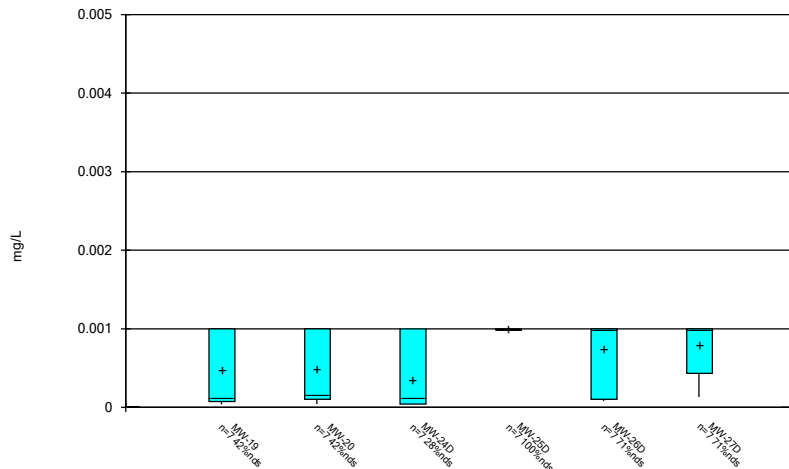
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Box & Whiskers Plot



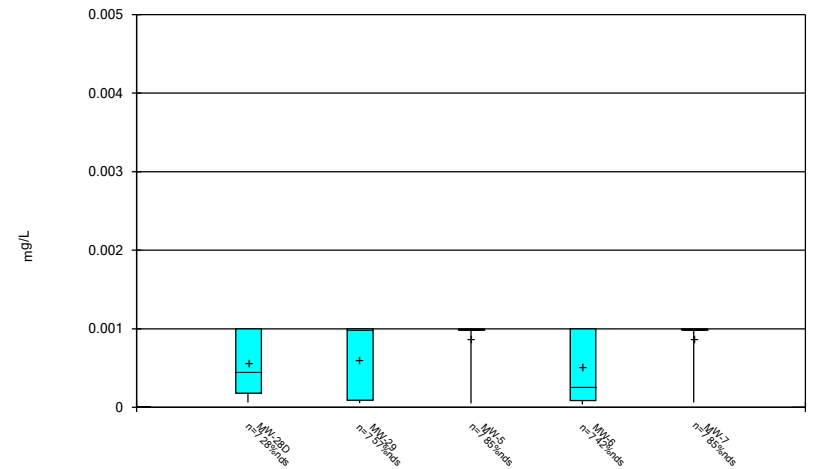
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Box & Whiskers Plot



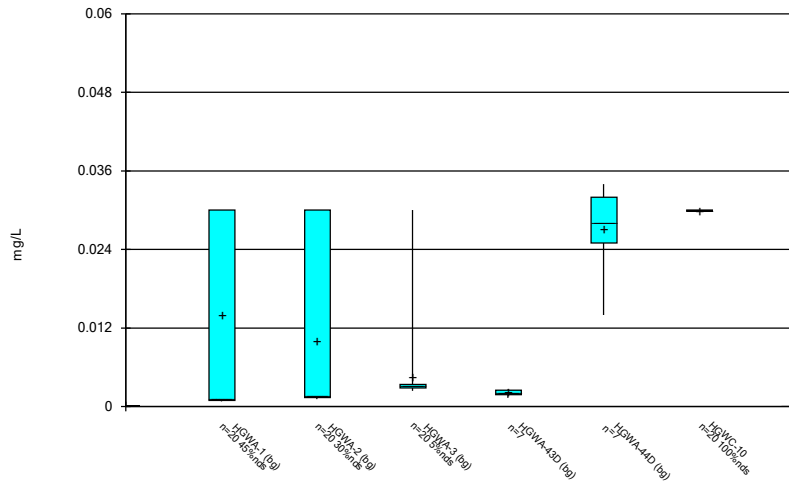
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Box & Whiskers Plot



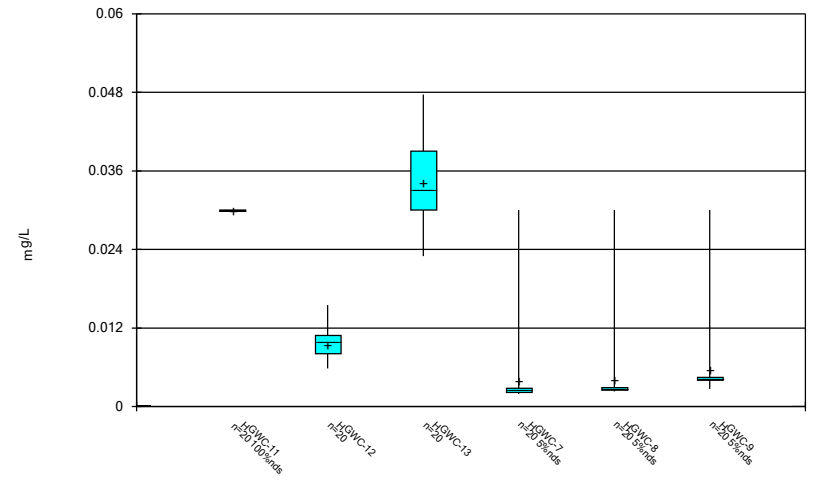
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Box & Whiskers Plot



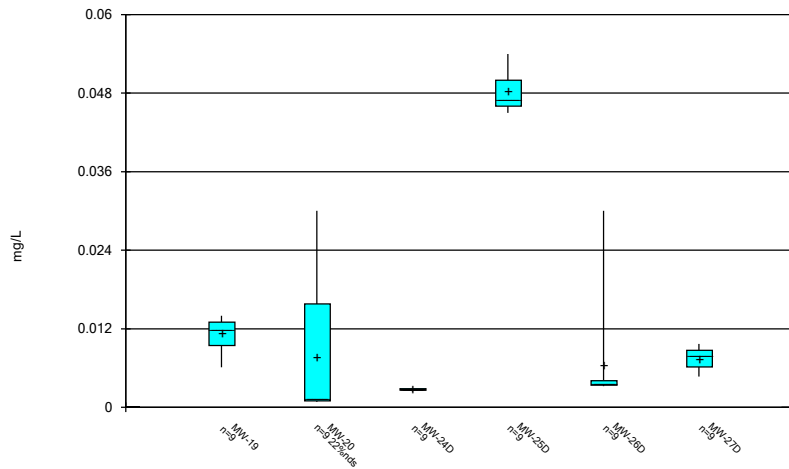
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Box & Whiskers Plot



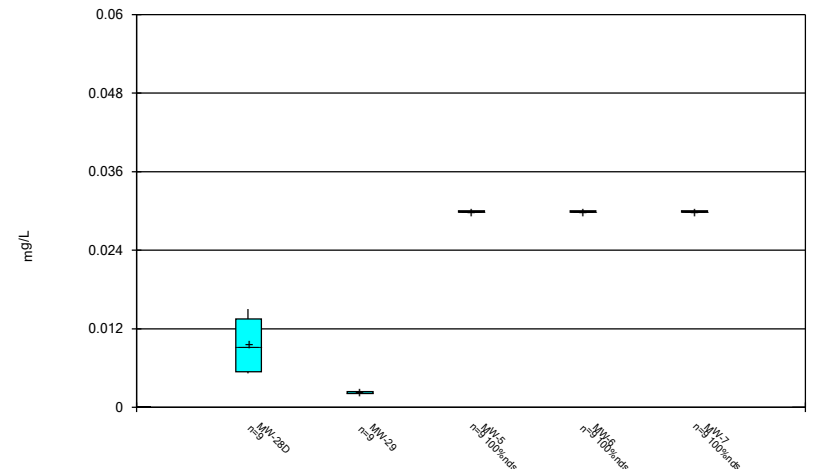
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Box & Whiskers Plot



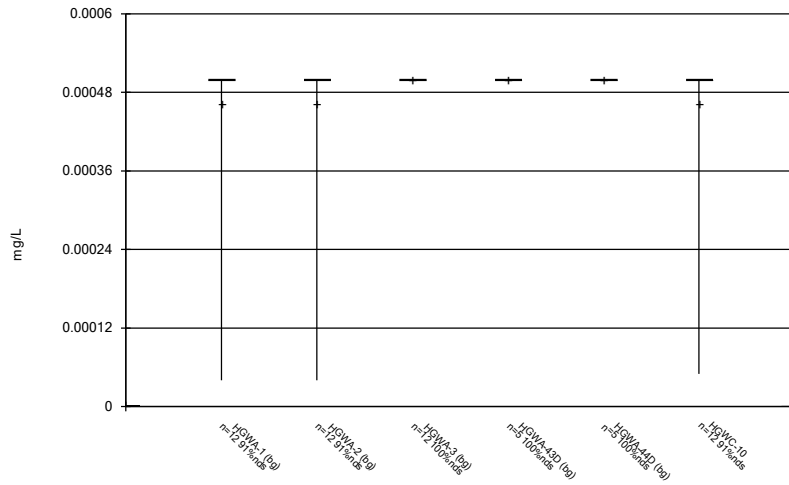
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Box & Whiskers Plot



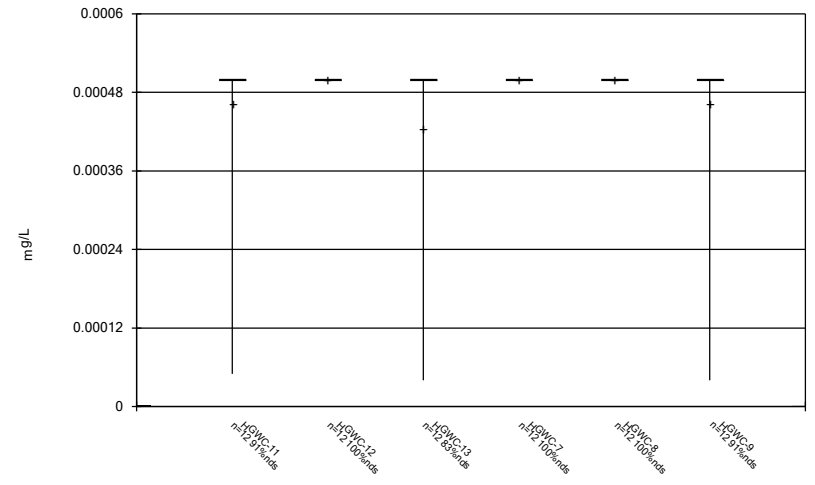
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Box & Whiskers Plot



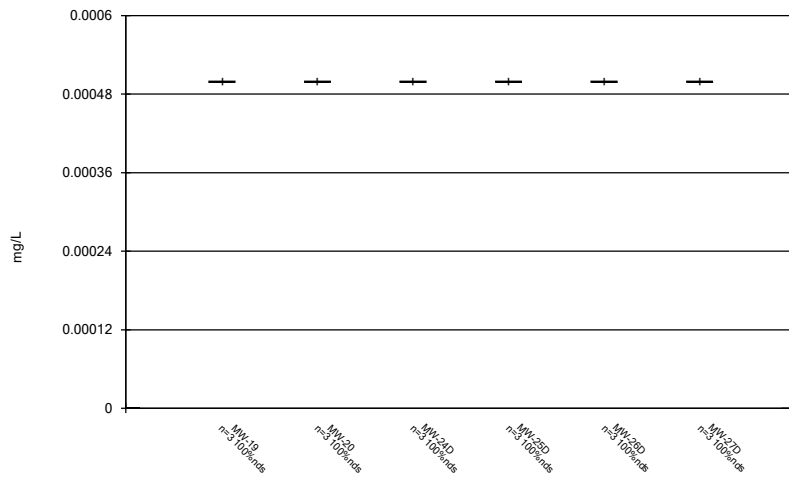
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Box & Whiskers Plot



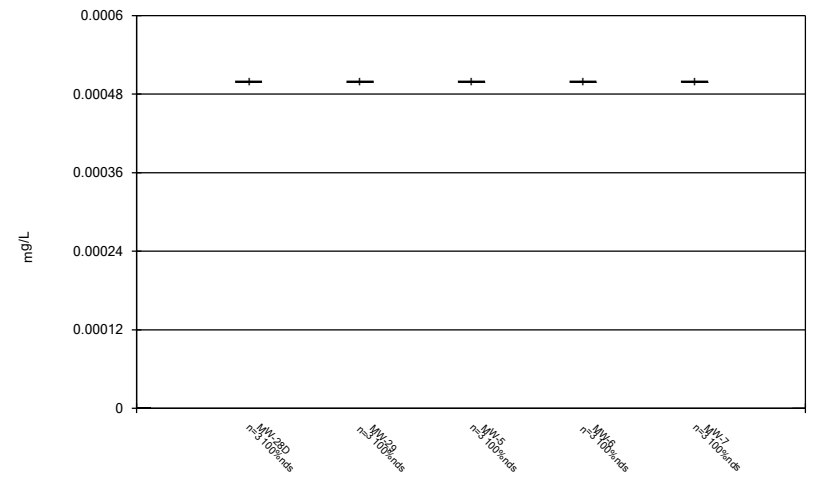
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Box & Whiskers Plot



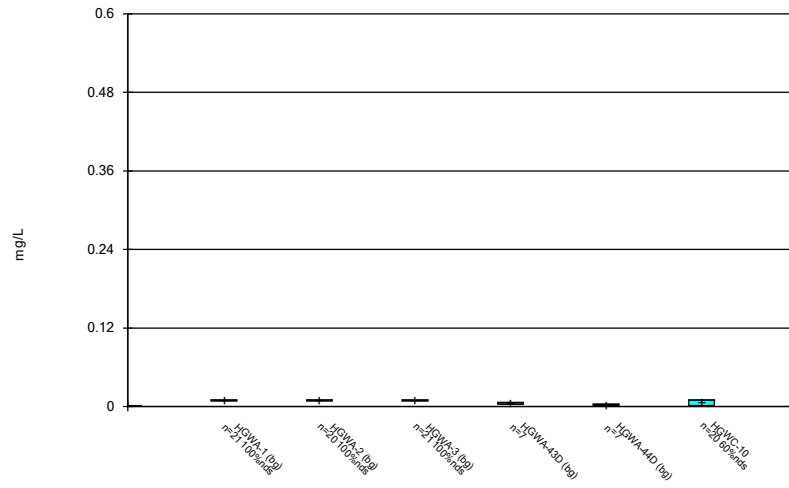
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Box & Whiskers Plot



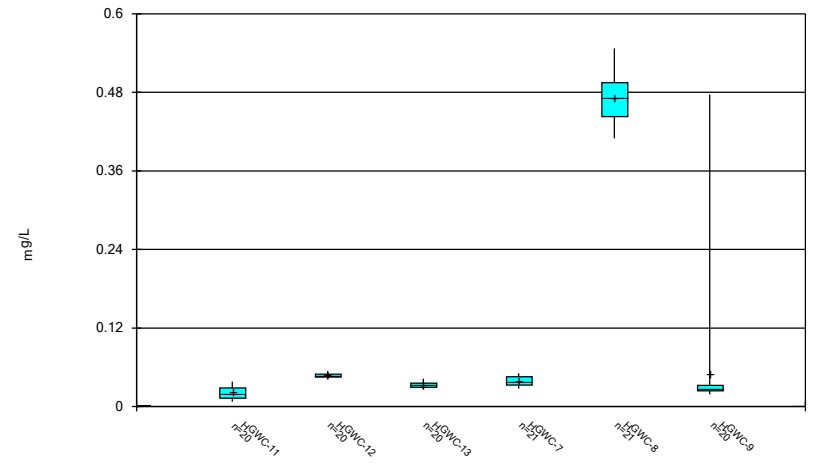
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Box & Whiskers Plot



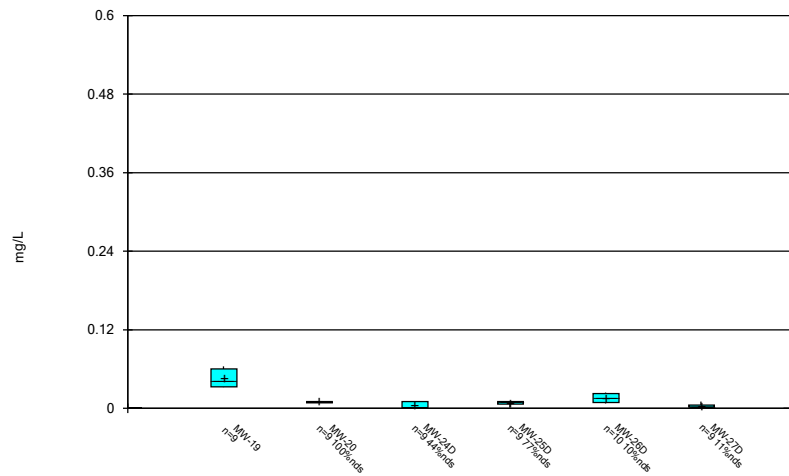
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Box & Whiskers Plot



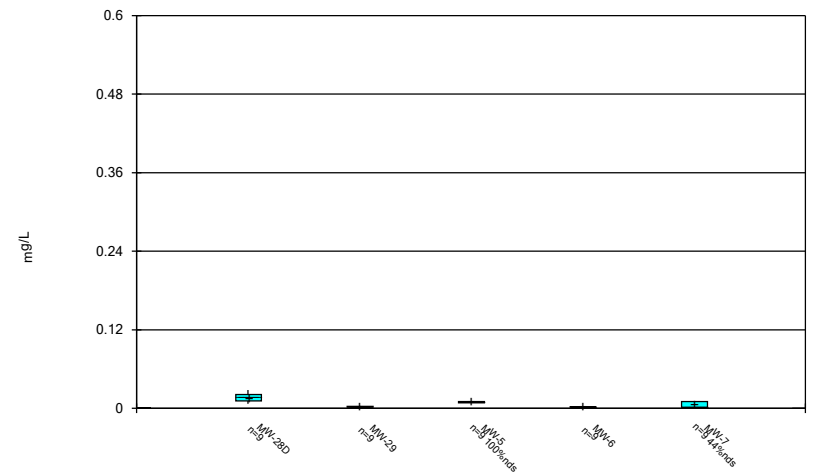
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Box & Whiskers Plot



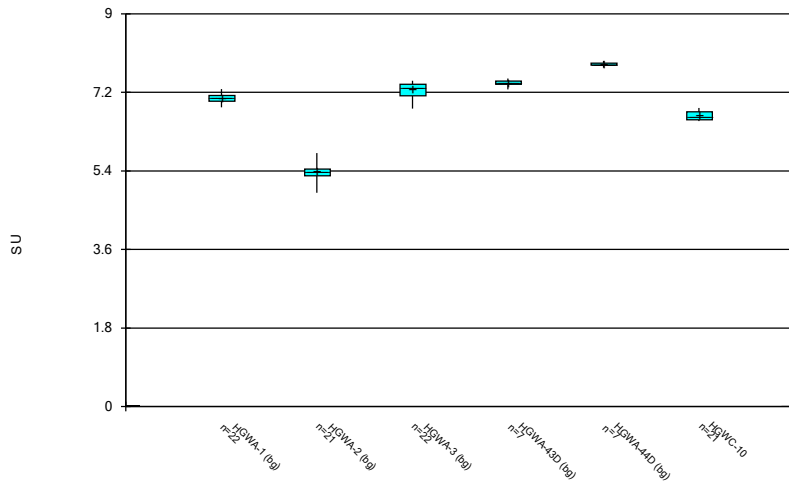
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Box & Whiskers Plot



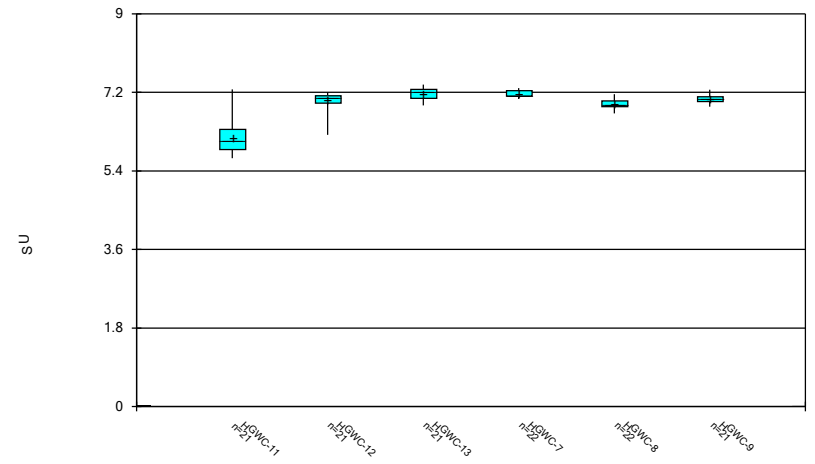
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Box & Whiskers Plot



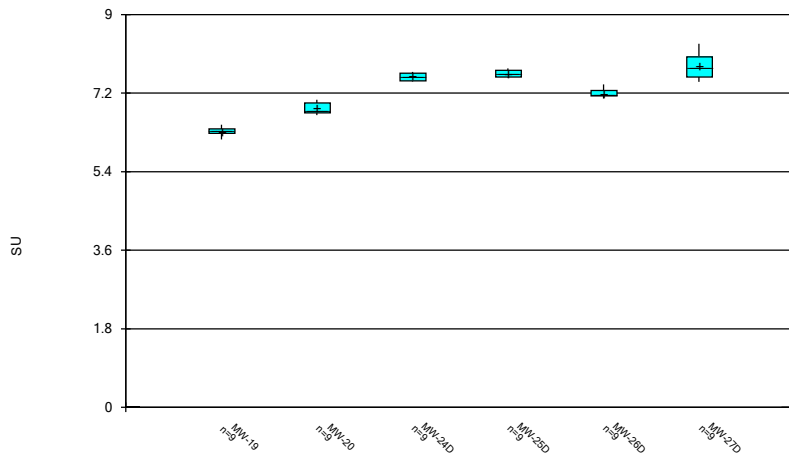
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Box & Whiskers Plot



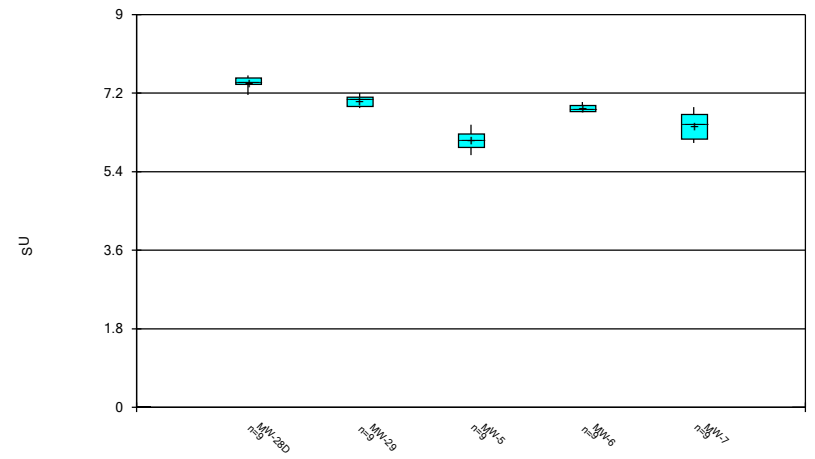
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Box & Whiskers Plot



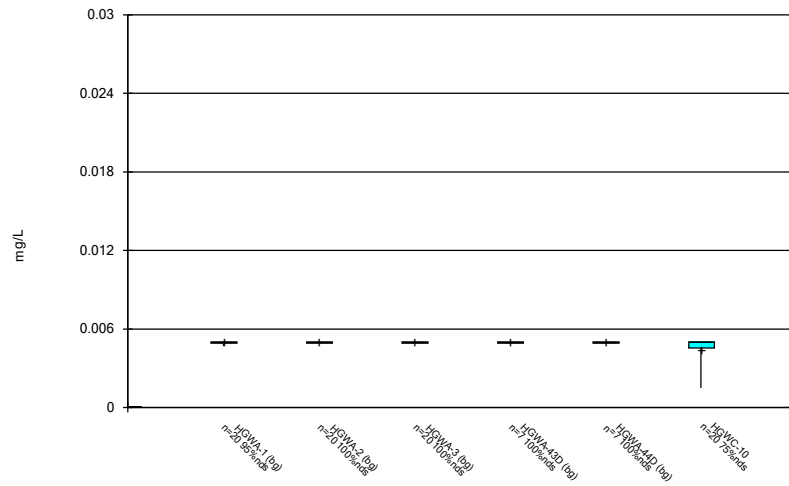
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Box & Whiskers Plot



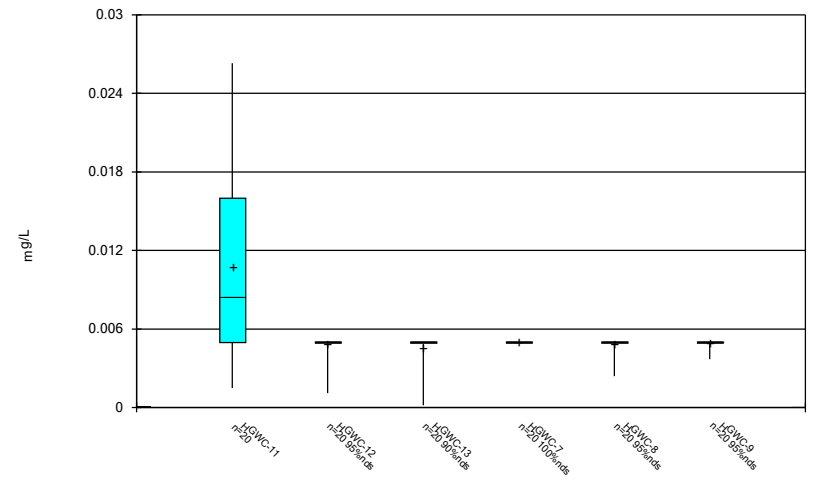
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



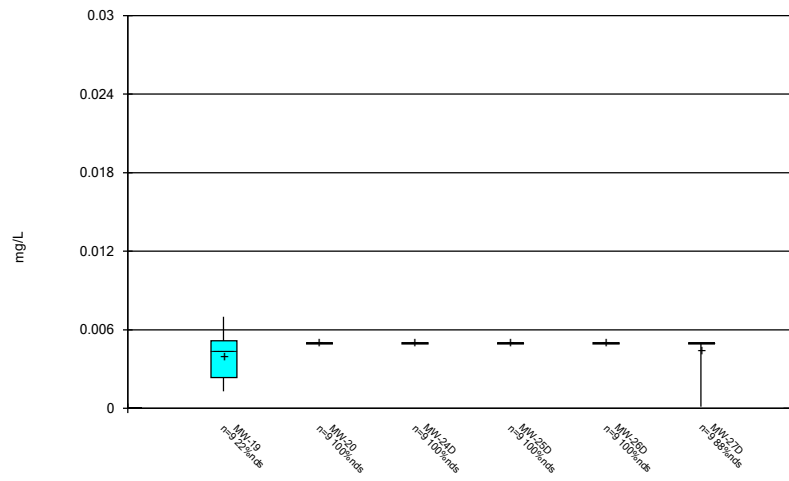
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



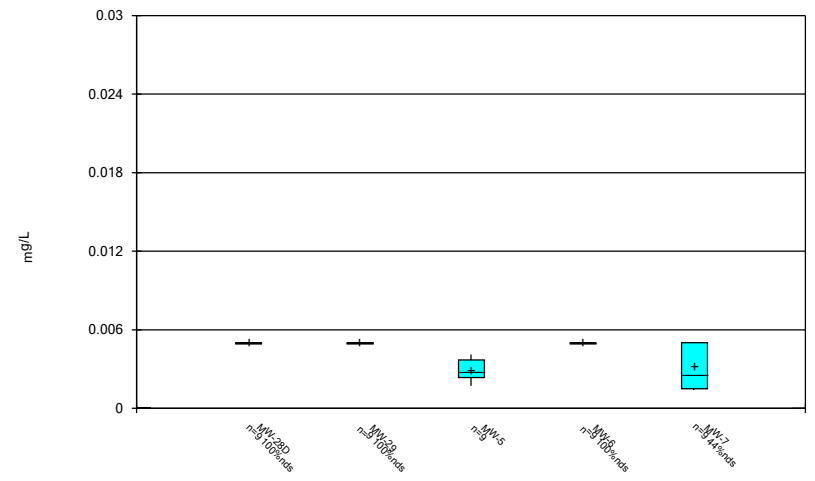
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



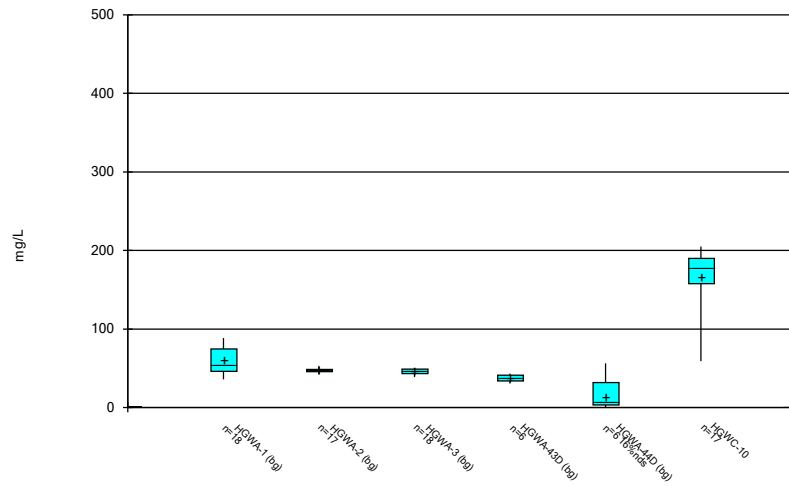
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



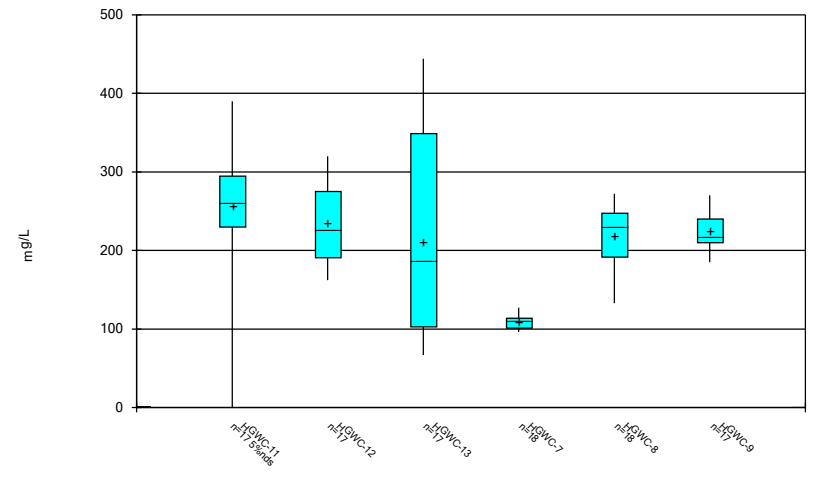
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



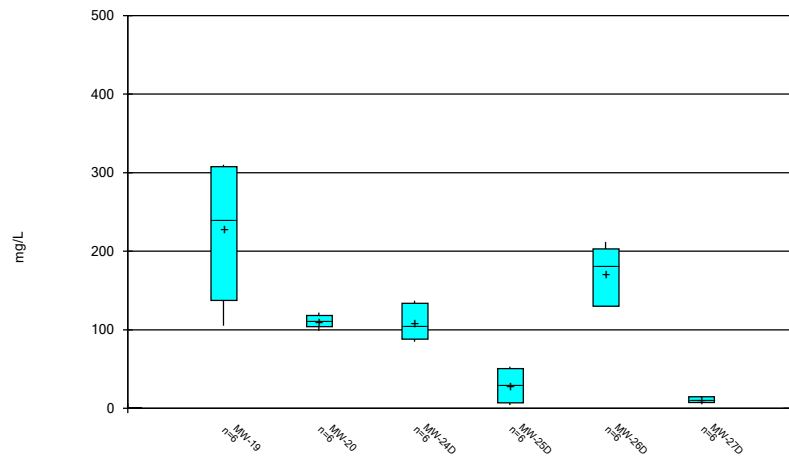
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



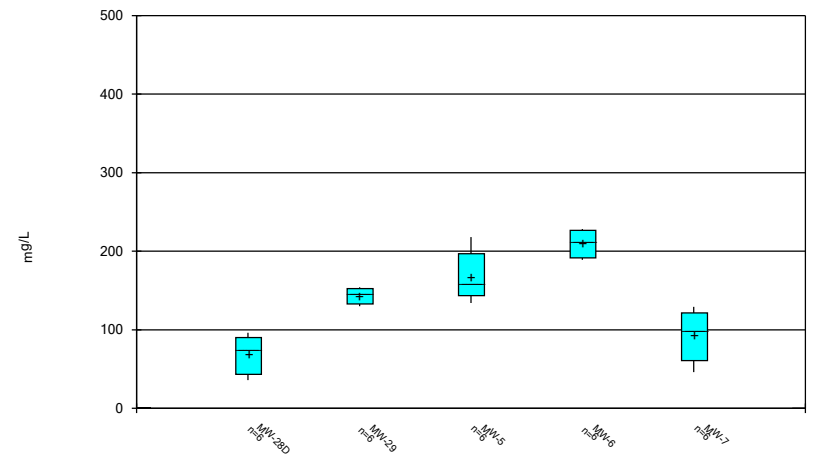
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Box & Whiskers Plot



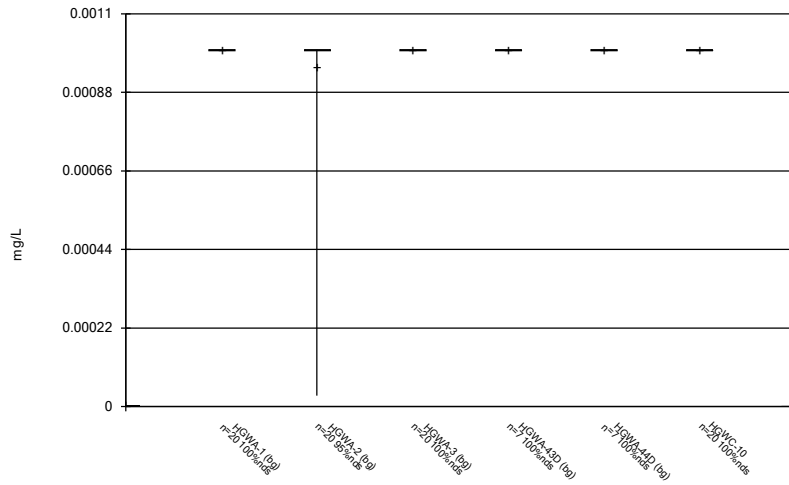
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



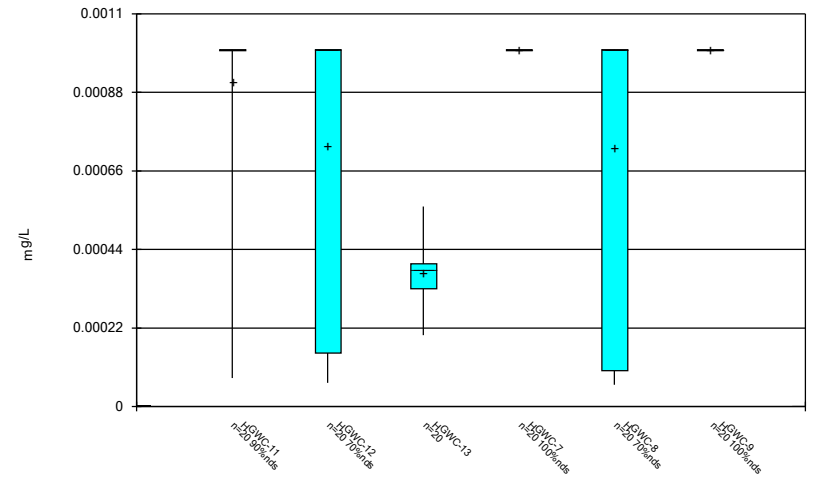
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



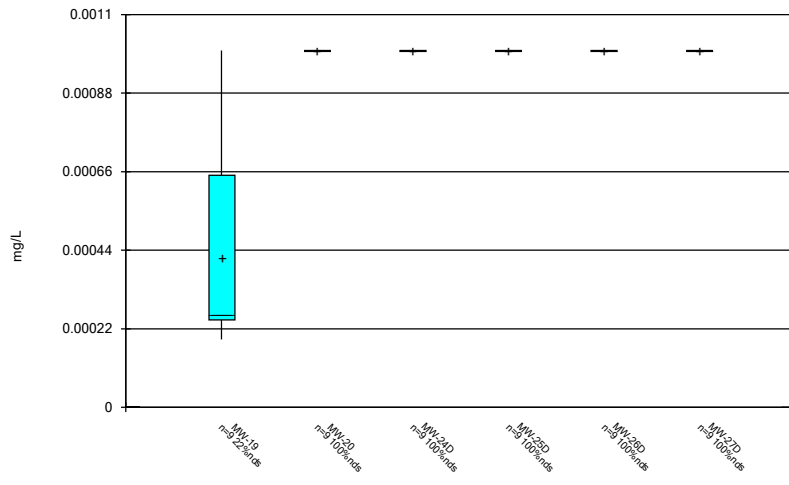
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



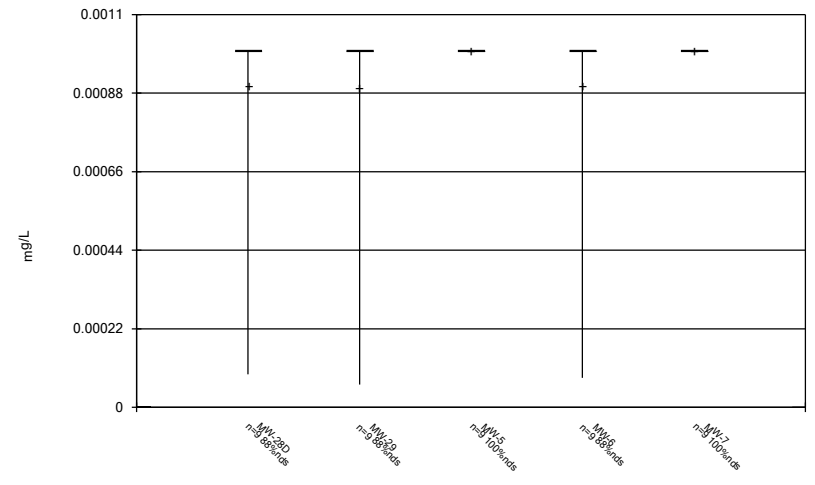
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Box & Whiskers Plot



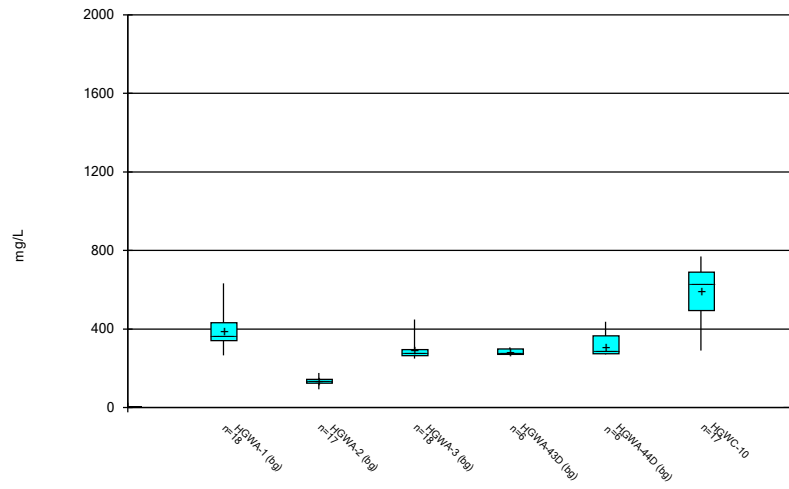
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



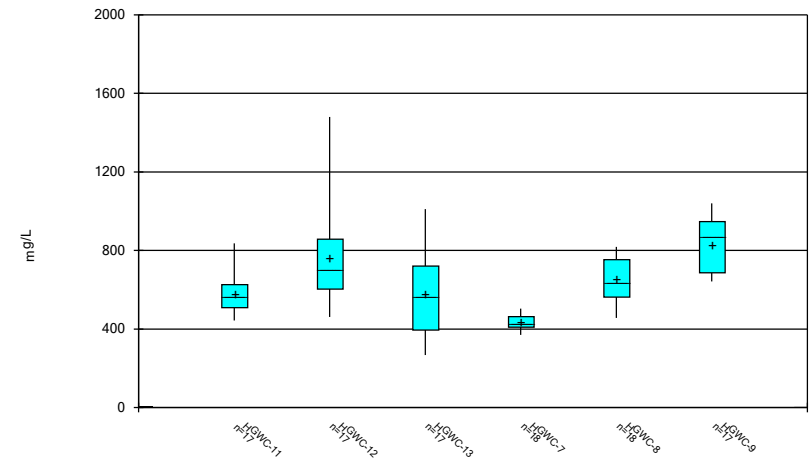
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



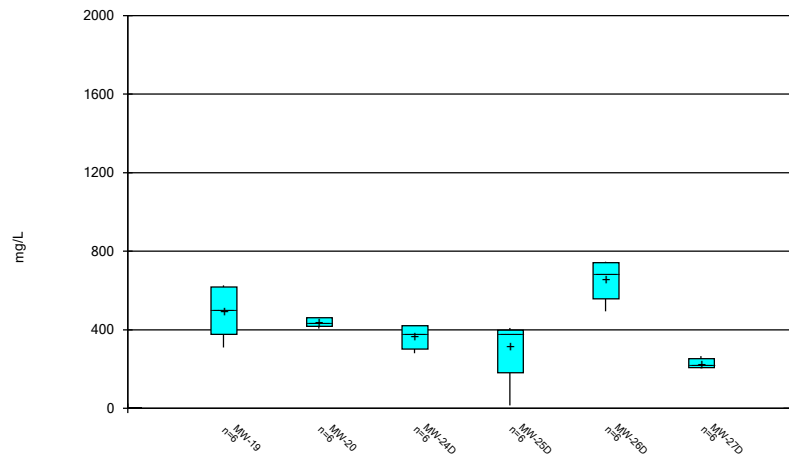
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



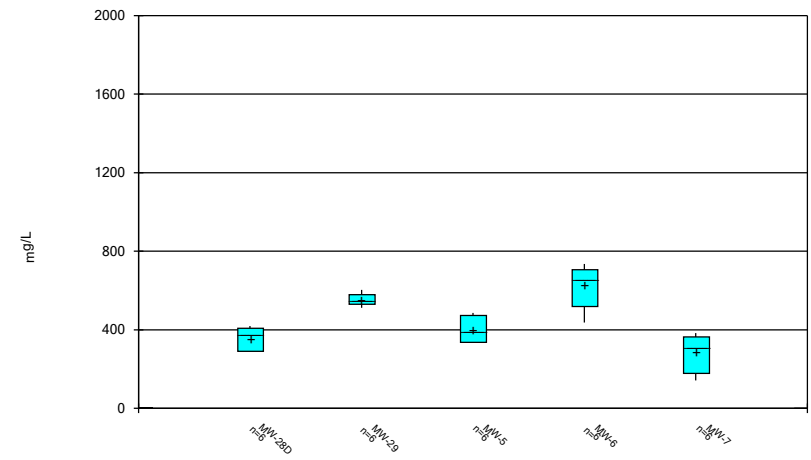
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 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 10/21/2021 3:33 PM View: Constituents View
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 10/21/2021 3:33 PM View: Constituents View
 Plant Hammond Client: Southern Company Data: Hammond AP-1

FIGURE C.

Outlier Summary

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/20/2021, 5:14 PM

No outliers were flagged.

FIGURE D.

Appendix III Interwell Prediction Limits - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/20/2021, 5:16 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-10	0.4	n/a	8/17/2021	0.88	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-11	0.4	n/a	8/18/2021	0.91	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-12	0.4	n/a	8/18/2021	1.9	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-13	0.4	n/a	8/19/2021	0.73	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-7	0.4	n/a	8/16/2021	1.1	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-8	0.4	n/a	8/18/2021	1.8	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-9	0.4	n/a	8/17/2021	2.3	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-10	138	n/a	8/17/2021	153	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-12	138	n/a	8/18/2021	163	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-13	138	n/a	8/19/2021	179	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-8	138	n/a	8/18/2021	147	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-9	138	n/a	8/17/2021	183	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-12	41.1	n/a	8/18/2021	47.3	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-8	41.1	n/a	8/18/2021	50.9	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-9	41.1	n/a	8/17/2021	88.6	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-10	88.2	n/a	8/17/2021	156	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-11	88.2	n/a	8/18/2021	237	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-12	88.2	n/a	8/18/2021	226	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-13	88.2	n/a	8/19/2021	339	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-7	88.2	n/a	8/16/2021	98.1	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-8	88.2	n/a	8/18/2021	245	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-9	88.2	n/a	8/17/2021	207	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-13	632	n/a	8/19/2021	726	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-9	632	n/a	8/17/2021	704	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2

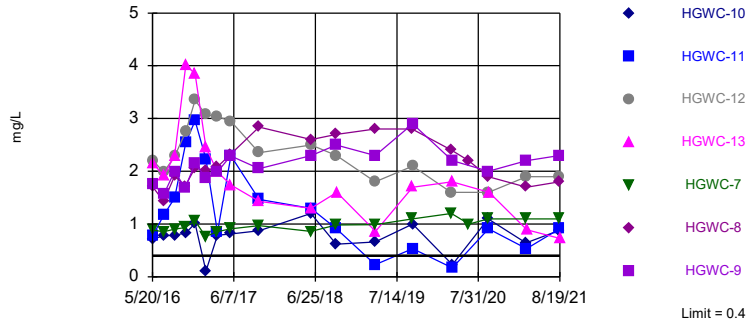
Appendix III Interwell Prediction Limits - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/20/2021, 5:16 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	HGWC-10	0.4	n/a	8/17/2021	0.88	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-11	0.4	n/a	8/18/2021	0.91	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-12	0.4	n/a	8/18/2021	1.9	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-13	0.4	n/a	8/19/2021	0.73	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-7	0.4	n/a	8/16/2021	1.1	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-8	0.4	n/a	8/18/2021	1.8	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Boron (mg/L)	HGWC-9	0.4	n/a	8/17/2021	2.3	Yes	65	n/a	n/a	4.615	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-10	138	n/a	8/17/2021	153	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-11	138	n/a	8/18/2021	128	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-12	138	n/a	8/18/2021	163	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-13	138	n/a	8/19/2021	179	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-7	138	n/a	8/16/2021	112	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-8	138	n/a	8/18/2021	147	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Calcium (mg/L)	HGWC-9	138	n/a	8/17/2021	183	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-10	41.1	n/a	8/17/2021	28.3	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-11	41.1	n/a	8/18/2021	19.9	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-12	41.1	n/a	8/18/2021	47.3	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-13	41.1	n/a	8/19/2021	24.4	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-7	41.1	n/a	8/16/2021	40.3	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-8	41.1	n/a	8/18/2021	50.9	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Chloride (mg/L)	HGWC-9	41.1	n/a	8/17/2021	88.6	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-10	0.87	n/a	8/17/2021	0.05ND	No	79	n/a	n/a	31.65	n/a	n/a	0.0003072	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-11	0.87	n/a	8/18/2021	0.21	No	79	n/a	n/a	31.65	n/a	n/a	0.0003072	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-12	0.87	n/a	8/18/2021	0.15	No	79	n/a	n/a	31.65	n/a	n/a	0.0003072	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-13	0.87	n/a	8/19/2021	0.53	No	79	n/a	n/a	31.65	n/a	n/a	0.0003072	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-7	0.87	n/a	8/16/2021	0.084J	No	79	n/a	n/a	31.65	n/a	n/a	0.0003072	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-8	0.87	n/a	8/18/2021	0.41	No	79	n/a	n/a	31.65	n/a	n/a	0.0003072	NP Inter (normality) 1 of 2
Fluoride (mg/L)	HGWC-9	0.87	n/a	8/17/2021	0.095J	No	79	n/a	n/a	31.65	n/a	n/a	0.0003072	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-10	7.92	4.9	8/17/2021	6.75	No	79	n/a	n/a	0	n/a	n/a	0.0006143	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-11	7.92	4.9	8/18/2021	6.1	No	79	n/a	n/a	0	n/a	n/a	0.0006143	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-12	7.92	4.9	8/18/2021	6.89	No	79	n/a	n/a	0	n/a	n/a	0.0006143	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-13	7.92	4.9	8/19/2021	7.38	No	79	n/a	n/a	0	n/a	n/a	0.0006143	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-7	7.92	4.9	8/16/2021	7.12	No	79	n/a	n/a	0	n/a	n/a	0.0006143	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-8	7.92	4.9	8/18/2021	7.02	No	79	n/a	n/a	0	n/a	n/a	0.0006143	NP Inter (normality) 1 of 2
pH, Field (SU)	HGWC-9	7.92	4.9	8/17/2021	7.1	No	79	n/a	n/a	0	n/a	n/a	0.0006143	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-10	88.2	n/a	8/17/2021	156	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-11	88.2	n/a	8/18/2021	237	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-12	88.2	n/a	8/18/2021	226	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-13	88.2	n/a	8/19/2021	339	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-7	88.2	n/a	8/16/2021	98.1	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-8	88.2	n/a	8/18/2021	245	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Sulfate (mg/L)	HGWC-9	88.2	n/a	8/17/2021	207	Yes	65	n/a	n/a	1.538	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-10	632	n/a	8/17/2021	496	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-11	632	n/a	8/18/2021	566	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-12	632	n/a	8/18/2021	600	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-13	632	n/a	8/19/2021	726	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-7	632	n/a	8/16/2021	407	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-8	632	n/a	8/18/2021	620	No	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	HGWC-9	632	n/a	8/17/2021	704	Yes	65	n/a	n/a	0	n/a	n/a	0.0004535	NP Inter (normality) 1 of 2

Exceeds Limit: HGWC-10, HGWC-11, HGWC-12, HGWC-13, HGWC-7, HGWC-8, HGWC-9

Prediction Limit
Interwell Non-parametric

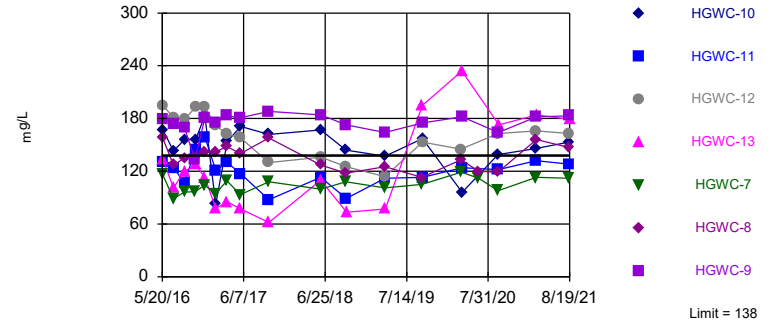


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 65 background values. 4.615% NDs. Annual per-constituent alpha = 0.006331. Individual comparison alpha = 0.0004535 (1 of 2). Comparing 7 points to limit.

Constituent: Boron Analysis Run 10/20/2021 5:15 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

Exceeds Limit: HGWC-10, HGWC-12, HGWC-13, HGWC-8, HGWC-9

Prediction Limit
Interwell Non-parametric

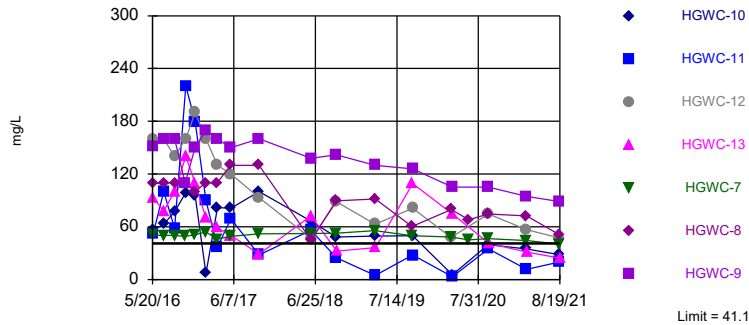


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 65 background values. Annual per-constituent alpha = 0.006331. Individual comparison alpha = 0.0004535 (1 of 2). Comparing 7 points to limit.

Constituent: Calcium Analysis Run 10/20/2021 5:15 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

Exceeds Limit: HGWC-12, HGWC-8, HGWC-9

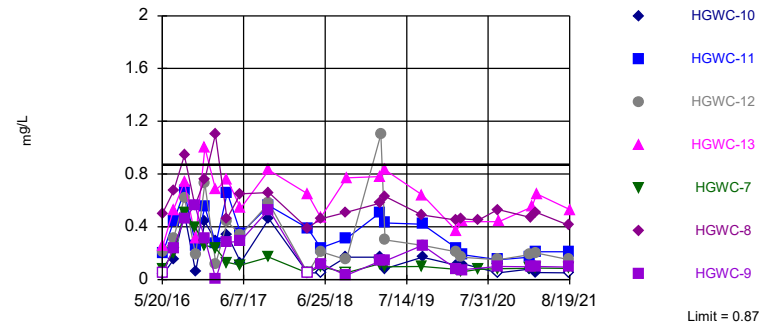
Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 65 background values. Annual per-constituent alpha = 0.006331. Individual comparison alpha = 0.0004535 (1 of 2). Comparing 7 points to limit.

Constituent: Chloride Analysis Run 10/20/2021 5:15 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

Prediction Limit
Interwell Non-parametric

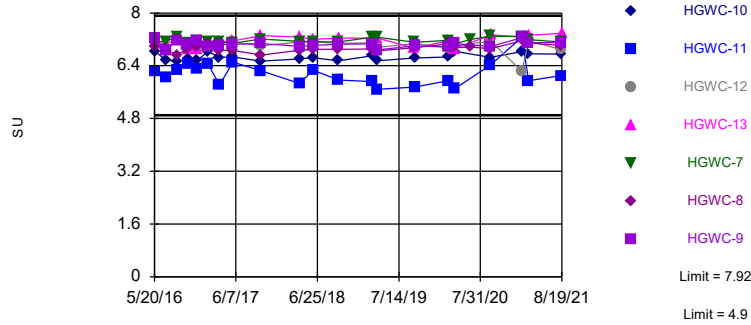


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 79 background values. 31.65% NDs. Annual per-constituent alpha = 0.004292. Individual comparison alpha = 0.0003072 (1 of 2). Comparing 7 points to limit.

Constituent: Fluoride Analysis Run 10/20/2021 5:15 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

Within Limits

Prediction Limit
Interwell Non-parametric



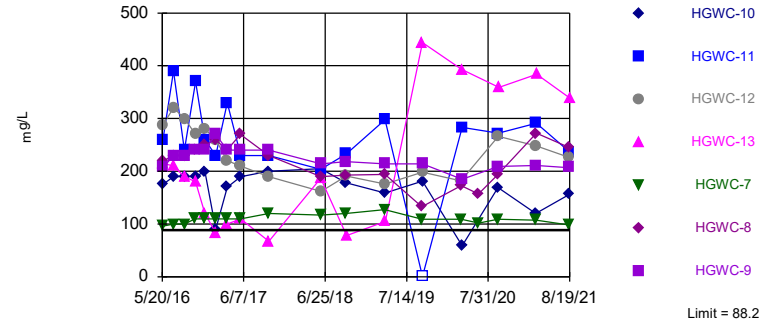
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 79 background values. Annual per-constituent alpha = 0.008583. Individual comparison alpha = 0.0006143 (1 of 2). Comparing 7 points to limit.

Constituent: pH, Field Analysis Run 10/20/2021 5:15 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

Hollow symbols indicate censored values.

Exceeds Limit: HGWC-10, HGWC-11, HGWC-12, HGWC-13, HGWC-7, HGWC-8, HGWC-9

Prediction Limit
Interwell Non-parametric

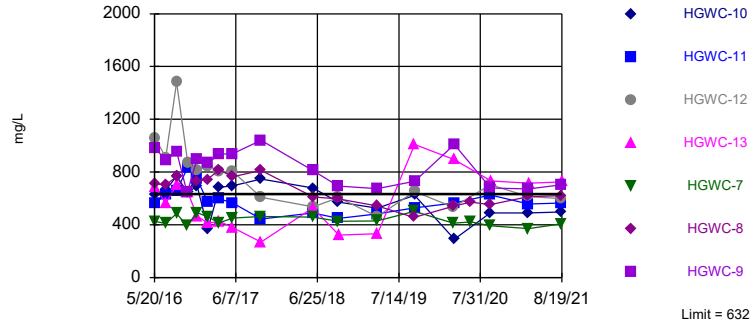


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 65 background values. 1.538% NDs. Annual per-constituent alpha = 0.006331. Individual comparison alpha = 0.0004535 (1 of 2). Comparing 7 points to limit.

Constituent: Sulfate Analysis Run 10/20/2021 5:15 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

Exceeds Limit: HGWC-13, HGWC-9

Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 65 background values. Annual per-constituent alpha = 0.006331. Individual comparison alpha = 0.0004535 (1 of 2). Comparing 7 points to limit.

Constituent: Total Dissolved Solids Analysis Run 10/20/2021 5:15 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWC-7	HGWC-8	HGWC-12	HGWC-13	HGWC-11	HGWC-10
1/19/2021									
3/10/2021	0.015 (J)								
3/11/2021		0.015 (J)	0.056						
3/12/2021									0.64
3/15/2021				1.1	1.7				
3/16/2021						1.9		0.53	
3/17/2021							0.89		
8/11/2021	0.02 (J)								
8/12/2021		<0.04	0.044						
8/13/2021									
8/16/2021				1.1					
8/17/2021									0.88
8/18/2021					1.8	1.9		0.91	
8/19/2021							0.73		

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-9	HGWA-44D (bg)	HGWA-43D (bg)
5/19/2016			
5/20/2016			
5/23/2016	1.76		
7/11/2016			
7/12/2016	1.56		
8/30/2016			
9/1/2016	2		
10/19/2016			
10/20/2016	1.68		
10/24/2016			
12/6/2016	2.15		
12/7/2016			
1/24/2017			
1/25/2017			
1/26/2017	1.87		
3/21/2017			
3/22/2017	1.99		
5/22/2017			
5/23/2017	2.29		
5/24/2017			
10/3/2017	2.05		
6/4/2018			
6/5/2018			
6/6/2018	2.3		
10/1/2018			
10/2/2018	2.5		
10/3/2018			
10/5/2018			
4/1/2019			
4/2/2019			
4/3/2019	2.3		
4/5/2019			
9/23/2019			
9/24/2019			
9/25/2019			
9/26/2019			
9/27/2019	2.9		
3/25/2020			
3/26/2020			
3/27/2020			
3/30/2020			
3/31/2020	2.2		
4/1/2020			
6/16/2020			
6/17/2020			
9/15/2020			
9/16/2020		0.23	0.061 (J)
9/17/2020	2		
9/18/2020			
9/21/2020			
11/10/2020		0.29	0.057 (J)
12/15/2020		0.31	0.052 (J)

Prediction Limit

Constituent: Boron (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-9	HGWA-44D (bg)	HGWA-43D (bg)
1/19/2021		0.4	0.049 (J)
3/10/2021		0.39	
3/11/2021			0.06
3/12/2021			
3/15/2021			
3/16/2021	2.2		
3/17/2021			
8/11/2021			0.042
8/12/2021			
8/13/2021		0.31	
8/16/2021			
8/17/2021	2.3		
8/18/2021			
8/19/2021			

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWC-7	HGWC-8	HGWC-12	HGWC-13	HGWC-11	HGWC-10
1/19/2021									
3/10/2021	111								
3/11/2021		83.8	43.8						
3/12/2021									146 (M1)
3/15/2021				113	156				
3/16/2021						166		132	
3/17/2021							184		
8/11/2021	113								
8/12/2021		84	21.9						
8/13/2021									
8/16/2021				112					
8/17/2021									153
8/18/2021					147	163		128	
8/19/2021							179		

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-9	HGWA-44D (bg)	HGWA-43D (bg)
5/19/2016			
5/20/2016			
5/23/2016	179		
7/11/2016			
7/12/2016	174		
8/30/2016			
9/1/2016	170		
10/19/2016			
10/20/2016	133		
10/24/2016			
12/6/2016	181		
12/7/2016			
1/24/2017			
1/25/2017			
1/26/2017	175		
3/21/2017			
3/22/2017	183		
5/22/2017			
5/23/2017	181		
5/24/2017			
10/3/2017	188		
6/4/2018			
6/5/2018			
6/6/2018	184		
10/1/2018			
10/2/2018	173		
10/3/2018			
10/5/2018			
4/1/2019			
4/2/2019			
4/3/2019	164		
4/5/2019			
9/23/2019			
9/24/2019			
9/25/2019			
9/26/2019			
9/27/2019	175		
3/25/2020			
3/26/2020			
3/27/2020			
3/30/2020			
3/31/2020	182		
4/1/2020			
6/16/2020			
6/17/2020			
9/15/2020			
9/16/2020		30	56
9/17/2020	164		
9/18/2020			
9/21/2020			
11/10/2020		33.6	63.3
12/15/2020		28.7	62.6

Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-9	HGWA-44D (bg)	HGWA-43D (bg)
1/19/2021		33	60.1
3/10/2021		5.9	
3/11/2021			59.6
3/12/2021			
3/15/2021			
3/16/2021	182		
3/17/2021			
8/11/2021			61
8/12/2021			
8/13/2021		28.9	
8/16/2021			
8/17/2021	183		
8/18/2021			
8/19/2021			

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWC-7	HGWC-8	HGWC-12	HGWC-13	HGWC-11	HGWC-10
1/19/2021									
3/10/2021	7.4								
3/11/2021		5.9	5.1						
3/12/2021									35
3/15/2021				44.5	72.4				
3/16/2021						56.8		11.5	
3/17/2021							31.4		
8/11/2021	9.6								
8/12/2021		4.8	5.2						
8/13/2021									
8/16/2021				40.3					
8/17/2021									28.3
8/18/2021					50.9	47.3		19.9	
8/19/2021							24.4		

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-9	HGWA-44D (bg)	HGWA-43D (bg)
5/19/2016			
5/20/2016			
5/23/2016	152		
7/11/2016			
7/12/2016	160		
8/30/2016			
9/1/2016	160		
10/19/2016			
10/20/2016	110		
10/24/2016			
12/6/2016	150		
12/7/2016			
1/24/2017			
1/25/2017			
1/26/2017	170		
3/21/2017			
3/22/2017	160		
5/22/2017			
5/23/2017	150		
5/24/2017			
10/3/2017	160		
6/4/2018			
6/5/2018			
6/6/2018	138		
10/1/2018			
10/2/2018	142		
10/3/2018			
10/5/2018			
4/1/2019			
4/2/2019			
4/3/2019	130		
4/5/2019			
9/23/2019			
9/24/2019			
9/25/2019			
9/26/2019			
9/27/2019	126		
3/25/2020			
3/26/2020			
3/27/2020			
3/30/2020			
3/31/2020	105		
4/1/2020			
6/16/2020			
6/17/2020			
9/15/2020			
9/16/2020		7.2	4.1
9/17/2020	105		
9/18/2020			
9/21/2020			
11/10/2020		7.8	4.4
12/15/2020		9.4	4.7

Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-9	HGWA-44D (bg)	HGWA-43D (bg)
1/19/2021		9.5	4.1
3/10/2021		12.3	
3/11/2021			4.5
3/12/2021			
3/15/2021			
3/16/2021	94.7		
3/17/2021			
8/11/2021			3.5
8/12/2021			
8/13/2021		39.9	
8/16/2021			
8/17/2021	88.6		
8/18/2021			
8/19/2021			

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III

Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWC-7	HGWC-8	HGWC-12	HGWC-11	HGWC-10	HGWC-9
5/19/2016	0.105 (J)	0.0513 (J)	0.0303 (J)						
5/20/2016				0.0828 (J)	0.499				
5/23/2016						0.212 (J)	0.203 (J)	0.0394 (J)	<0.1
7/11/2016	0.16 (J)		0.05 (J)						
7/12/2016		0.12 (J)		0.2 (J)	0.67	0.31	0.44	0.15 (J)	0.24 (J)
8/30/2016	0.09 (J)	0.09 (J)	0.06 (J)						
9/1/2016				0.51	0.94	0.62	0.67	0.5	0.46
10/19/2016	0.1 (J)	0.1 (J)	0.04 (J)						
10/20/2016				0.4	0.56				0.56
10/24/2016						0.19 (J)	0.26 (J)	0.06 (J)	
12/6/2016	0.11 (J)	0.21 (J)	0.36	0.26 (J)	0.76				0.31
12/7/2016						0.73	0.55	0.44	
1/24/2017	0.09 (J)	0.06 (J)	<0.1						
1/25/2017				0.24 (J)	1.1				
1/26/2017						0.12 (J)	0.27 (J)	0.29 (J)	0.004 (J)
3/21/2017	0.13 (J)	0.005 (J)	<0.1	0.13 (J)	0.46				
3/22/2017						0.44	0.66	0.34	0.28 (J)
5/22/2017	0.12 (J)	0.05 (J)	<0.1						
5/23/2017				0.11 (J)	0.65				0.29 (J)
5/24/2017						0.34	0.35	0.13 (J)	
10/3/2017	0.13 (J)	0.13 (J)	<0.1	0.17 (J)	0.66	0.58	0.56	0.46	0.53
4/2/2018	<0.1		<0.1						
4/3/2018		<0.1		<0.1	0.39				<0.1
4/4/2018						<0.1	0.39	<0.1	
6/4/2018	0.074 (J)	<0.1	<0.1						
6/5/2018				0.099 (J)			0.24 (J)	<0.1	
6/6/2018					0.46	0.21 (J)			0.12 (J)
10/1/2018	<0.1	<0.1	<0.1						
10/2/2018				<0.1	0.51			0.17 (J)	0.031 (J)
10/3/2018						0.15 (J)	0.31		
10/5/2018									
3/12/2019	0.29 (J)	0.072 (J)	0.038 (J)		0.58				
3/13/2019				0.12 (J)			0.51	0.17 (J)	0.14 (J)
3/14/2019						1.1			
4/1/2019		0.029 (J)							
4/2/2019	0.1 (J)		0.071 (J)	0.097 (J)					
4/3/2019					0.63	0.3 (J)	0.43	0.082 (J)	0.14 (J)
4/5/2019									
9/23/2019	0.078 (J)	<0.1	<0.1						
9/24/2019					0.49				
9/25/2019				0.1 (J)					
9/26/2019									
9/27/2019						0.26 (J)	0.42	0.17 (J)	0.26 (J)
3/2/2020	0.076 (J)	<0.1	<0.1						
3/3/2020					0.45	0.21 (J)	0.24 (J)	0.11 (J)	
3/4/2020				0.077 (J)					0.08 (J)
3/25/2020	0.098 (J)	<0.1	<0.1						
3/26/2020						0.17 (J)			
3/27/2020				0.059 (J)	0.46				
3/30/2020									
3/31/2020							0.19 (J)		0.074 (J)
4/1/2020								0.12 (J)	

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWA-44D (bg)	HGWA-43D (bg)
5/19/2016			
5/20/2016			
5/23/2016	0.2587 (J)		
7/11/2016			
7/12/2016	0.53		
8/30/2016			
9/1/2016	0.74		
10/19/2016			
10/20/2016			
10/24/2016	0.31		
12/6/2016			
12/7/2016	1		
1/24/2017			
1/25/2017			
1/26/2017	0.68		
3/21/2017			
3/22/2017	0.76		
5/22/2017			
5/23/2017			
5/24/2017	0.54		
10/3/2017	0.83		
4/2/2018			
4/3/2018			
4/4/2018	0.65		
6/4/2018			
6/5/2018	0.47		
6/6/2018			
10/1/2018			
10/2/2018			
10/3/2018			
10/5/2018	0.77		
3/12/2019			
3/13/2019	0.78		
3/14/2019			
4/1/2019			
4/2/2019			
4/3/2019			
4/5/2019	0.83		
9/23/2019			
9/24/2019			
9/25/2019			
9/26/2019	0.64		
9/27/2019			
3/2/2020			
3/3/2020			
3/4/2020	0.37		
3/25/2020			
3/26/2020			
3/27/2020			
3/30/2020	0.44		
3/31/2020			
4/1/2020			

Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWA-44D (bg)	HGWA-43D (bg)
6/16/2020			
6/17/2020			
9/15/2020			
9/16/2020		0.52	0.22
9/17/2020			
9/18/2020			
9/21/2020	0.44		
11/10/2020		0.59	0.19
12/15/2020		0.67	0.21
1/19/2021		0.74	0.16
2/8/2021			
2/9/2021		0.44	0.19
2/10/2021			
2/12/2021			
2/15/2021			
2/16/2021			
2/22/2021	0.55		
3/10/2021		0.65	
3/11/2021			0.2
3/12/2021			
3/15/2021			
3/16/2021			
3/17/2021	0.65		
8/11/2021			0.15
8/12/2021			
8/13/2021		0.87	
8/16/2021			
8/17/2021			
8/18/2021			
8/19/2021	0.53		

Prediction Limit

Constituent: pH, Field (SU) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWA-44D (bg)	HGWA-43D (bg)
5/19/2016			
5/20/2016			
5/23/2016	7.14		
7/11/2016			
7/12/2016	7.04		
8/30/2016			
9/1/2016	7.24		
10/19/2016			
10/20/2016			
10/24/2016	6.9		
12/6/2016			
12/7/2016	6.91		
1/24/2017			
1/25/2017			
1/26/2017	7.08		
3/21/2017			
3/22/2017	7.13		
5/22/2017			
5/23/2017			
5/24/2017	7.15		
10/3/2017	7.32		
4/2/2018			
4/3/2018			
4/4/2018	7.27		
6/4/2018			
6/5/2018	7.2		
6/6/2018			
10/1/2018			
10/2/2018			
10/3/2018			
10/5/2018	7.24		
3/12/2019			
3/13/2019	7.24		
3/14/2019			
4/1/2019			
4/2/2019			
4/3/2019			
4/5/2019	7.24		
9/23/2019			
9/24/2019			
9/25/2019			
9/26/2019	6.94		
9/27/2019			
3/2/2020			
3/3/2020			
3/4/2020	7.16		
3/25/2020			
3/26/2020			
3/27/2020			
3/30/2020	6.91		
3/31/2020			
4/1/2020			

Prediction Limit

Constituent: pH, Field (SU) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-13	HGWA-44D (bg)	HGWA-43D (bg)
6/16/2020			
6/17/2020			
9/15/2020			
9/16/2020		7.83	7.52
9/17/2020			
9/18/2020			
9/21/2020	7.34		
11/10/2020		7.84	7.27
12/15/2020		7.87	7.39
1/19/2021		7.86	7.39
2/8/2021			
2/9/2021		7.84	7.44
2/10/2021			
2/12/2021			
2/15/2021			
2/16/2021			
2/22/2021	7.27		
3/10/2021		7.92	
3/11/2021			7.46
3/12/2021			
3/15/2021			
3/16/2021			
3/17/2021	7.33		
8/11/2021			7.4
8/12/2021			
8/13/2021		7.77	
8/16/2021			
8/17/2021			
8/18/2021			
8/19/2021	7.38		

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWC-7	HGWC-8	HGWC-12	HGWC-13	HGWC-11	HGWC-10
1/19/2021									
3/10/2021	49.6								
3/11/2021		50.4	52.9						
3/12/2021									120
3/15/2021				107	272				
3/16/2021						248		291	
3/17/2021							384		
8/11/2021	48.9								
8/12/2021		38.6	47.4						
8/13/2021									
8/16/2021				98.1					
8/17/2021									156
8/18/2021					245	226		237	
8/19/2021							339		

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-9	HGWA-44D (bg)	HGWA-43D (bg)
5/19/2016			
5/20/2016			
5/23/2016	207		
7/11/2016			
7/12/2016	230		
8/30/2016			
9/1/2016	230		
10/19/2016			
10/20/2016	240		
10/24/2016			
12/6/2016	240		
12/7/2016			
1/24/2017			
1/25/2017			
1/26/2017	270		
3/21/2017			
3/22/2017	240		
5/22/2017			
5/23/2017	240		
5/24/2017			
10/3/2017	240		
6/4/2018			
6/5/2018			
6/6/2018	214		
10/1/2018			
10/2/2018	218		
10/3/2018			
10/5/2018			
4/1/2019			
4/2/2019			
4/3/2019	214		
4/5/2019			
9/23/2019			
9/24/2019			
9/25/2019			
9/26/2019			
9/27/2019	214		
3/25/2020			
3/26/2020			
3/27/2020			
3/30/2020			
3/31/2020	185		
4/1/2020			
6/16/2020			
6/17/2020			
9/15/2020			
9/16/2020		6.9	43
9/17/2020	209		
9/18/2020			
9/21/2020			
11/10/2020		6.3	39
12/15/2020		6.7	38.8

Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-9	HGWA-44D (bg)	HGWA-43D (bg)
1/19/2021		7.4	37.3
3/10/2021		<1	
3/11/2021			38.6
3/12/2021			
3/15/2021			
3/16/2021	211		
3/17/2021			
8/11/2021			30.5
8/12/2021			
8/13/2021		56.1	
8/16/2021			
8/17/2021	207		
8/18/2021			
8/19/2021			

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWA-1 (bg)	HGWA-3 (bg)	HGWA-2 (bg)	HGWC-7	HGWC-8	HGWC-12	HGWC-13	HGWC-11	HGWC-10
1/19/2021									
3/10/2021	348								
3/11/2021		267	169						
3/12/2021									490 (H1)
3/15/2021				370	614				
3/16/2021						614		558	
3/17/2021							716		
8/11/2021	366								
8/12/2021		265	118						
8/13/2021									
8/16/2021				407					
8/17/2021									496
8/18/2021					620	600		566	
8/19/2021							726		

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-9	HGWA-44D (bg)	HGWA-43D (bg)
5/19/2016			
5/20/2016			
5/23/2016	984		
7/11/2016			
7/12/2016	887		
8/30/2016			
9/1/2016	956		
10/19/2016			
10/20/2016	642		
10/24/2016			
12/6/2016	899		
12/7/2016			
1/24/2017			
1/25/2017			
1/26/2017	869		
3/21/2017			
3/22/2017	936		
5/22/2017			
5/23/2017	939		
5/24/2017			
10/3/2017	1040		
6/4/2018			
6/5/2018			
6/6/2018	810		
10/1/2018			
10/2/2018	693		
10/3/2018			
10/5/2018			
4/1/2019			
4/2/2019			
4/3/2019	673		
4/5/2019			
9/23/2019			
9/24/2019			
9/25/2019			
9/26/2019			
9/27/2019	730		
3/25/2020			
3/26/2020			
3/27/2020			
3/30/2020			
3/31/2020	1010		
4/1/2020			
6/16/2020			
6/17/2020			
9/15/2020			
9/16/2020		270	272
9/17/2020	680		
9/18/2020			
9/21/2020			
11/10/2020		287	307
12/15/2020		295	289

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/20/2021 5:16 PM View: Appendix III
Plant Hammond Client: Southern Company Data: Hammond AP-1

	HGWC-9	HGWA-44D (bg)	HGWA-43D (bg)
1/19/2021		278	270
3/10/2021		289	
3/11/2021			279
3/12/2021			
3/15/2021			
3/16/2021	672		
3/17/2021			
8/11/2021			277
8/12/2021			
8/13/2021		436	
8/16/2021			
8/17/2021	704		
8/18/2021			
8/19/2021			

FIGURE E.

Appendix III Trend Test Summary - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/20/2021, 5:19 PM

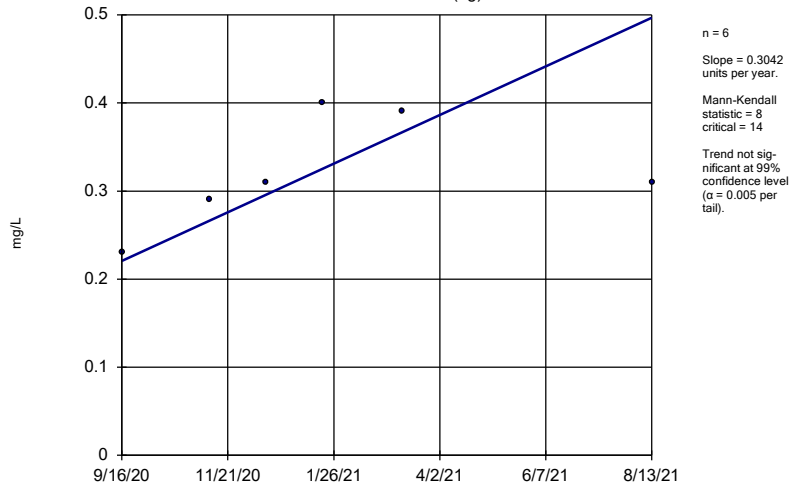
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-2 (bg)	0.002396	83	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-13	-0.2963	-79	-63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-7	0.04766	92	68	Yes	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-9	0.1232	71	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	2.813	71	68	Yes	18	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-44D (bg)	13.69	15	14	Yes	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-12	-24.65	-96	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-8	-9.055	-70	-68	Yes	18	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-9	-13	-86	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.201	66	63	Yes	17	0	n/a	n/a	0.01	NP

Appendix III Trend Test Summary - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/20/2021, 5:19 PM

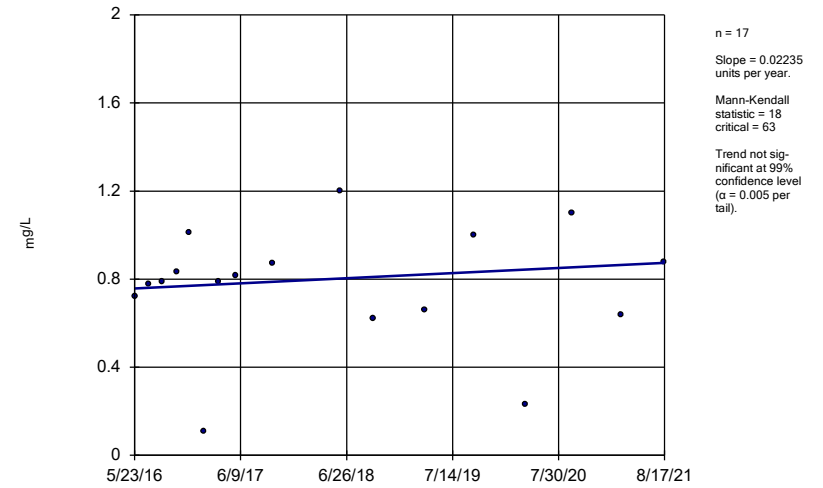
Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	HGWA-1 (bg)	0	-1	-68	No	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-2 (bg)	0.002396	83	63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-3 (bg)	0	0	68	No	18	16.67	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-43D (bg)	-0.02108	-9	-14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWA-44D (bg)	0.3042	8	14	No	6	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-10	0.02235	18	63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-11	-0.2373	-50	-63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-12	-0.1865	-56	-63	No	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-13	-0.2963	-79	-63	Yes	17	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-7	0.04766	92	68	Yes	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-8	0.1123	34	68	No	18	0	n/a	n/a	0.01	NP
Boron (mg/L)	HGWC-9	0.1232	71	63	Yes	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-1 (bg)	3.476	57	68	No	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-2 (bg)	0.3671	20	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-3 (bg)	2.813	71	68	Yes	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-43D (bg)	-2.444	-1	-14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWA-44D (bg)	-5.272	-5	-14	No	6	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-10	-3.3	-30	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-12	-8.499	-58	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-13	11.16	17	63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-8	-2.839	-31	-68	No	18	0	n/a	n/a	0.01	NP
Calcium (mg/L)	HGWC-9	0.7439	23	63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-1 (bg)	0.9675	48	68	No	18	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-2 (bg)	-0.2131	-62	-63	No	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-3 (bg)	-0.1313	-57	-68	No	18	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-43D (bg)	-0.6657	-2	-14	No	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWA-44D (bg)	13.69	15	14	Yes	6	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-12	-24.65	-96	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-8	-9.055	-70	-68	Yes	18	0	n/a	n/a	0.01	NP
Chloride (mg/L)	HGWC-9	-13	-86	-63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-1 (bg)	2.869	46	68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-2 (bg)	1.201	66	63	Yes	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-3 (bg)	1.327	60	68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-43D (bg)	-12.17	-13	-14	No	6	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWA-44D (bg)	4.171	3	14	No	6	16.67	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-10	-5.889	-41	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-11	-14.3	-22	-63	No	17	5.882	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-12	-24.63	-62	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-13	27.63	14	63	No	17	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-7	0	4	68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-8	-9.402	-20	-68	No	18	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	HGWC-9	-5.158	-55	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-1 (bg)	5.962	23	68	No	18	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-2 (bg)	-2.657	-23	-63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-3 (bg)	0	-2	-68	No	18	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-43D (bg)	-5.84	-3	-14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWA-44D (bg)	83.43	9	14	No	6	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-13	9.753	10	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	HGWC-9	-49.17	-42	-63	No	17	0	n/a	n/a	0.01	NP

Sen's Slope Estimator
HGWA-44D (bg)



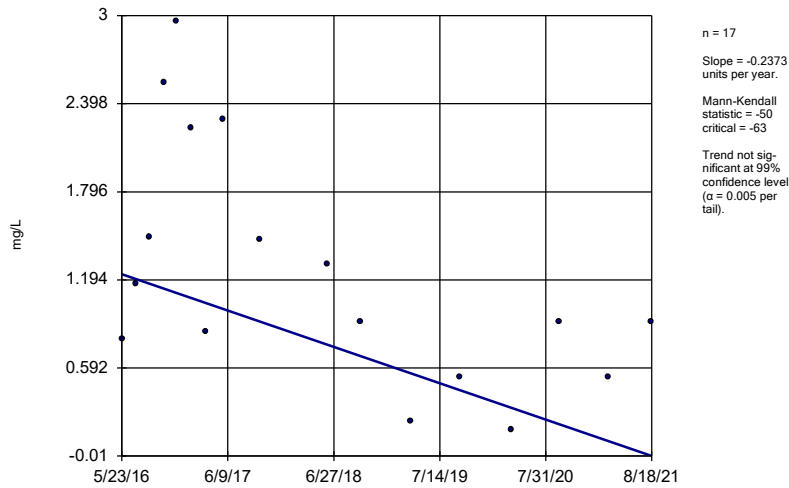
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWC-10



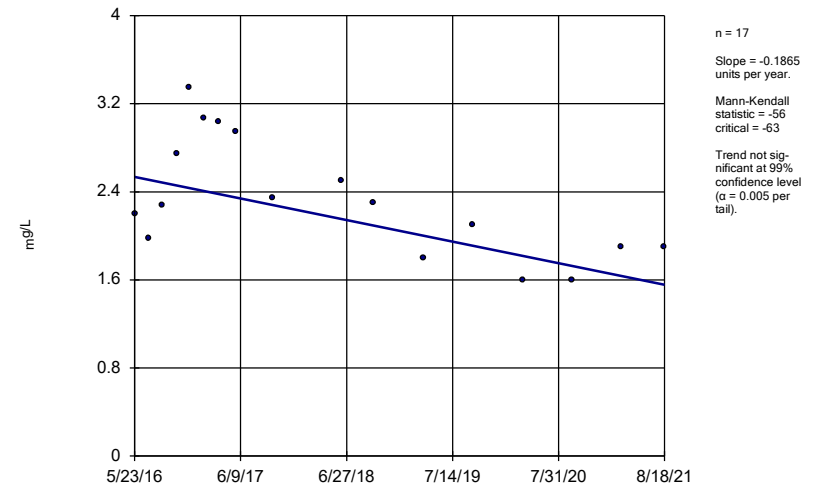
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWC-11



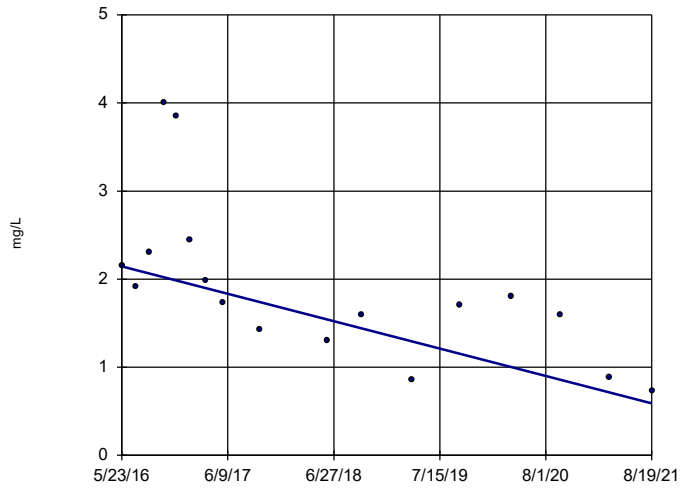
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWC-12



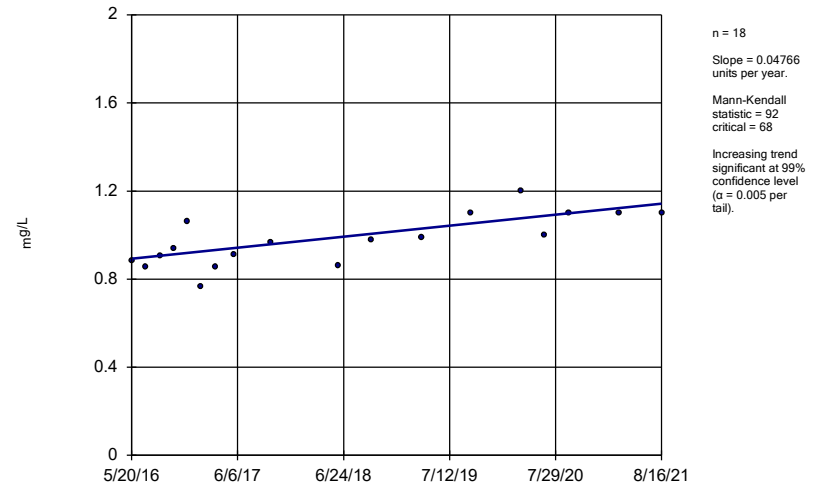
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWC-13



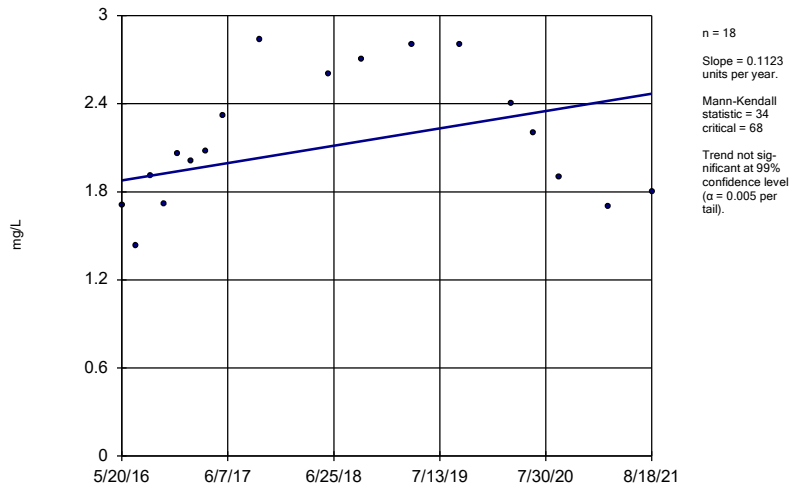
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWC-7



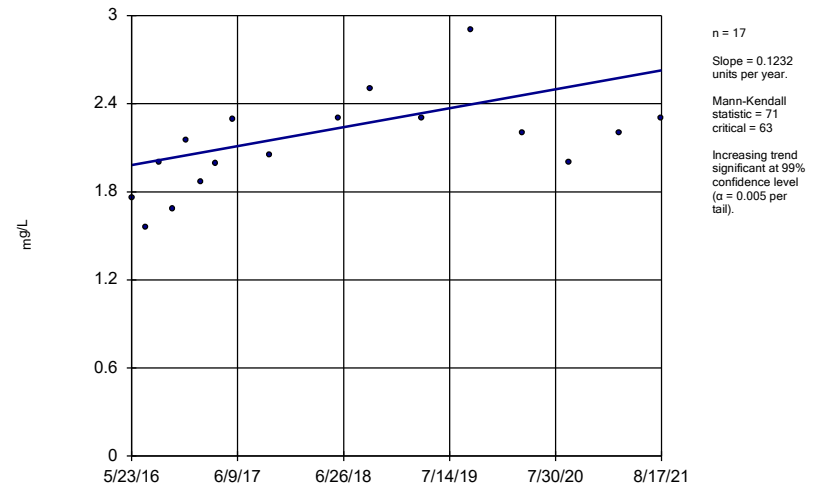
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWC-8



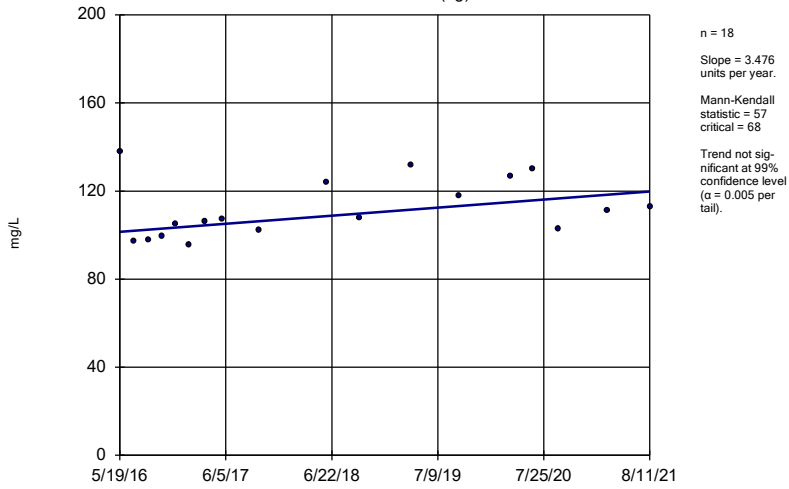
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWC-9



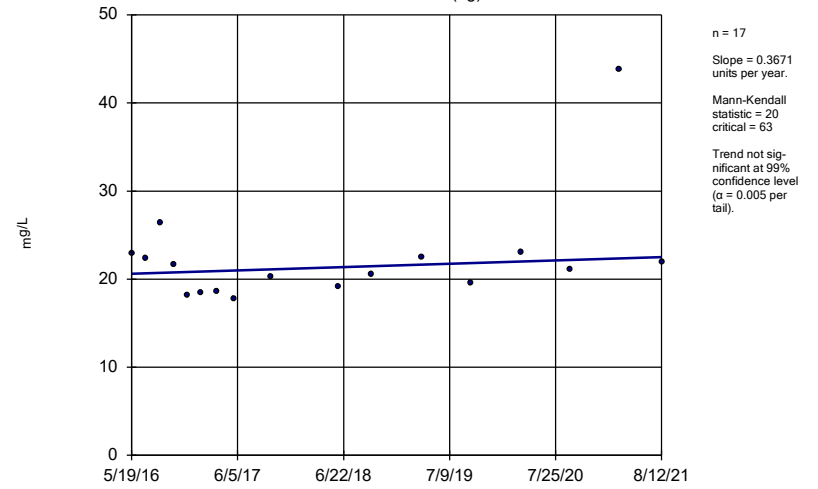
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-1 (bg)



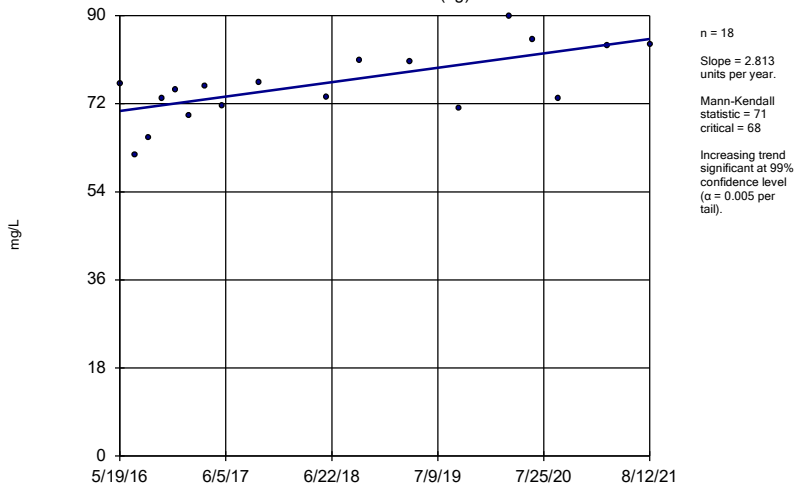
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-2 (bg)



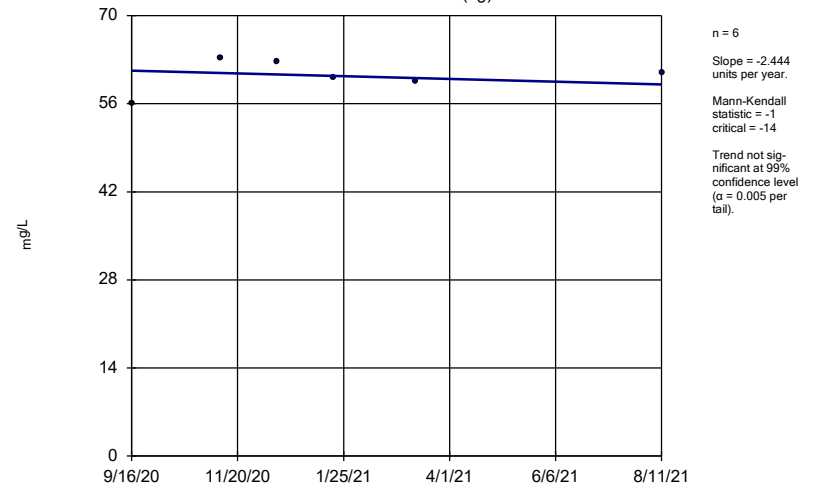
Constituent: Calcium Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-3 (bg)



Constituent: Calcium Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

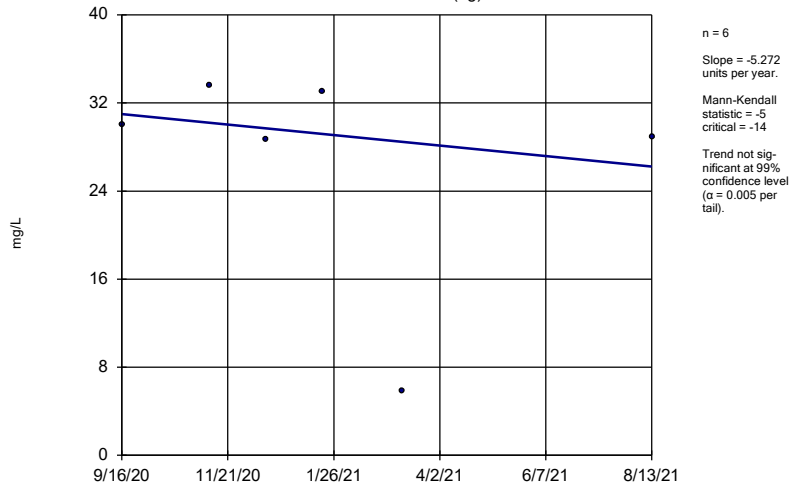
Sen's Slope Estimator
HGWA-43D (bg)



Constituent: Calcium Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

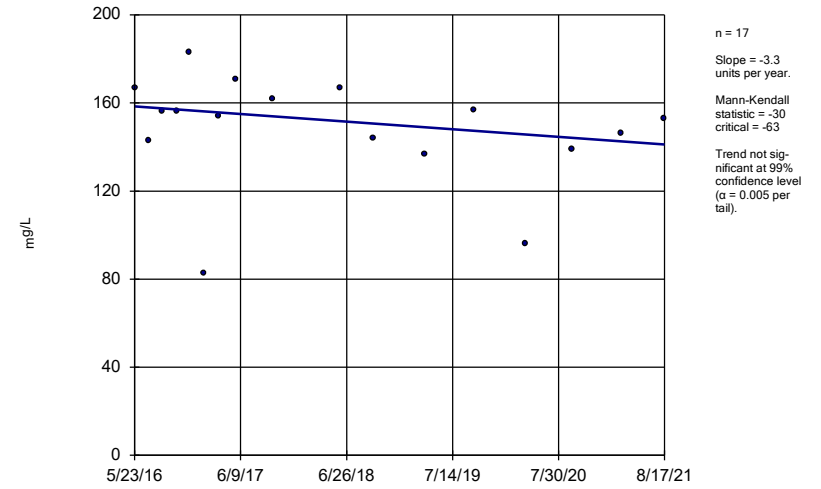
HGWA-44D (bg)



Constituent: Calcium Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

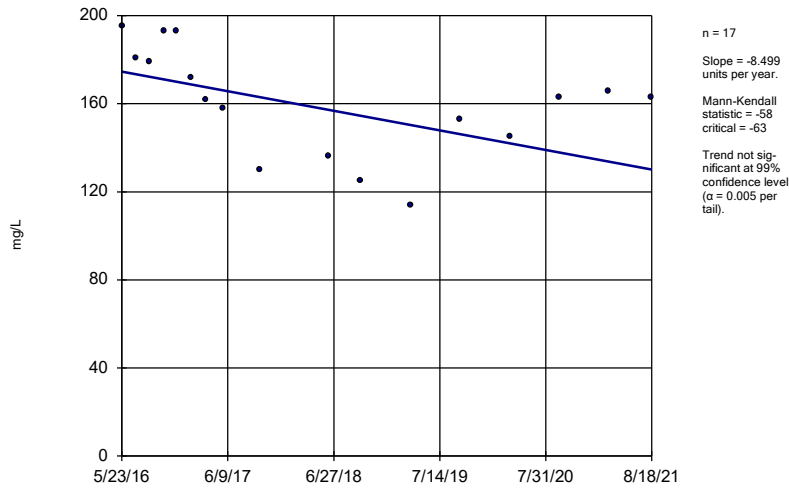
HGWC-10



Constituent: Calcium Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

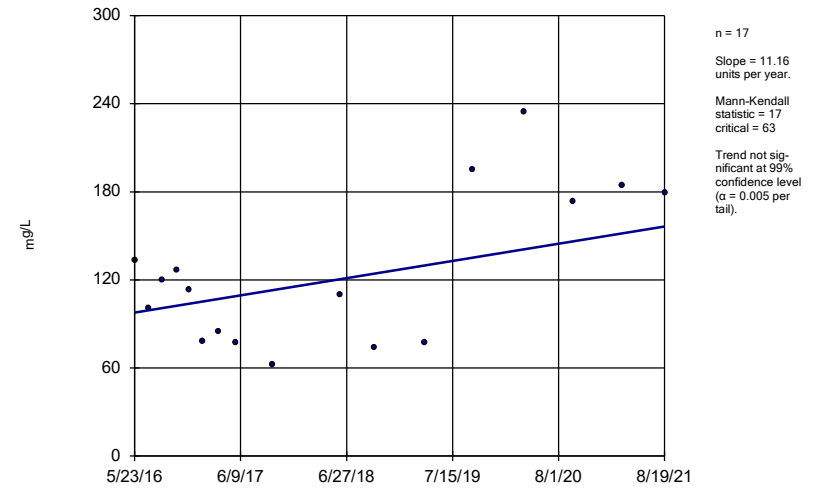
HGWC-12



Constituent: Calcium Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

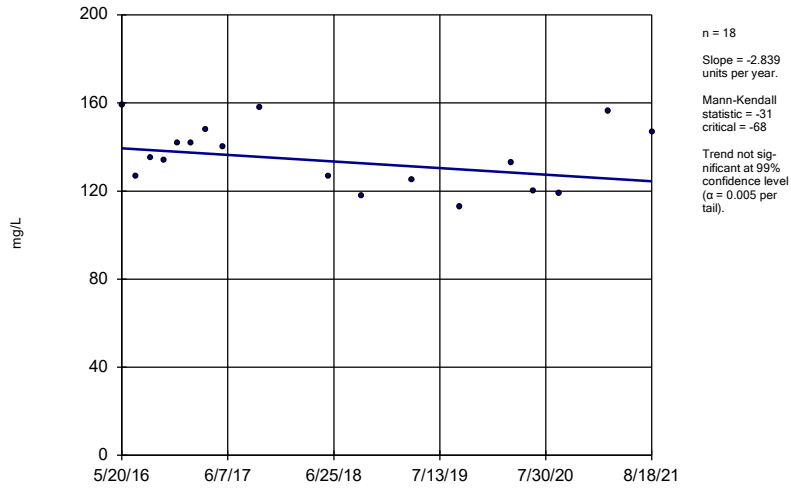
Sen's Slope Estimator

HGWC-13



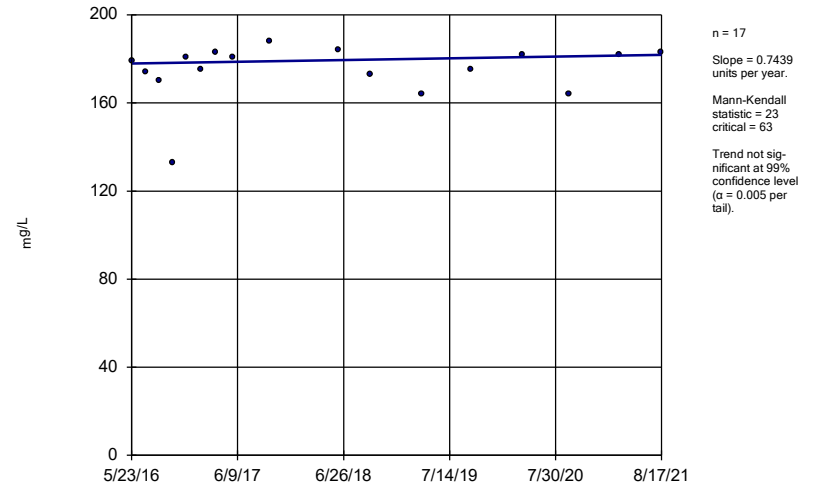
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWC-8



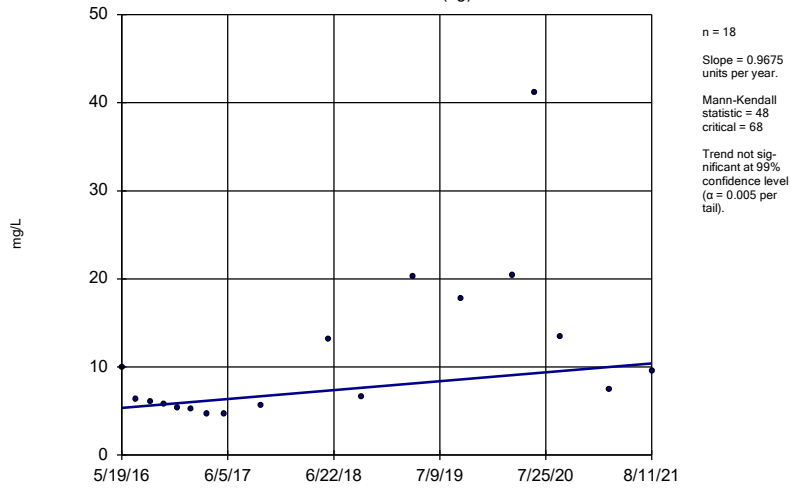
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWC-9



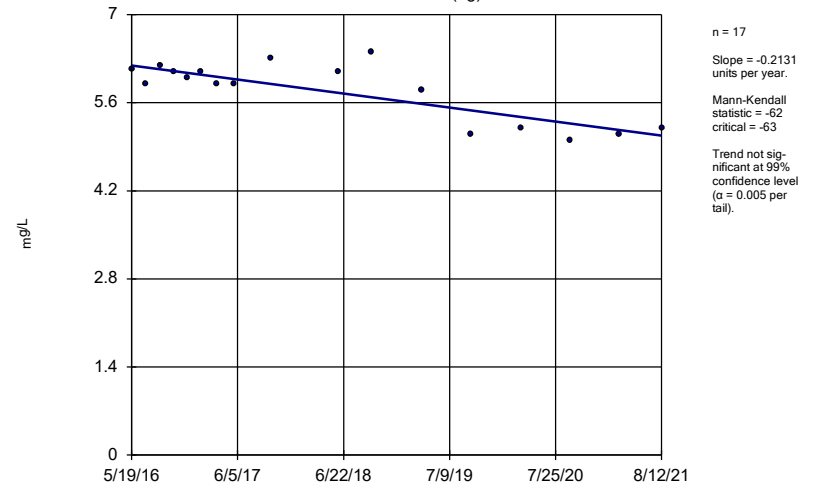
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWA-1 (bg)



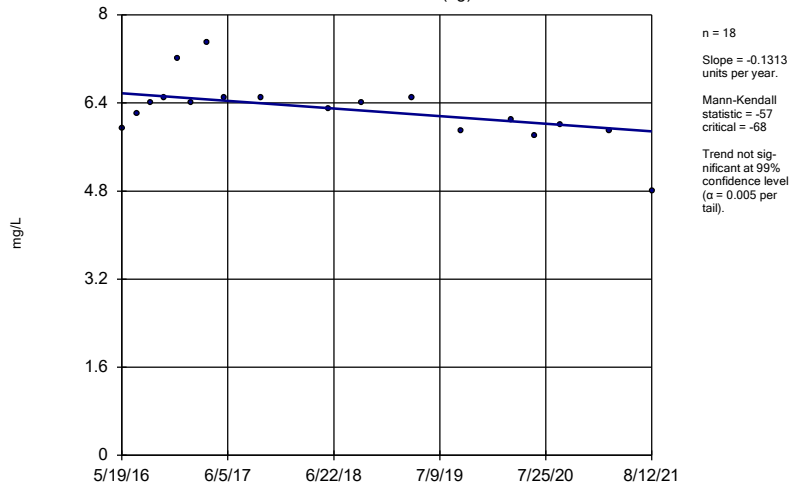
Constituent: Chloride Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWA-2 (bg)



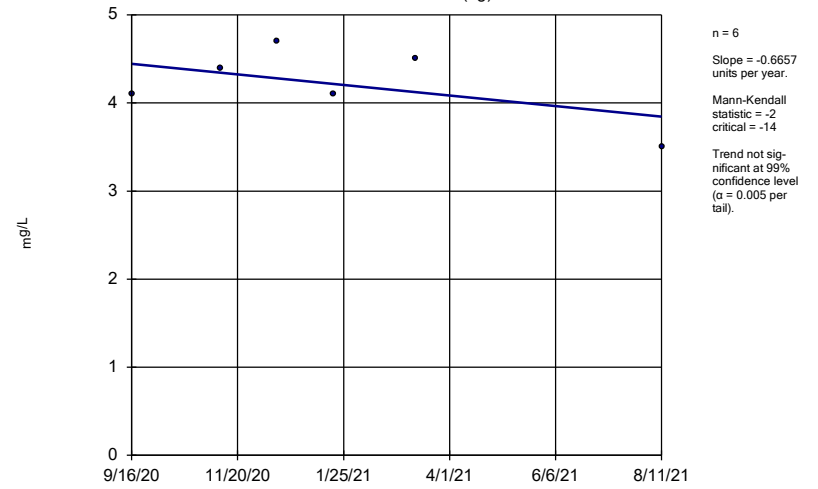
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWA-3 (bg)



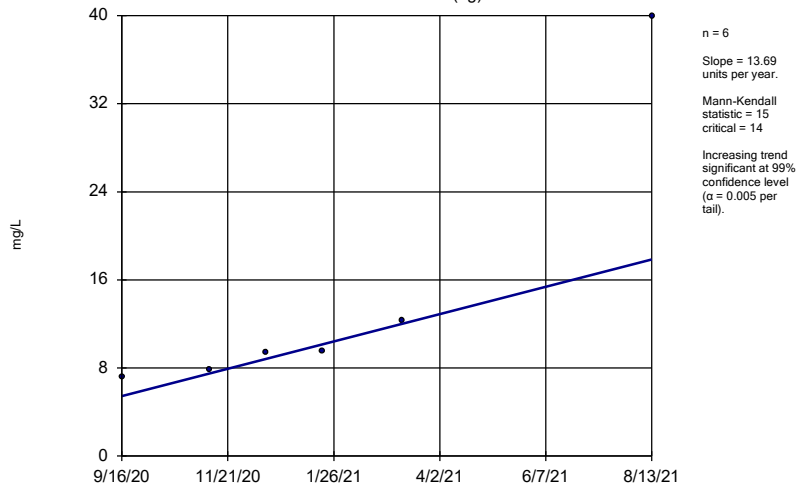
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWA-43D (bg)



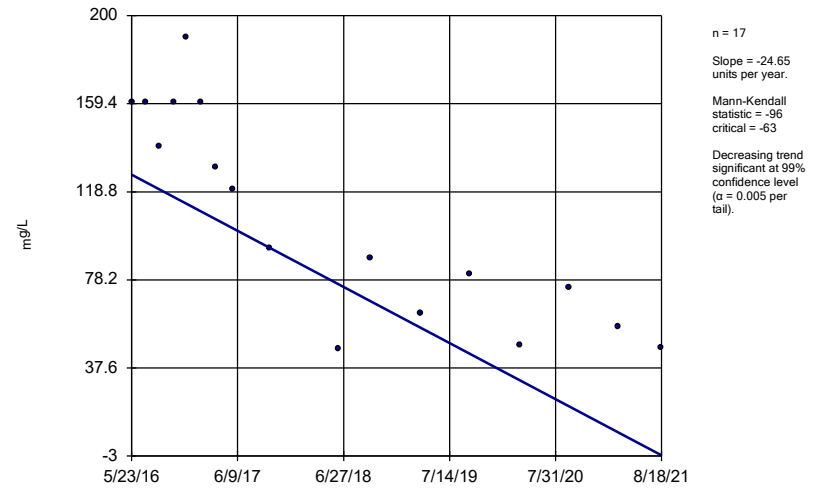
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWA-44D (bg)



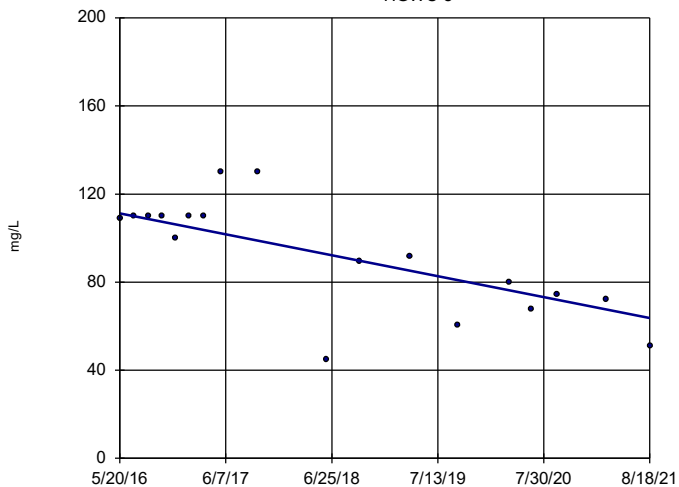
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWC-12



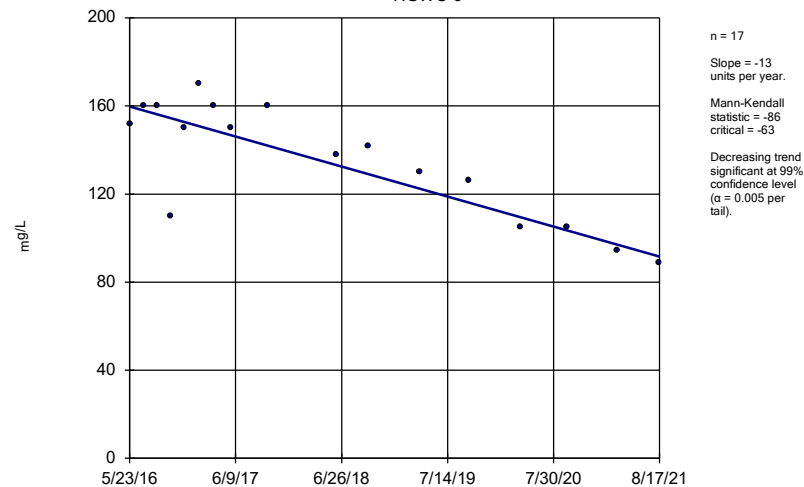
Constituent: Chloride Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWC-8



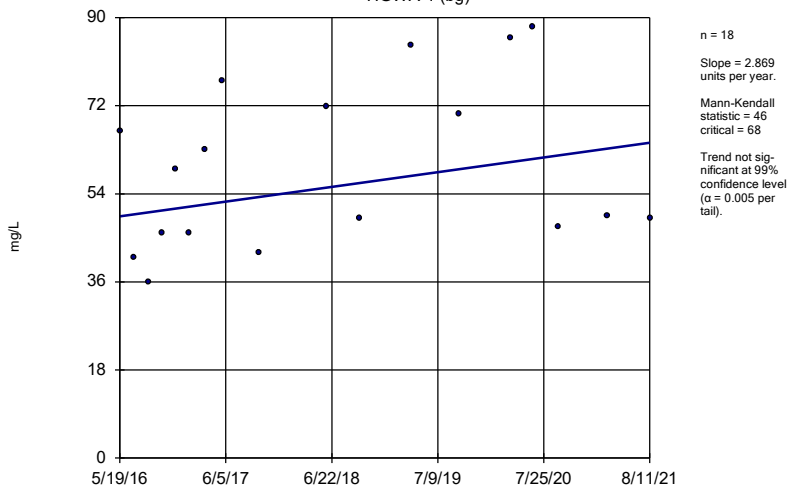
Constituent: Chloride Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWC-9



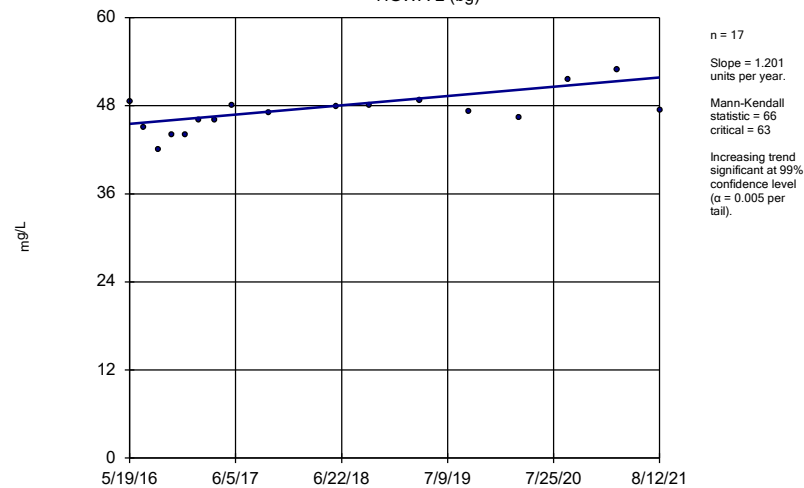
Constituent: Chloride Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-1 (bg)



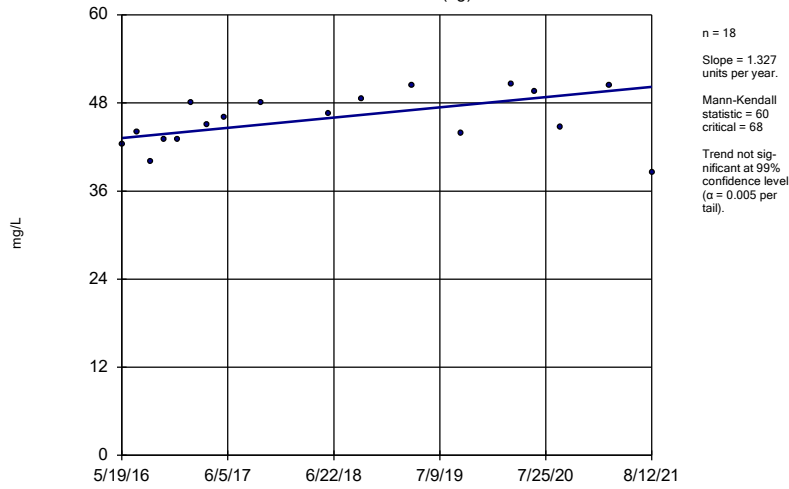
Constituent: Sulfate Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-2 (bg)



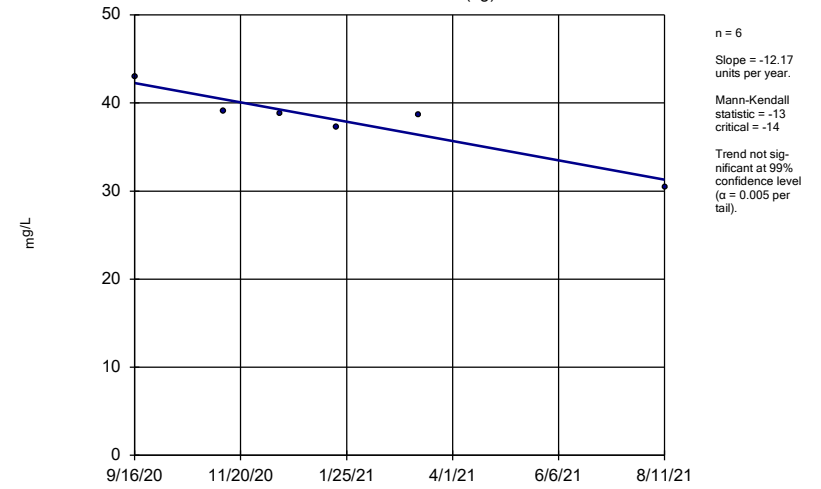
Constituent: Sulfate Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-3 (bg)



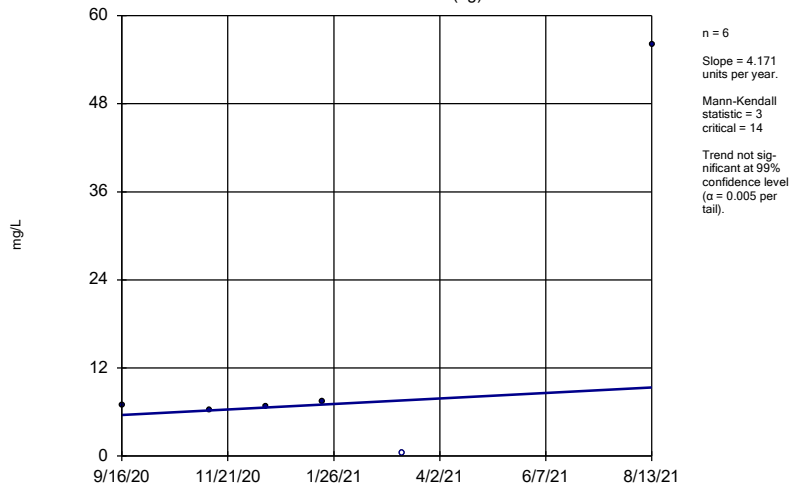
Constituent: Sulfate Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-43D (bg)



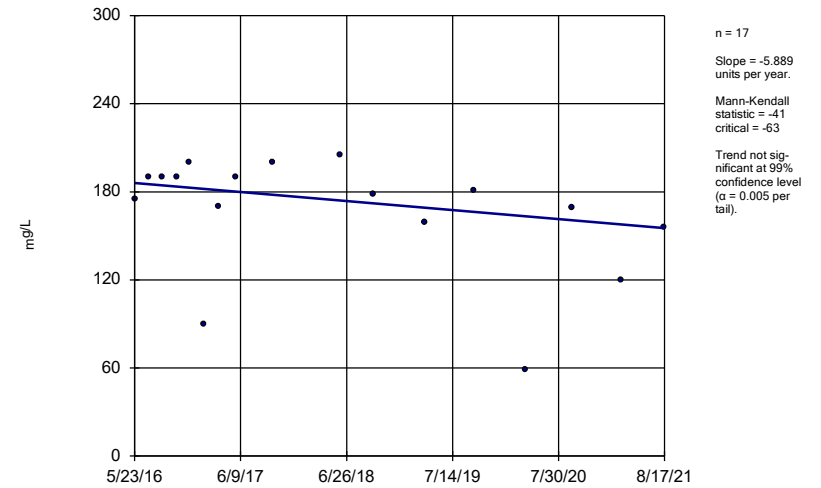
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-44D (bg)



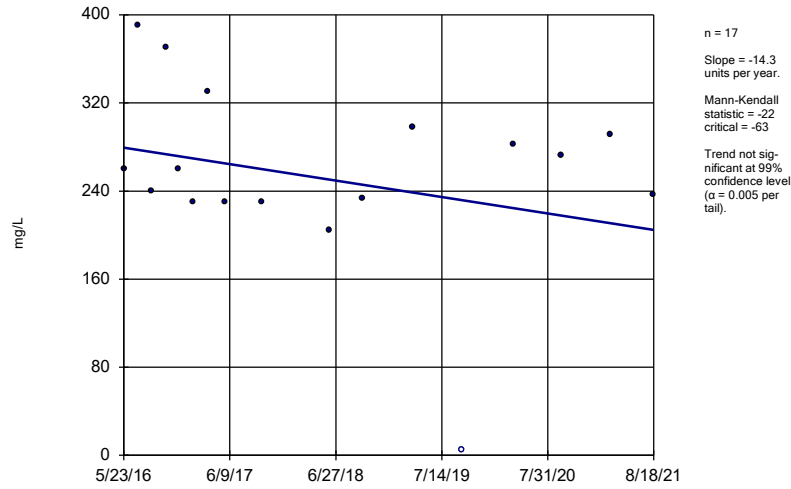
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWC-10



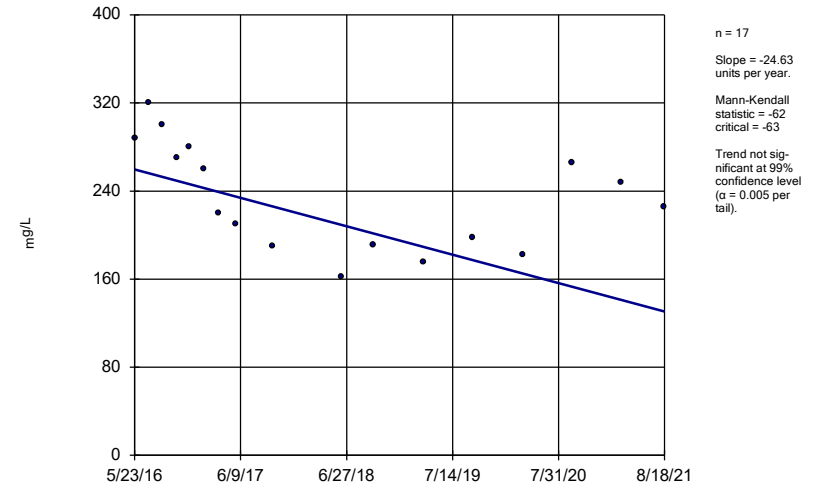
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWC-11



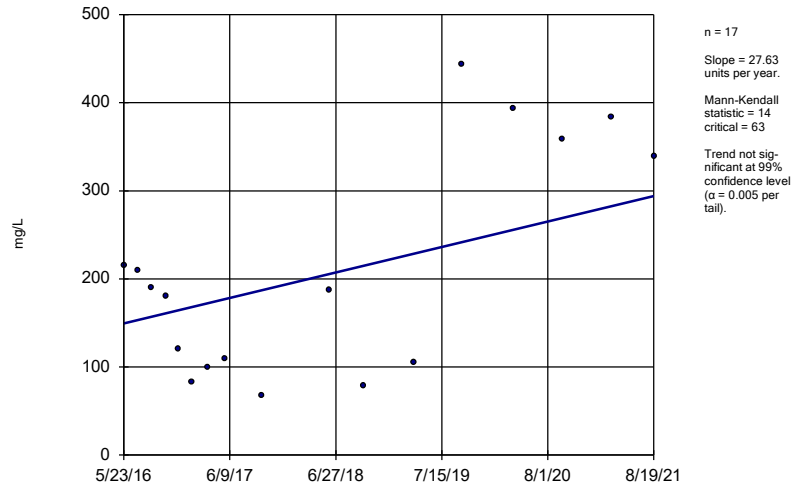
Constituent: Sulfate Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWC-12



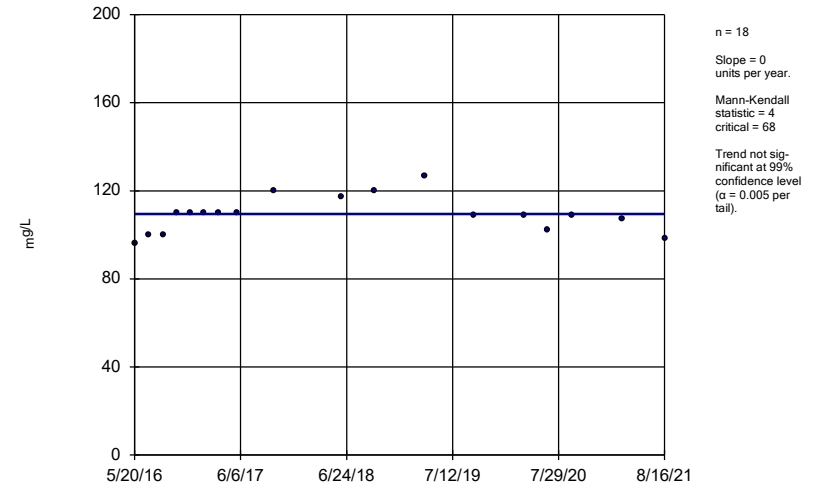
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWC-13



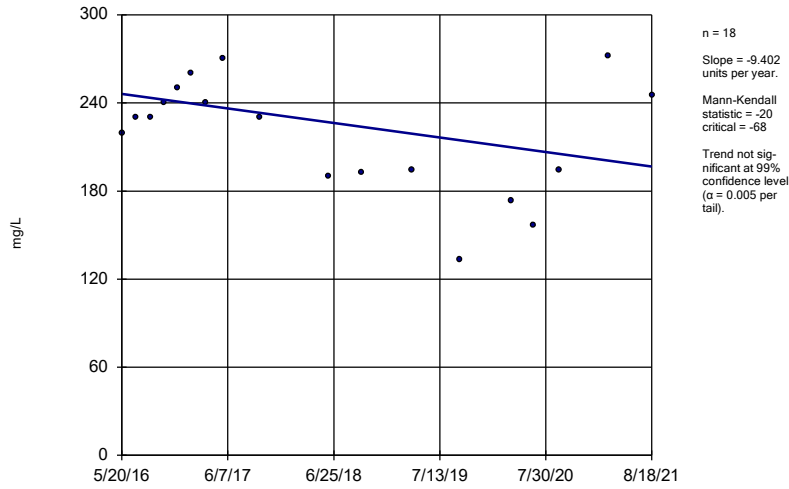
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Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWC-7



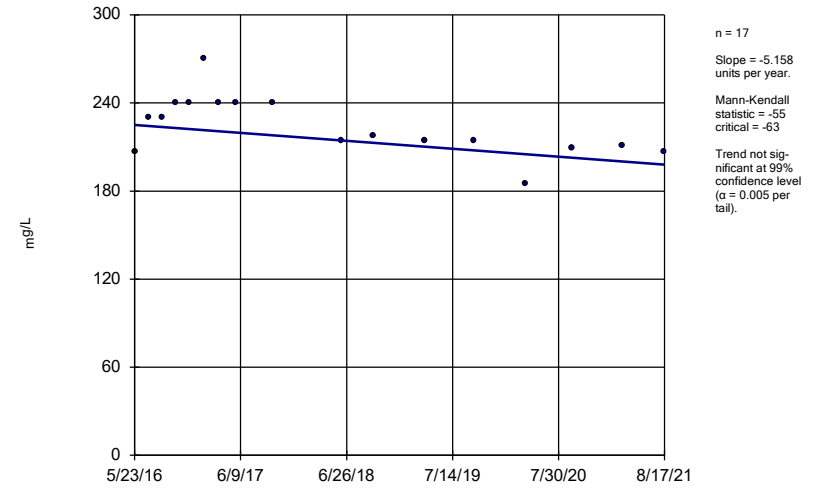
Constituent: Sulfate Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWC-8



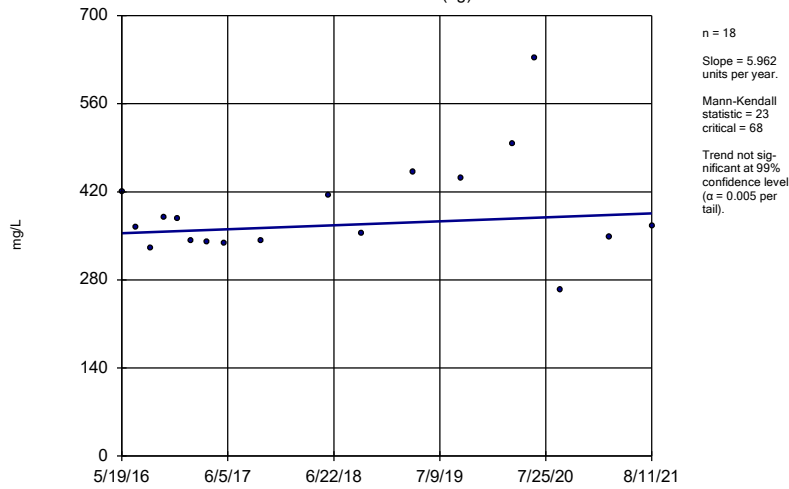
Constituent: Sulfate Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWC-9



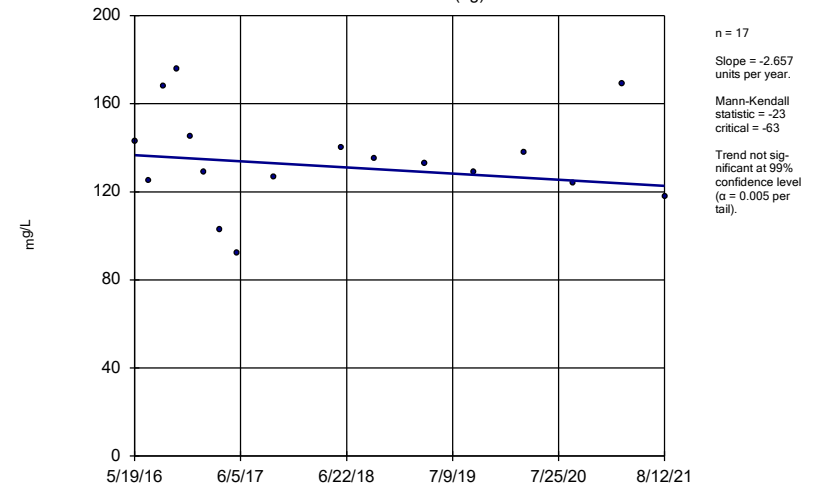
Constituent: Sulfate Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWA-1 (bg)



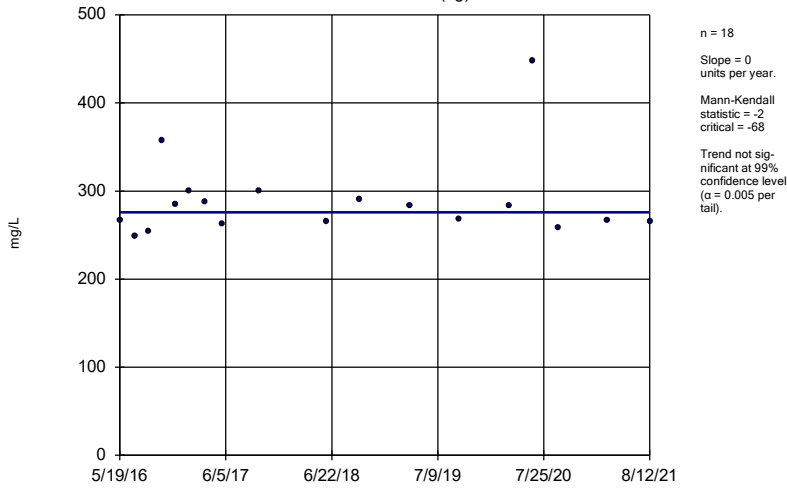
Constituent: Total Dissolved Solids Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator HGWA-2 (bg)



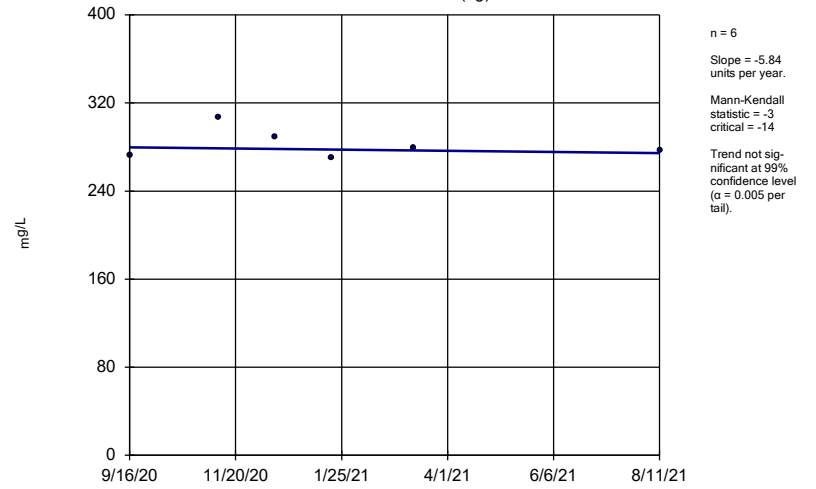
Constituent: Total Dissolved Solids Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-3 (bg)



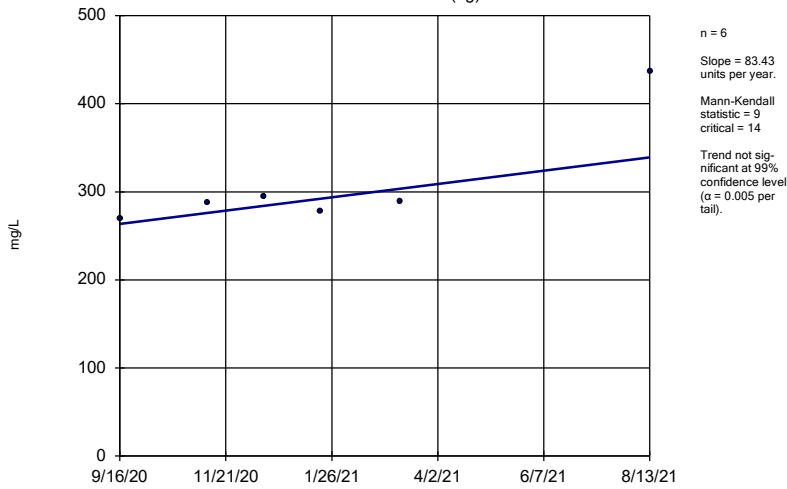
Constituent: Total Dissolved Solids Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-43D (bg)



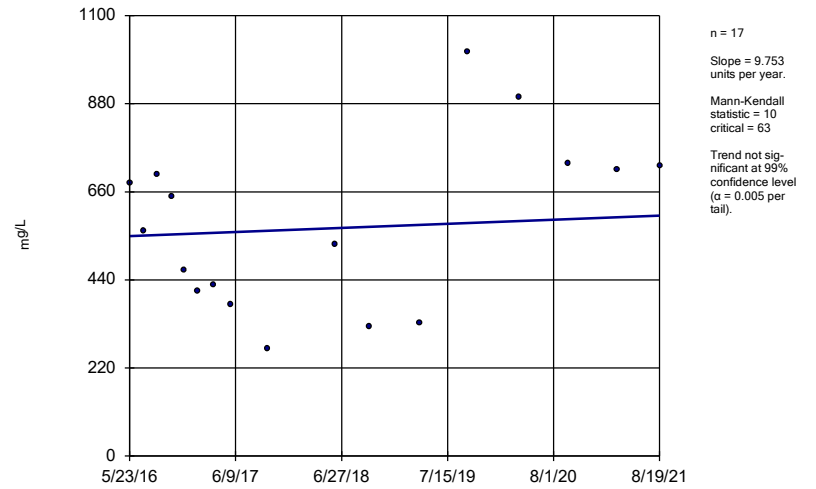
Constituent: Total Dissolved Solids Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-44D (bg)



Constituent: Total Dissolved Solids Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

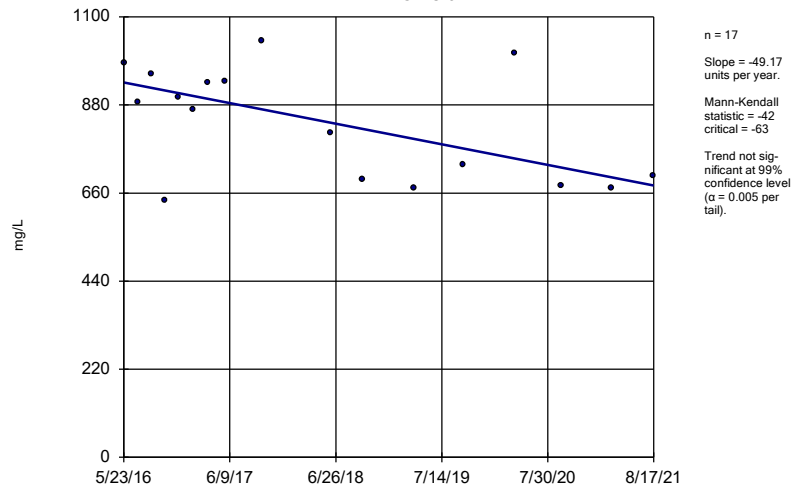
Sen's Slope Estimator
HGWC-13



Constituent: Total Dissolved Solids Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWC-9



Constituent: Total Dissolved Solids Analysis Run 10/20/2021 5:18 PM View: Appendix III - Trend Test
Plant Hammond Client: Southern Company Data: Hammond AP-1

FIGURE F.

Upper Tolerance Limits Summary Table

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/21/2021, 3:36 PM

Constituent	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	0.003	n/a	n/a	n/a	n/a	68	77.94	n/a	0.03056	NP Inter(NDs)
Arsenic (mg/L)	0.005	n/a	n/a	n/a	n/a	74	67.57	n/a	0.02247	NP Inter(NDs)
Barium (mg/L)	0.46	n/a	n/a	n/a	n/a	74	0	n/a	0.02247	NP Inter(normality)
Beryllium (mg/L)	0.0005	n/a	n/a	n/a	n/a	68	77.94	n/a	0.03056	NP Inter(NDs)
Cadmium (mg/L)	0.0005	n/a	n/a	n/a	n/a	68	86.76	n/a	0.03056	NP Inter(NDs)
Chromium (mg/L)	0.0079	n/a	n/a	n/a	n/a	68	80.88	n/a	0.03056	NP Inter(NDs)
Cobalt (mg/L)	0.038	n/a	n/a	n/a	n/a	68	72.06	n/a	0.03056	NP Inter(NDs)
Combined Radium 226 + 228 (pCi/L)	4.36	n/a	n/a	n/a	n/a	74	0	n/a	0.02247	NP Inter(normality)
Fluoride (mg/L)	0.87	n/a	n/a	n/a	n/a	79	31.65	n/a	0.01738	NP Inter(normality)
Lead (mg/L)	0.001	n/a	n/a	n/a	n/a	65	61.54	n/a	0.03565	NP Inter(NDs)
Lithium (mg/L)	0.034	n/a	n/a	n/a	n/a	74	21.62	n/a	0.02247	NP Inter(normality)
Mercury (mg/L)	0.0005	n/a	n/a	n/a	n/a	46	95.65	n/a	0.09447	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	n/a	n/a	76	81.58	n/a	0.02028	NP Inter(NDs)
Selenium (mg/L)	0.005	n/a	n/a	n/a	n/a	74	98.65	n/a	0.02247	NP Inter(NDs)
Thallium (mg/L)	0.001	n/a	n/a	n/a	n/a	74	98.65	n/a	0.02247	NP Inter(NDs)

FIGURE G.

PLANT HAMMOND AP-1 GWPS (State)				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	State GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.46	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0079	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.87	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.001
Lithium, Total (mg/L)	n/a	0.04	0.034	0.034
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.01
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**Grey cell indicates background is higher than MCL or CCR-Rule*

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

FIGURE H.

PLANT HAMMOND AP-1 GWPS (Federal)				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	Federal GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.005	0.01
Barium, Total (mg/L)	2		0.46	2
Beryllium, Total (mg/L)	0.004		0.0005	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.0079	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.038	0.038
Combined Radium, Total (pCi/L)	5		4.36	5
Fluoride, Total (mg/L)	4		0.87	4
Lead, Total (mg/L)	n/a	0.015	0.001	0.015
Lithium, Total (mg/L)	n/a	0.04	0.034	0.04
Mercury, Total (mg/L)	0.002		0.0005	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**Grey cell indicates background is higher than MCL or CCR-Rule*

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

**GWPS = Groundwater Protection Standard*

FIGURE I.

State Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 11/11/2021, 3:33 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	HGWC-13	0.4267	0.3553	0.01	Yes	20	0.391	0.06286	0	None	No	0.01	Param.
Lithium (mg/L)	MW-25D	0.05094	0.0455	0.034	Yes	9	0.04822	0.002819	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-11	0.02626	0.01574	0.01	Yes	20	0.021	0.009269	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-12	0.04956	0.04565	0.01	Yes	20	0.04761	0.003445	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-13	0.03572	0.03021	0.01	Yes	20	0.03297	0.004847	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-7	0.0429	0.03482	0.01	Yes	21	0.03886	0.007318	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-8	0.4921	0.4518	0.01	Yes	21	0.472	0.03653	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-9	0.033	0.0236	0.01	Yes	20	0.05018	0.1006	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	MW-19	0.05804	0.03307	0.01	Yes	9	0.04556	0.01293	0	None	No	0.01	Param.

State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 11/11/2021, 3:33 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	HGWC-10	0.003	0.00065	0.006	No	18	0.002869	0.0005539	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-11	0.003	0.00038	0.006	No	18	0.002854	0.0006175	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-13	0.003	0.00036	0.006	No	18	0.001985	0.001312	61.11	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-7	0.003	0.0017	0.006	No	18	0.00278	0.0006815	88.89	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-8	0.003	0.00064	0.006	No	18	0.002869	0.0005563	94.44	None	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-9	0.003	0.00043	0.006	No	18	0.002565	0.001001	83.33	None	No	0.01	NP (NDs)
Antimony (mg/L)	MW-24D	0.003	0.0017	0.006	No	9	0.002856	0.0004333	88.89	None	No	0.002	NP (NDs)
Antimony (mg/L)	MW-26D	0.003	0.0013	0.006	No	9	0.0027	0.0006205	77.78	None	No	0.002	NP (NDs)
Antimony (mg/L)	MW-27D	0.003	0.00016	0.006	No	9	0.001202	0.00135	33.33	None	No	0.002	NP (normality)
Antimony (mg/L)	MW-28D	0.003	0.0019	0.006	No	9	0.002878	0.0003667	88.89	None	No	0.002	NP (NDs)
Antimony (mg/L)	MW-29	0.003	0.00094	0.006	No	9	0.002771	0.0006867	88.89	None	No	0.002	NP (NDs)
Antimony (mg/L)	MW-6	0.003	0.0014	0.006	No	9	0.002822	0.0005333	88.89	None	No	0.002	NP (NDs)
Antimony (mg/L)	MW-7	0.003	0.00051	0.006	No	9	0.002197	0.001041	55.56	None	No	0.002	NP (NDs)
Arsenic (mg/L)	HGWC-11	0.005	0.0017	0.01	No	20	0.003352	0.001764	45	None	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-12	0.004509	0.003111	0.01	No	20	0.00381	0.00123	10	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-13	0.4267	0.3553	0.01	Yes	20	0.391	0.06286	0	None	No	0.01	Param.
Arsenic (mg/L)	HGWC-7	0.005	0.0019	0.01	No	20	0.004845	0.0006932	95	None	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-9	0.005	0.0008	0.01	No	20	0.004346	0.001599	85	None	No	0.01	NP (NDs)
Arsenic (mg/L)	MW-19	0.005	0.00045	0.01	No	9	0.004494	0.001517	88.89	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-20	0.005	0.00038	0.01	No	9	0.003736	0.00196	66.67	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-25D	0.005	0.00075	0.01	No	9	0.003306	0.002032	55.56	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-26D	0.005	0.0006	0.01	No	9	0.004044	0.001897	77.78	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-27D	0.005	0.0002	0.01	No	9	0.003543	0.002194	66.67	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-28D	0.005	0.0011	0.01	No	9	0.004567	0.0013	88.89	None	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-29	0.005	0.00037	0.01	No	9	0.004486	0.001543	88.89	None	No	0.002	NP (NDs)
Barium (mg/L)	HGWC-10	0.08761	0.06522	2	No	20	0.07642	0.01972	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-11	0.05264	0.032	2	No	20	0.04356	0.02019	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	HGWC-12	0.127	0.084	2	No	20	0.102	0.02089	0	None	No	0.01	NP (normality)
Barium (mg/L)	HGWC-13	0.09105	0.06791	2	No	20	0.07948	0.02038	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-7	0.07501	0.06859	2	No	20	0.0718	0.005661	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-8	0.07573	0.06317	2	No	20	0.06945	0.01106	0	None	No	0.01	Param.
Barium (mg/L)	HGWC-9	0.1216	0.1056	2	No	20	0.1136	0.01407	0	None	No	0.01	Param.
Barium (mg/L)	MW-19	0.06604	0.0484	2	No	9	0.05722	0.009135	0	None	No	0.01	Param.
Barium (mg/L)	MW-20	0.09679	0.08499	2	No	9	0.09089	0.006112	0	None	No	0.01	Param.
Barium (mg/L)	MW-24D	0.12	0.043	2	No	9	0.06344	0.02374	0	None	No	0.002	NP (normality)
Barium (mg/L)	MW-25D	0.5115	0.3929	2	No	9	0.4522	0.0614	0	None	No	0.01	Param.
Barium (mg/L)	MW-26D	0.135	0.08209	2	No	9	0.1086	0.02741	0	None	No	0.01	Param.
Barium (mg/L)	MW-27D	1.5	0.95	2	No	9	1.089	0.1746	0	None	No	0.002	NP (normality)
Barium (mg/L)	MW-28D	0.7012	0.2255	2	No	9	0.4633	0.2464	0	None	No	0.01	Param.
Barium (mg/L)	MW-29	0.08543	0.07568	2	No	9	0.08056	0.005053	0	None	No	0.01	Param.
Barium (mg/L)	MW-5	0.05145	0.04411	2	No	9	0.04778	0.003801	0	None	No	0.01	Param.
Barium (mg/L)	MW-6	0.09297	0.08147	2	No	9	0.08722	0.005954	0	None	No	0.01	Param.
Barium (mg/L)	MW-7	0.06362	0.04816	2	No	9	0.05589	0.008007	0	None	No	0.01	Param.
Beryllium (mg/L)	HGWC-11	0.0005	0.0001	0.004	No	18	0.0003498	0.0001948	61.11	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-13	0.0005	0.000093	0.004	No	18	0.0003186	0.000209	55.56	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-7	0.0005	0.00019	0.004	No	18	0.000436	0.0001489	83.33	None	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-8	0.0005	0.000087	0.004	No	18	0.0003839	0.0001927	72.22	None	No	0.01	NP (NDs)
Beryllium (mg/L)	MW-19	0.0005	0.000058	0.004	No	9	0.0004509	0.0001473	88.89	None	No	0.002	NP (NDs)
Beryllium (mg/L)	MW-28D	0.0005	0.000048	0.004	No	9	0.0003602	0.0002112	66.67	None	No	0.002	NP (NDs)
Beryllium (mg/L)	MW-7	0.0005	0.000051	0.004	No	9	0.0004501	0.0001497	88.89	None	No	0.002	NP (NDs)
Cadmium (mg/L)	HGWC-10	0.0005	0.0001	0.005	No	18	0.0003508	0.0001937	61.11	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-11	0.0005	0.0001	0.005	No	18	0.0004331	0.0001539	83.33	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-12	0.0005	0.0003	0.005	No	18	0.00043	0.0001398	77.78	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-7	0.0005	0.0002	0.005	No	18	0.0004278	0.0001406	77.78	None	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-8	0.00032	0.00017	0.005	No	18	0.0003078	0.0003607	5.556	None	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-9	0.0005	0.0002	0.005	No	18	0.0004372	0.0001463	83.33	None	No	0.01	NP (NDs)
Cadmium (mg/L)	MW-19	0.0002432	0.0001534	0.005	No	9	0.0002656	0.00014	22.22	Kaplan-Meier	x^(1/3)	0.01	Param.
Chromium (mg/L)	HGWC-10	0.02	0.005	0.1	No	18	0.005833	0.003536	94.44	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-11	0.005	0.00061	0.1	No	18	0.004495	0.001471	88.89	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-12	0.005	0.0025	0.1	No	18	0.004378	0.001479	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-13	0.005	0.00059	0.1	No	18	0.004253	0.00172	83.33	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-7	0.071	0.0016	0.1	No	18	0.007624	0.01591	66.67	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-8	0.005	0.0015	0.1	No	18	0.004084	0.001772	77.78	None	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-9	0.005	0.00067	0.1	No	18	0.004511	0.001425	88.89	None	No	0.01	NP (NDs)
Chromium (mg/L)	MW-19	0.005	0.00047	0.1	No	9	0.002813	0.002138	44.44	None	No	0.002	NP (normality)
Chromium (mg/L)	MW-20	0.005	0.00051	0.1	No	9	0.003544	0.002184	66.67	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-24D	0.005	0.00042	0.1	No	9	0.004124	0.001767	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-25D	0.005	0.00061	0.1	No	9	0.004512	0.001463	88.89	None	No	0.002	NP (NDs)

State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 11/11/2021, 3:33 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chromium (mg/L)	MW-26D	0.005	0.00076	0.1	No	9	0.003007	0.001978	44.44	None	No	0.002	NP (normality)
Chromium (mg/L)	MW-27D	0.005	0.0007	0.1	No	9	0.004058	0.00187	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-28D	0.005	0.00078	0.1	No	9	0.002949	0.00203	44.44	None	No	0.002	NP (normality)
Chromium (mg/L)	MW-29	0.005	0.001	0.1	No	9	0.004556	0.001333	88.89	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-5	0.004351	0.00216	0.1	No	9	0.003256	0.001135	0	None	No	0.01	Param.
Chromium (mg/L)	MW-6	0.005	0.00044	0.1	No	9	0.004003	0.001978	77.78	None	No	0.002	NP (NDs)
Chromium (mg/L)	MW-7	0.005	0.0013	0.1	No	9	0.002467	0.001469	22.22	None	No	0.002	NP (normality)
Cobalt (mg/L)	HGWC-10	0.005	0.0007	0.038	No	18	0.003589	0.002058	66.67	None	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-11	0.005	0.00098	0.038	No	18	0.002787	0.001751	33.33	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-12	0.0018	0.0012	0.038	No	18	0.001833	0.001186	11.11	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-13	0.004154	0.002647	0.038	No	18	0.003401	0.001245	5.556	None	No	0.01	Param.
Cobalt (mg/L)	HGWC-7	0.0026	0.00065	0.038	No	18	0.001576	0.001654	16.67	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-8	0.0023	0.0019	0.038	No	18	0.002193	0.0007395	5.556	None	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-9	0.0011	0.00053	0.038	No	18	0.001194	0.001428	11.11	None	No	0.01	NP (normality)
Cobalt (mg/L)	MW-19	0.0435	0.03028	0.038	No	9	0.03689	0.006846	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-20	0.005	0.0011	0.038	No	9	0.004567	0.0013	88.89	None	No	0.002	NP (NDs)
Cobalt (mg/L)	MW-24D	0.005	0.00025	0.038	No	9	0.003546	0.002192	66.67	None	No	0.002	NP (NDs)
Cobalt (mg/L)	MW-26D	0.005	0.0003	0.038	No	9	0.002463	0.002407	44.44	None	No	0.002	NP (normality)
Cobalt (mg/L)	MW-27D	0.005	0.000091	0.038	No	9	0.003438	0.002345	66.67	None	No	0.002	NP (NDs)
Cobalt (mg/L)	MW-28D	0.005	0.00093	0.038	No	9	0.004548	0.001357	88.89	None	No	0.002	NP (NDs)
Cobalt (mg/L)	MW-29	0.001333	0.0006621	0.038	No	9	0.0009978	0.0003477	0	None	No	0.01	Param.
Cobalt (mg/L)	MW-6	0.005	0.00036	0.038	No	9	0.001524	0.001978	22.22	None	No	0.002	NP (normality)
Combined Radium 226 + 228 (pCi/L)	HGWC-10	1.111	0.5962	5	No	20	0.8535	0.453	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-11	1.209	0.6749	5	No	20	0.942	0.4703	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-12	1.089	0.5679	5	No	20	0.8287	0.4592	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-13	1.037	0.6055	5	No	20	0.821	0.3795	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-7	0.9458	0.4368	5	No	20	0.7386	0.4986	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-8	0.9917	0.6954	5	No	20	0.8436	0.2609	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-9	0.9483	0.5538	5	No	20	0.7511	0.3474	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-19	1.114	0.4725	5	No	9	0.793	0.332	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-20	1.115	0.31	5	No	9	0.7126	0.417	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-24D	0.7621	0.1304	5	No	9	0.4432	0.3823	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-25D	1.247	0.7658	5	No	9	1.006	0.2491	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-26D	1.165	0.1241	5	No	9	0.6445	0.539	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-27D	1.826	0.7882	5	No	9	1.307	0.5374	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-28D	1.367	0.4851	5	No	9	0.9259	0.4566	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-29	1.06	0.2667	5	No	9	0.6633	0.4108	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-5	1.072	0.4887	5	No	9	0.7803	0.3021	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-6	2.07	0.198	5	No	9	0.8311	0.5053	0	None	No	0.002	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-7	1.317	0.5092	5	No	9	0.9131	0.4184	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-10	0.2118	0.08062	4	No	21	0.1793	0.1403	19.05	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-11	0.4436	0.2643	4	No	21	0.354	0.1625	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-12	0.394	0.1856	4	No	21	0.3206	0.2485	4.762	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	HGWC-13	0.7128	0.5033	4	No	21	0.608	0.1899	0	None	No	0.01	Param.
Fluoride (mg/L)	HGWC-7	0.17	0.084	4	No	22	0.1485	0.1138	9.091	None	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-8	0.6378	0.4818	4	No	22	0.5745	0.1739	0	None	ln(x)	0.01	Param.
Fluoride (mg/L)	HGWC-9	0.2549	0.0956	4	No	21	0.1956	0.1598	9.524	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-19	0.3219	0.1032	4	No	9	0.2129	0.1399	0	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	MW-20	0.1	0.072	4	No	9	0.09689	0.009333	88.89	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-24D	0.1031	0.04171	4	No	9	0.09078	0.03986	44.44	Kaplan-Meier	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-25D	2.2	1.4	4	No	9	1.633	0.2291	0	None	No	0.002	NP (normality)
Fluoride (mg/L)	MW-26D	0.1112	0.04811	4	No	9	0.08056	0.04423	11.11	None	ln(x)	0.01	Param.
Fluoride (mg/L)	MW-27D	0.42	0.22	4	No	9	0.2667	0.05979	0	None	No	0.002	NP (normality)
Fluoride (mg/L)	MW-28D	0.2555	0.1445	4	No	9	0.2	0.05745	0	None	No	0.01	Param.
Fluoride (mg/L)	MW-29	0.18	0.045	4	No	9	0.09944	0.03592	66.67	None	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-5	0.09166	0.05606	4	No	9	0.07967	0.02074	22.22	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	MW-6	0.19	0.055	4	No	9	0.1073	0.05586	22.22	None	No	0.002	NP (normality)
Fluoride (mg/L)	MW-7	0.17	0.069	4	No	9	0.1043	0.02667	77.78	None	No	0.002	NP (NDs)
Lead (mg/L)	HGWC-10	0.001	0.00005	0.001	No	16	0.0009406	0.0002375	93.75	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-11	0.001	0.000099	0.001	No	16	0.0006912	0.0004165	62.5	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-12	0.001	0.000089	0.001	No	16	0.0007336	0.0004162	68.75	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-13	0.001	0.00014	0.001	No	16	0.0006744	0.0004348	62.5	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-7	0.001	0.00009	0.001	No	16	0.0006246	0.0004545	43.75	None	No	0.01	NP (normality)
Lead (mg/L)	HGWC-8	0.001	0.00013	0.001	No	16	0.0007829	0.000389	75	None	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-9	0.001	0.00014	0.001	No	16	0.0005821	0.0004341	50	None	No	0.01	NP (normality)
Lead (mg/L)	MW-19	0.001	0.000038	0.001	No	7	0.000472	0.0004944	42.86	None	No	0.008	NP (normality)
Lead (mg/L)	MW-20	0.0001863	0.00004985	0.001	No	7	0.0004913	0.0004775	42.86	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	MW-24D	0.0001552	0.00003672	0.001	No	7	0.0003509	0.0004465	28.57	Kaplan-Meier	ln(x)	0.01	Param.

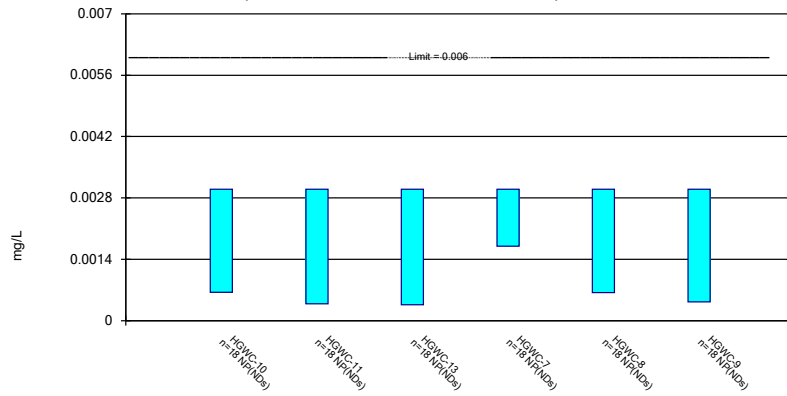
State Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 11/11/2021, 3:33 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lead (mg/L)	MW-26D	0.001	0.00008	0.001	No	7	0.00074	0.0004441	71.43	Kaplan-Meier	No	0.008	NP (NDs)
Lead (mg/L)	MW-27D	0.001	0.00013	0.001	No	7	0.0007943	0.0003618	71.43	Kaplan-Meier	No	0.008	NP (NDs)
Lead (mg/L)	MW-28D	0.0007798	0.00008112	0.001	No	7	0.0005746	0.0004152	28.57	Kaplan-Meier	sqrt(x)	0.01	Param.
Lead (mg/L)	MW-29	0.001	0.000052	0.001	No	7	0.0006074	0.0004899	57.14	Kaplan-Meier	No	0.008	NP (NDs)
Lead (mg/L)	MW-5	0.001	0.000047	0.001	No	7	0.0008639	0.0003602	85.71	Kaplan-Meier	No	0.008	NP (NDs)
Lead (mg/L)	MW-6	0.0002356	0.00004291	0.001	No	7	0.0005014	0.0004713	42.86	Kaplan-Meier	ln(x)	0.01	Param.
Lead (mg/L)	MW-7	0.001	0.000062	0.001	No	7	0.000866	0.0003545	85.71	Kaplan-Meier	No	0.008	NP (NDs)
Lithium (mg/L)	HGWC-12	0.01082	0.008191	0.034	No	20	0.009505	0.002314	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-13	0.03785	0.03067	0.034	No	20	0.03426	0.006315	0	None	No	0.01	Param.
Lithium (mg/L)	HGWC-7	0.003	0.0021	0.034	No	20	0.00316	0.00283	5	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-8	0.0029	0.0025	0.034	No	20	0.00332	0.002763	5	None	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-9	0.0045	0.004	0.034	No	20	0.00474	0.002457	5	None	No	0.01	NP (normality)
Lithium (mg/L)	MW-19	0.01378	0.008886	0.034	No	9	0.01133	0.002535	0	None	No	0.01	Param.
Lithium (mg/L)	MW-20	0.015	0.00082	0.034	No	9	0.004237	0.006108	22.22	None	No	0.002	NP (normality)
Lithium (mg/L)	MW-24D	0.002888	0.002557	0.034	No	9	0.002722	0.0001716	0	None	No	0.01	Param.
Lithium (mg/L)	MW-25D	0.05094	0.0455	0.034	Yes	9	0.04822	0.002819	0	None	No	0.01	Param.
Lithium (mg/L)	MW-26D	0.03	0.0032	0.034	No	9	0.006566	0.008797	0	None	No	0.002	NP (normality)
Lithium (mg/L)	MW-27D	0.008967	0.005855	0.034	No	9	0.007411	0.001611	0	None	No	0.01	Param.
Lithium (mg/L)	MW-28D	0.01335	0.005939	0.034	No	9	0.009644	0.003838	0	None	No	0.01	Param.
Lithium (mg/L)	MW-29	0.002401	0.00211	0.034	No	9	0.002256	0.0001509	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-10	0.005	0.0014	0.01	No	20	0.00354	0.001849	60	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	HGWC-11	0.02626	0.01574	0.01	Yes	20	0.021	0.009269	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-12	0.04956	0.04565	0.01	Yes	20	0.04761	0.003445	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-13	0.03572	0.03021	0.01	Yes	20	0.03297	0.004847	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-7	0.0429	0.03482	0.01	Yes	21	0.03886	0.007318	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-8	0.4921	0.4518	0.01	Yes	21	0.472	0.03653	0	None	No	0.01	Param.
Molybdenum (mg/L)	HGWC-9	0.033	0.0236	0.01	Yes	20	0.05018	0.1006	0	None	No	0.01	NP (normality)
Molybdenum (mg/L)	MW-19	0.05804	0.03307	0.01	Yes	9	0.04556	0.01293	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-24D	0.005	0.00027	0.01	No	9	0.002677	0.002215	44.44	None	No	0.002	NP (normality)
Molybdenum (mg/L)	MW-25D	0.005	0.00094	0.01	No	9	0.004238	0.001545	77.78	None	No	0.002	NP (NDs)
Molybdenum (mg/L)	MW-26D	0.02137	0.008627	0.01	No	10	0.015	0.007143	10	None	No	0.01	Param.
Molybdenum (mg/L)	MW-27D	0.004551	0.001204	0.01	No	9	0.002878	0.001733	11.11	None	No	0.01	Param.
Molybdenum (mg/L)	MW-28D	0.02271	0.009909	0.01	No	9	0.01631	0.006631	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-29	0.003271	0.002263	0.01	No	9	0.002767	0.000522	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-6	0.002621	0.002179	0.01	No	9	0.0024	0.0002291	0	None	No	0.01	Param.
Molybdenum (mg/L)	MW-7	0.005	0.0015	0.01	No	9	0.003422	0.001629	44.44	None	No	0.002	NP (normality)
Selenium (mg/L)	HGWC-10	0.005	0.0041	0.05	No	20	0.004385	0.001184	75	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-11	0.015	0.006546	0.05	No	20	0.01078	0.007448	0	None	No	0.01	Param.
Selenium (mg/L)	HGWC-12	0.005	0.0011	0.05	No	20	0.004805	0.0008721	95	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-13	0.005	0.0016	0.05	No	20	0.004589	0.001286	90	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-8	0.005	0.0024	0.05	No	20	0.00487	0.0005814	95	None	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-9	0.005	0.0037	0.05	No	20	0.004935	0.0002907	95	None	No	0.01	NP (NDs)
Selenium (mg/L)	MW-19	0.00518	0.001815	0.05	No	9	0.004	0.00181	22.22	Kaplan-Meier	No	0.01	Param.
Selenium (mg/L)	MW-27D	0.005	0.00012	0.05	No	9	0.004458	0.001627	88.89	Kaplan-Meier	No	0.002	NP (NDs)
Selenium (mg/L)	MW-5	0.003741	0.002193	0.05	No	9	0.002967	0.0008016	0	None	No	0.01	Param.
Selenium (mg/L)	MW-7	0.005	0.0014	0.05	No	9	0.003233	0.001716	44.44	None	No	0.002	NP (normality)
Thallium (mg/L)	HGWC-11	0.001	0.00008	0.002	No	20	0.000908	0.0002832	90	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-12	0.001	0.0001	0.002	No	20	0.0007312	0.000422	70	None	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-13	0.0004208	0.000328	0.002	No	20	0.0003744	0.00008178	0	None	No	0.01	Param.
Thallium (mg/L)	HGWC-8	0.001	0.00009	0.002	No	20	0.0007244	0.000432	70	None	No	0.01	NP (NDs)
Thallium (mg/L)	MW-19	0.001	0.00019	0.002	No	9	0.0004189	0.0003308	22.22	None	No	0.002	NP (normality)
Thallium (mg/L)	MW-28D	0.001	0.000092	0.002	No	9	0.0008991	0.0003027	88.89	None	No	0.002	NP (NDs)
Thallium (mg/L)	MW-29	0.001	0.000064	0.002	No	9	0.000896	0.000312	88.89	None	No	0.002	NP (NDs)
Thallium (mg/L)	MW-6	0.001	0.000082	0.002	No	9	0.000898	0.000306	88.89	None	No	0.002	NP (NDs)

Non-Parametric Confidence Interval

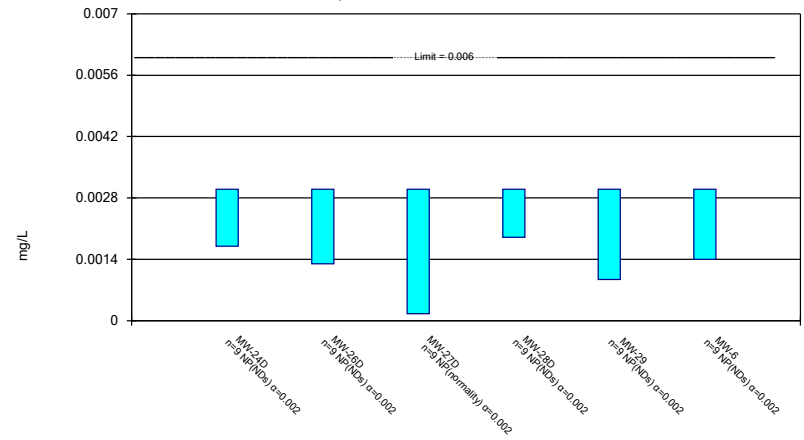
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Antimony Analysis Run 11/11/2021 3:31 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

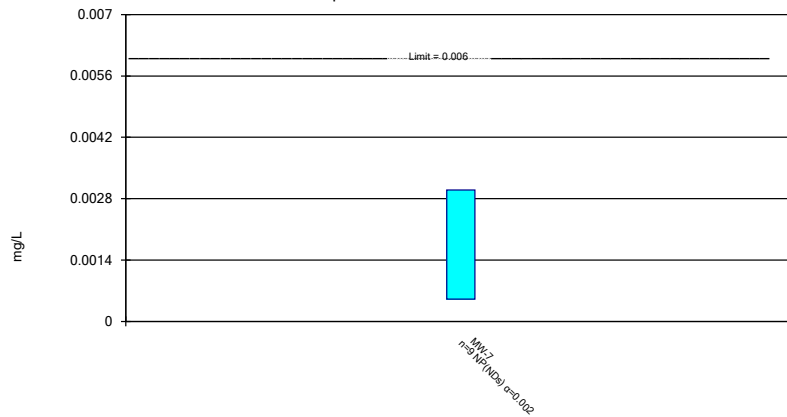
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 11/11/2021 3:31 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

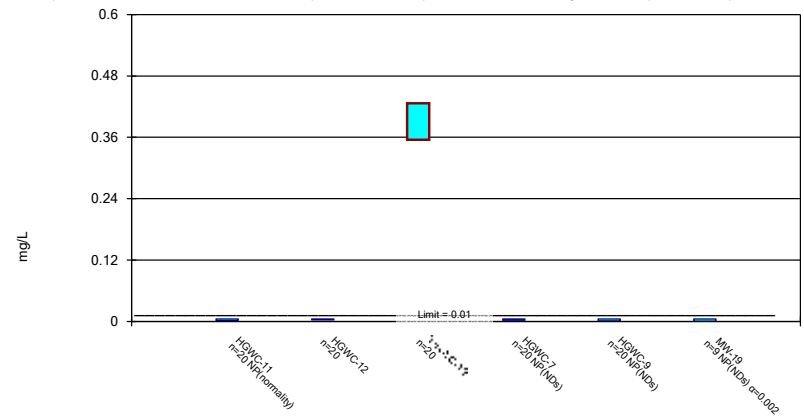
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 11/11/2021 3:31 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

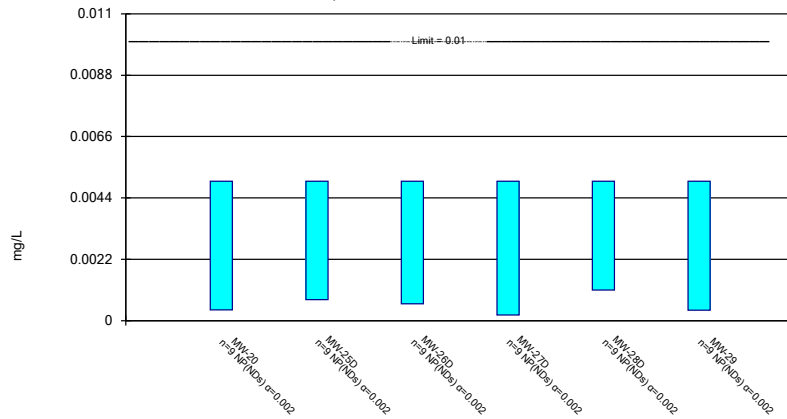
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 11/11/2021 3:31 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

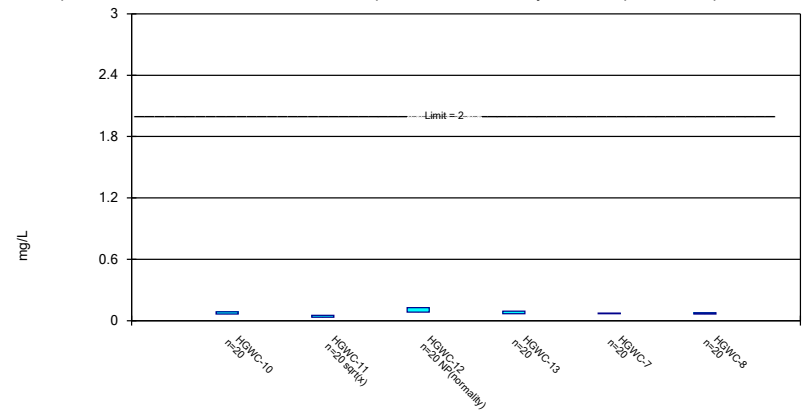
Compliance Limit is not exceeded.



Constituent: Arsenic Analysis Run 11/11/2021 3:31 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

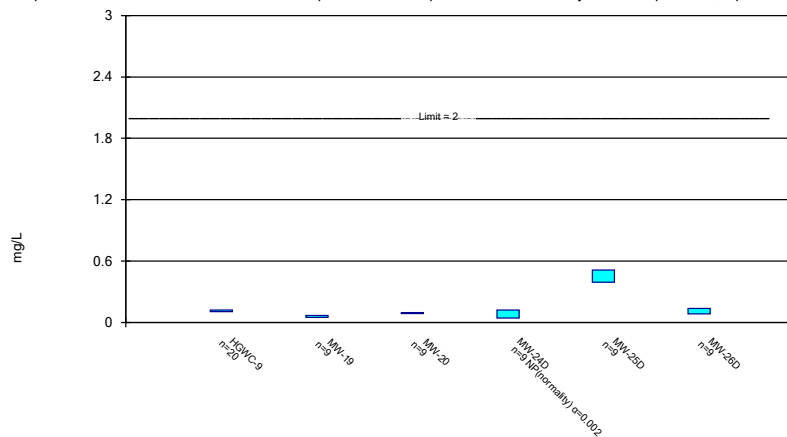
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 11/11/2021 3:31 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

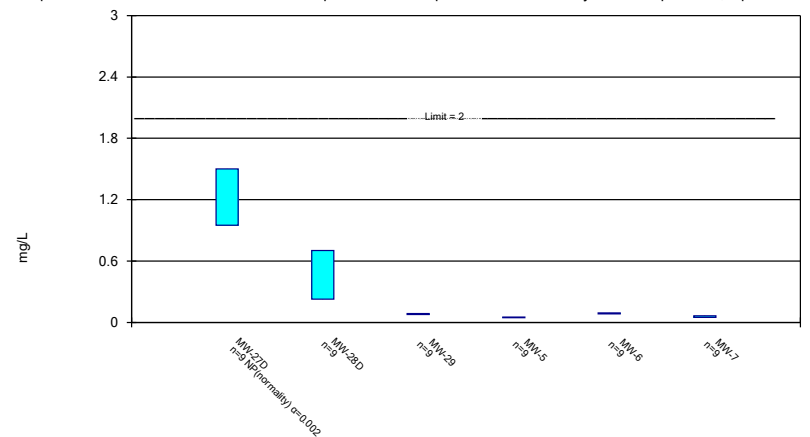
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 11/11/2021 3:31 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

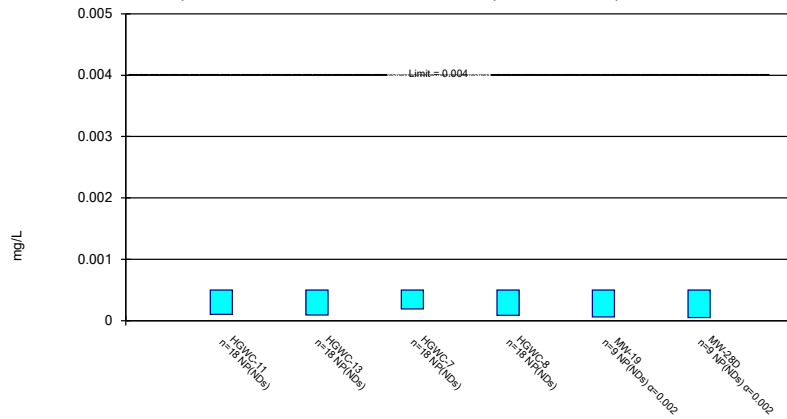
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 11/11/2021 3:31 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

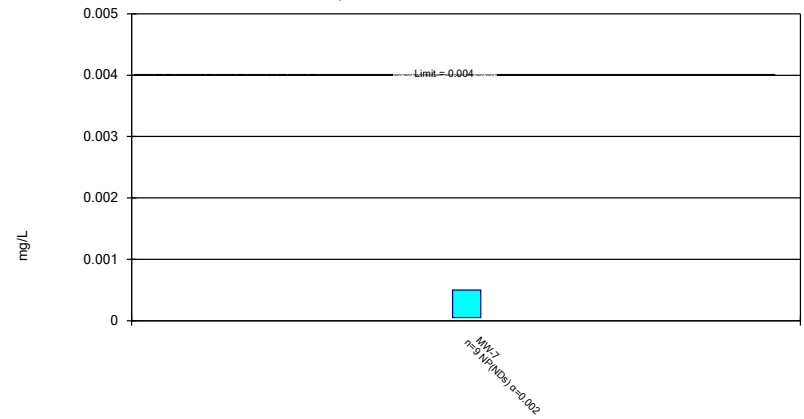
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Beryllium Analysis Run 11/11/2021 3:31 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

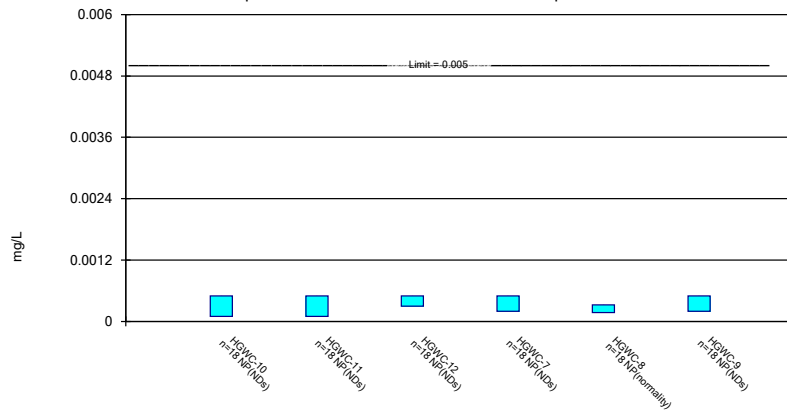
Compliance Limit is not exceeded.



Constituent: Beryllium Analysis Run 11/11/2021 3:31 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

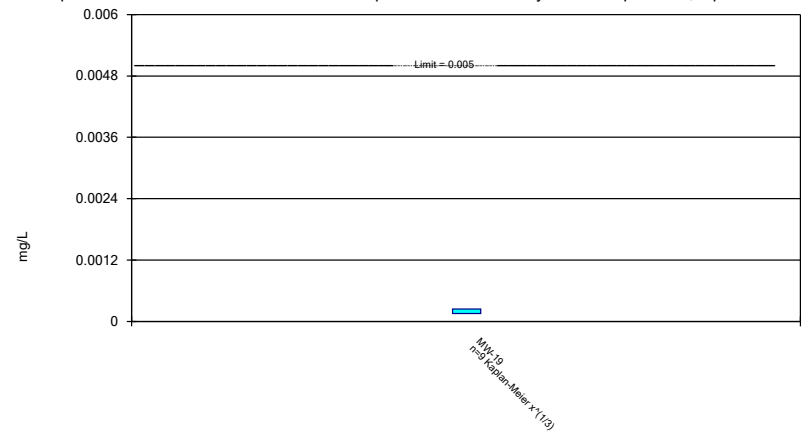
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Cadmium Analysis Run 11/11/2021 3:31 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

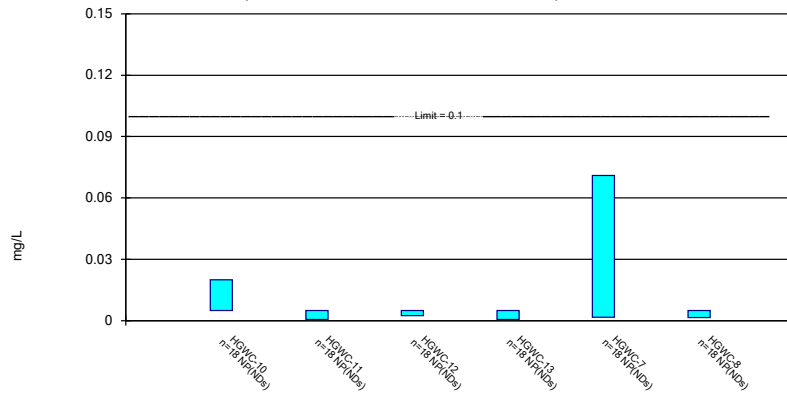
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 11/11/2021 3:31 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

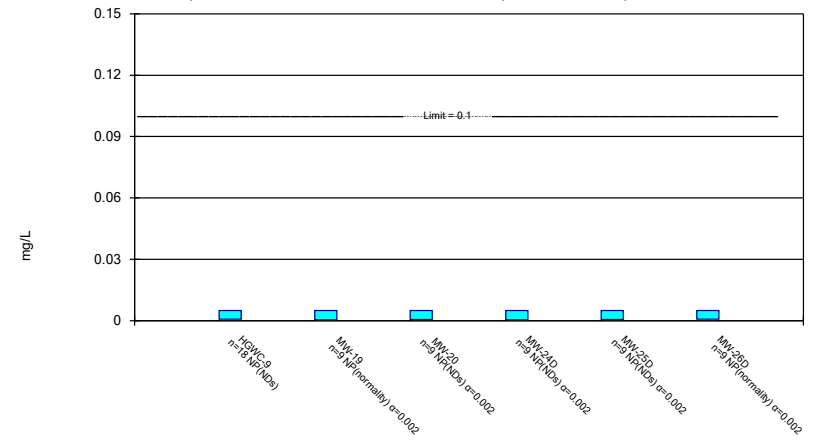
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 11/11/2021 3:31 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

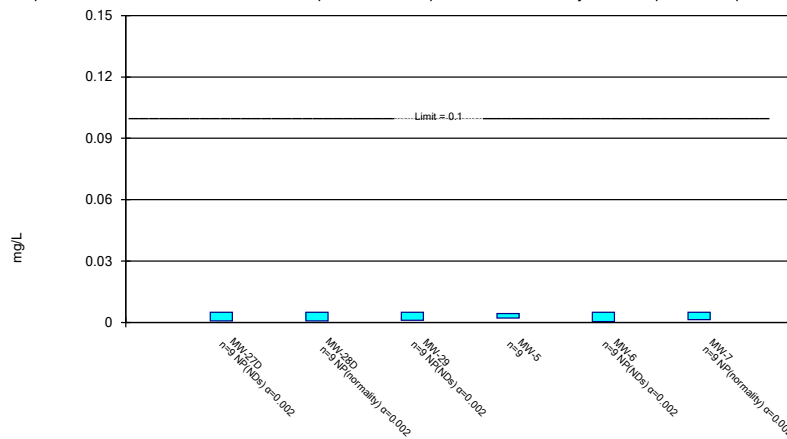
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 11/11/2021 3:31 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

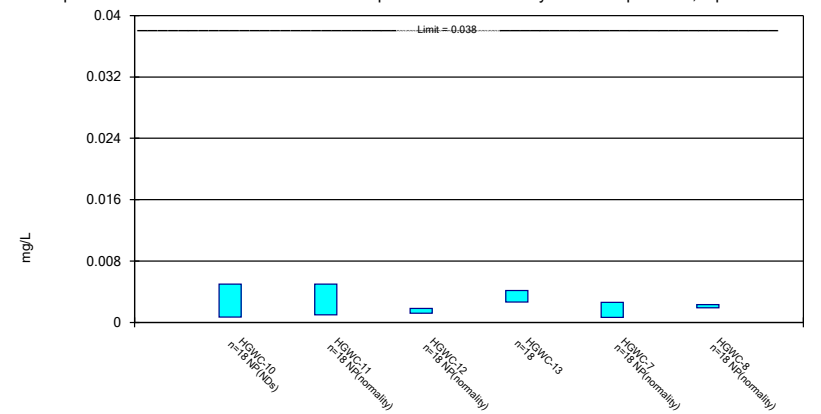
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 11/11/2021 3:31 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

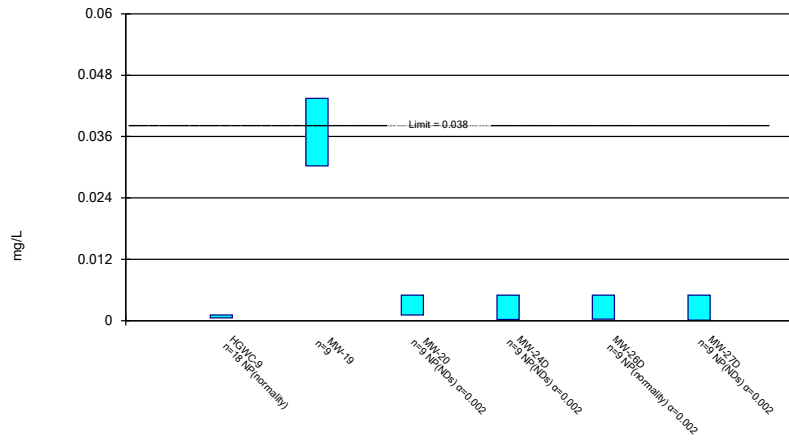
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/11/2021 3:31 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

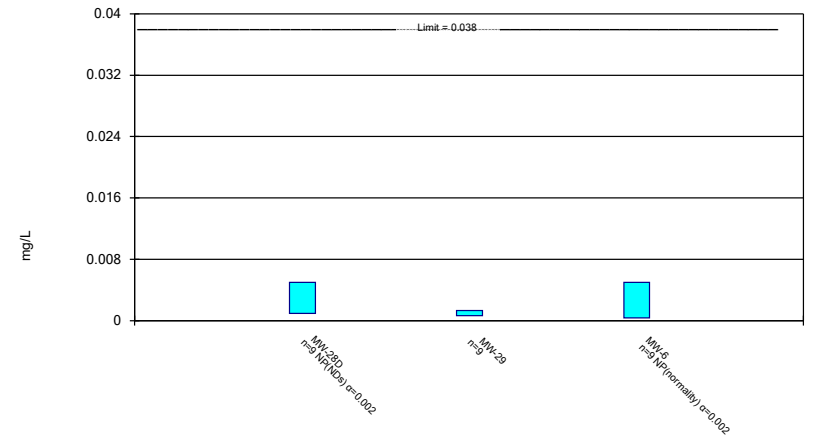
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/11/2021 3:31 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

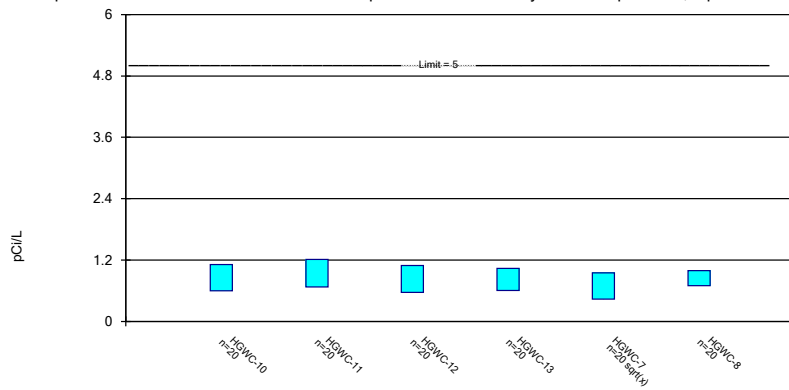
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/11/2021 3:31 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

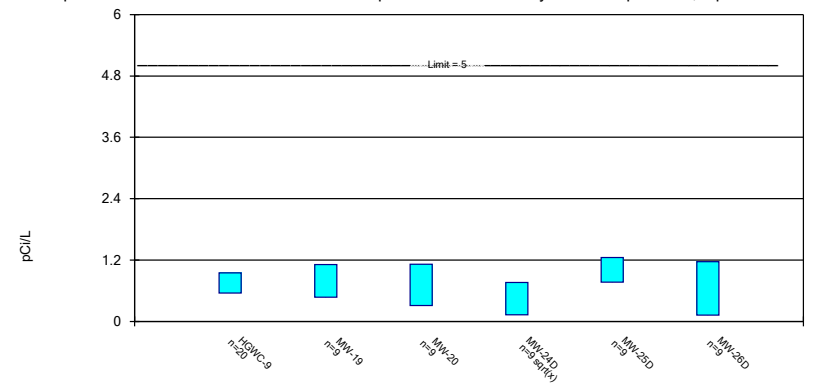
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/11/2021 3:32 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

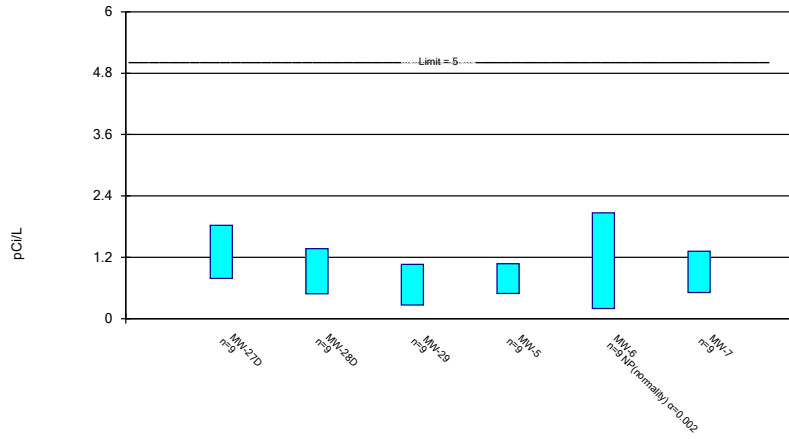
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/11/2021 3:32 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

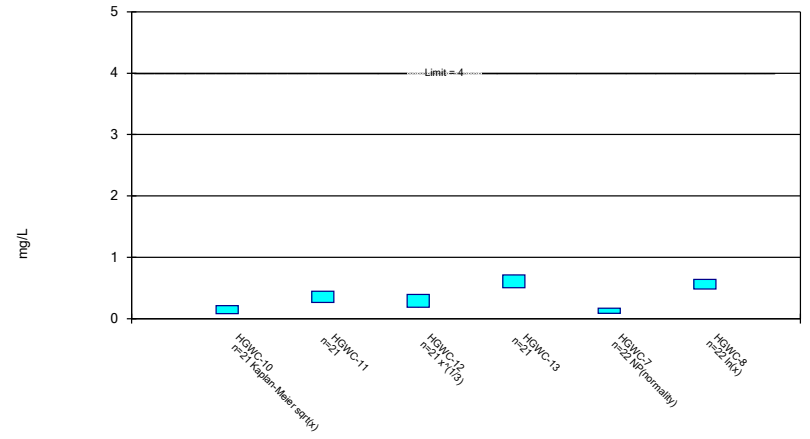
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/11/2021 3:32 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

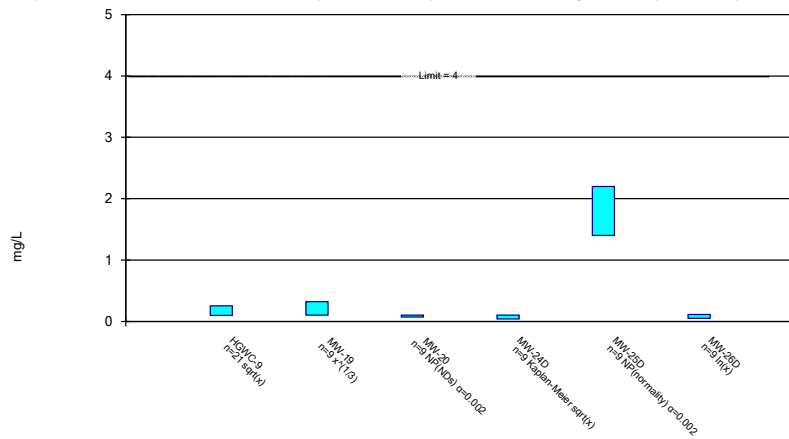
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/11/2021 3:32 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

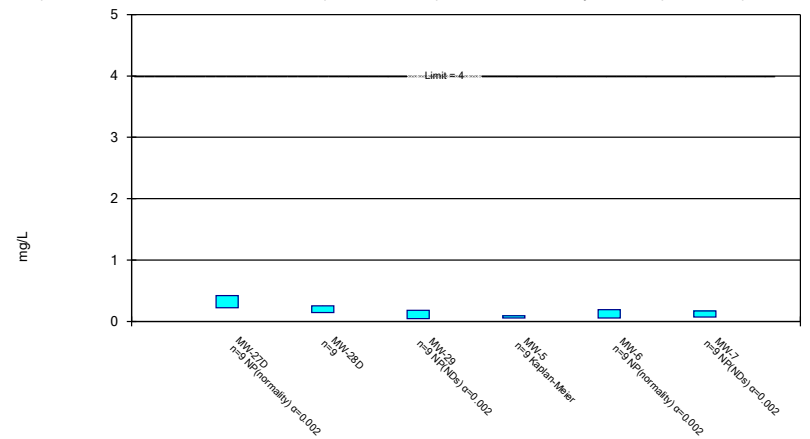
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/11/2021 3:32 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

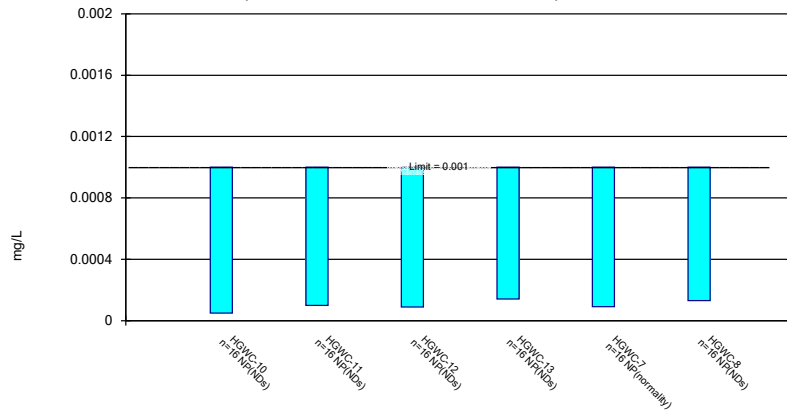
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 11/11/2021 3:32 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

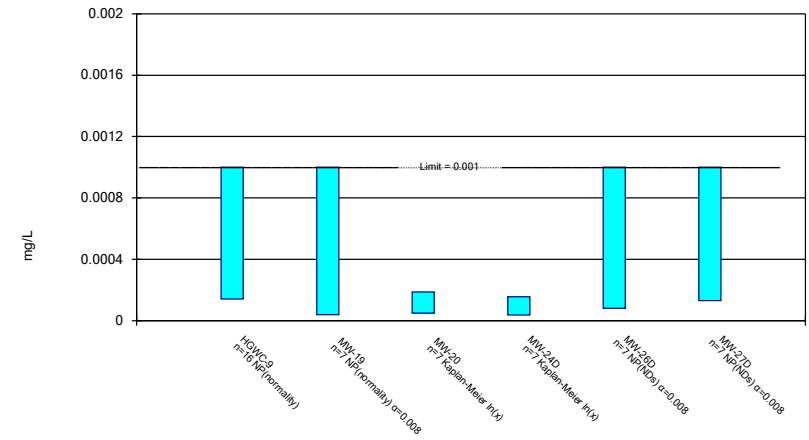
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 11/11/2021 3:32 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

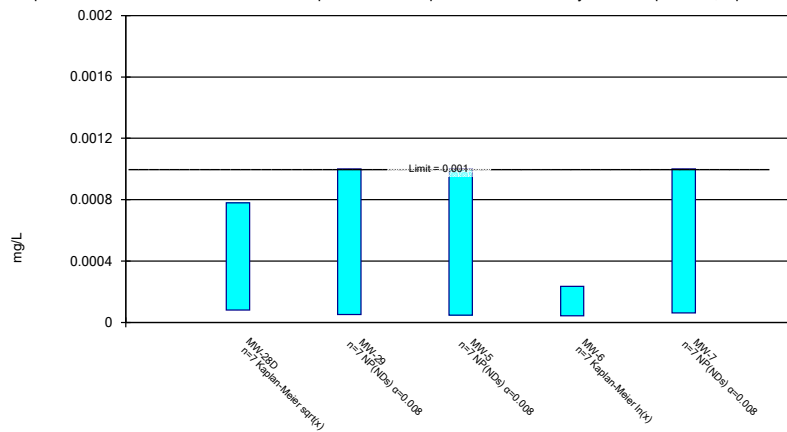
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 11/11/2021 3:32 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

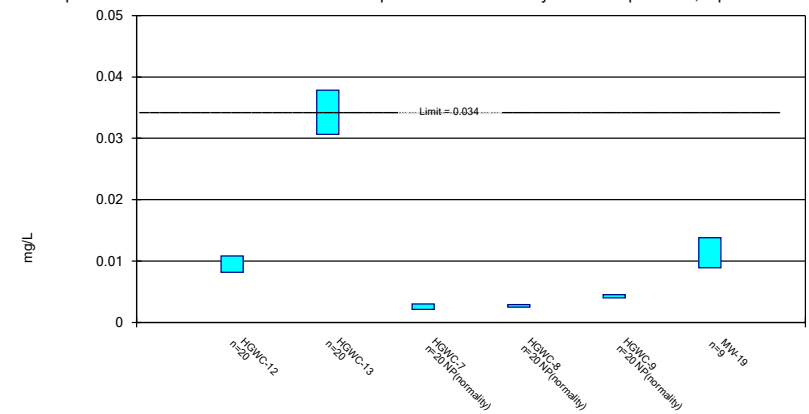
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 11/11/2021 3:32 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

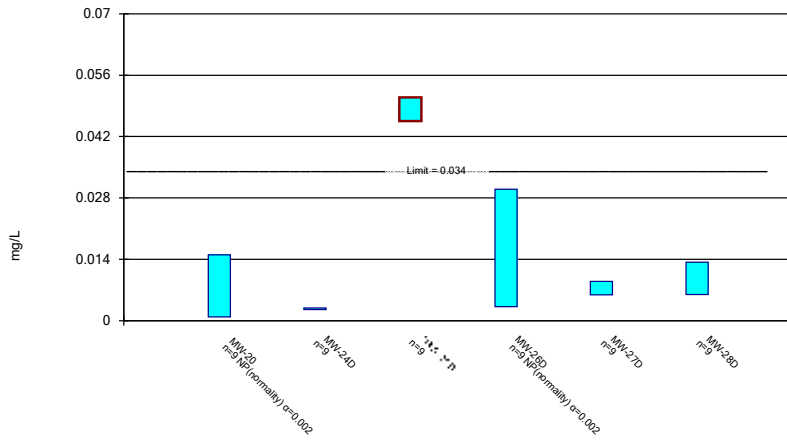
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 11/11/2021 3:32 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

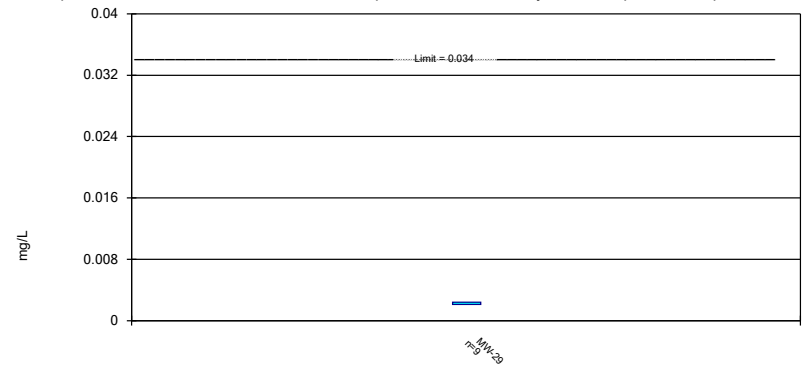
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 11/11/2021 3:32 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

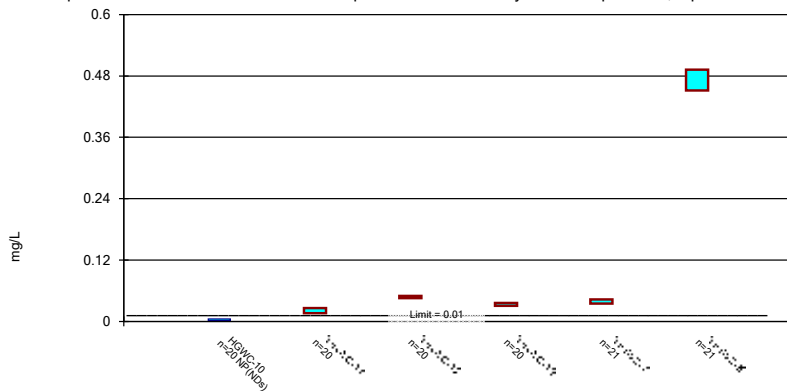
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 11/11/2021 3:32 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

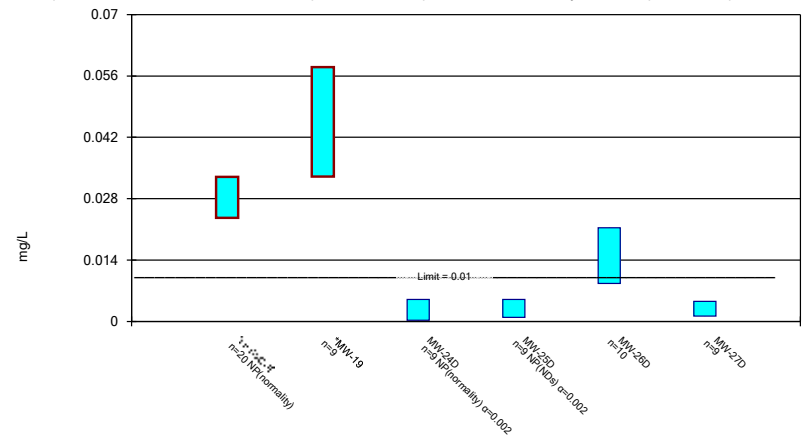
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 11/11/2021 3:32 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

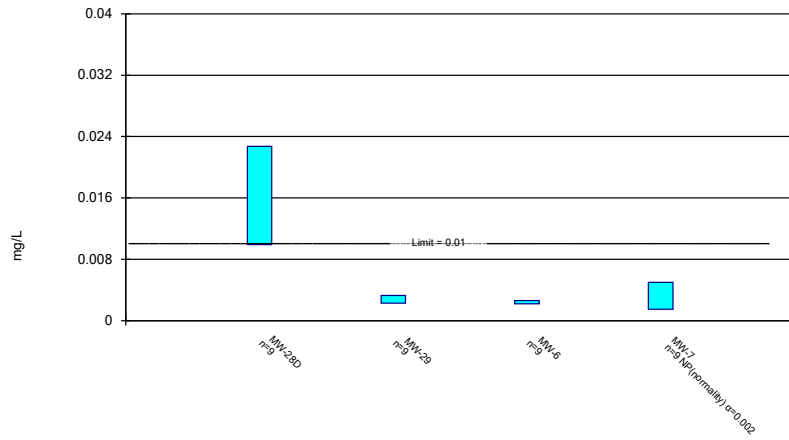
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 11/11/2021 3:32 PM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

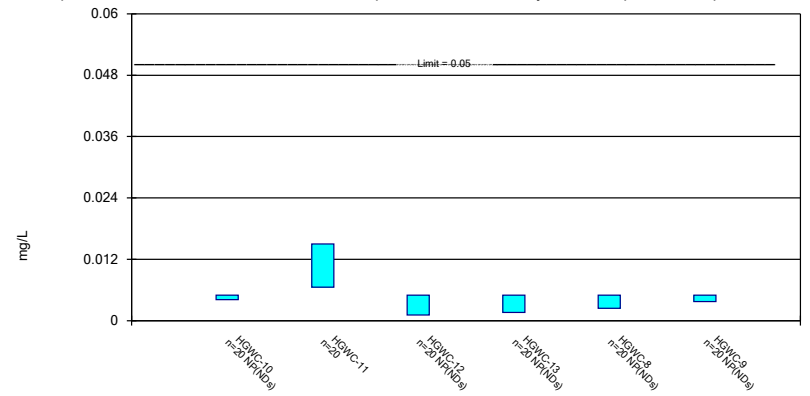
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 11/11/2021 3:32 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

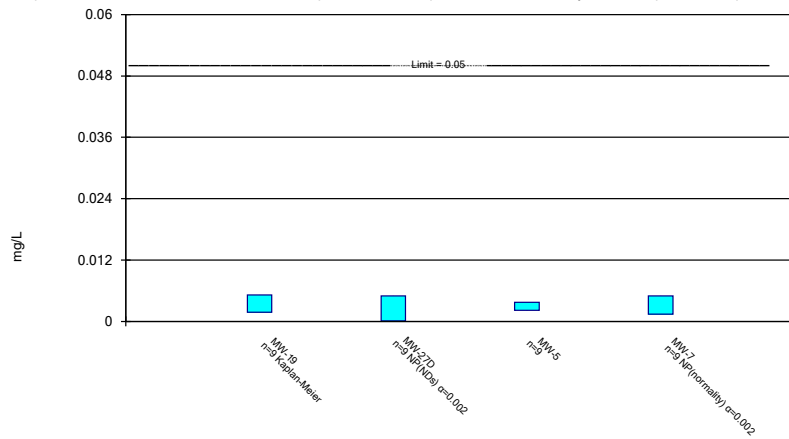
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 11/11/2021 3:32 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

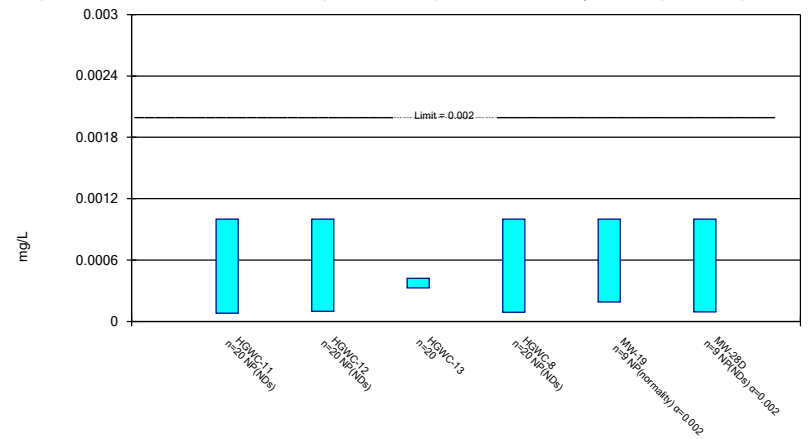
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 11/11/2021 3:32 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

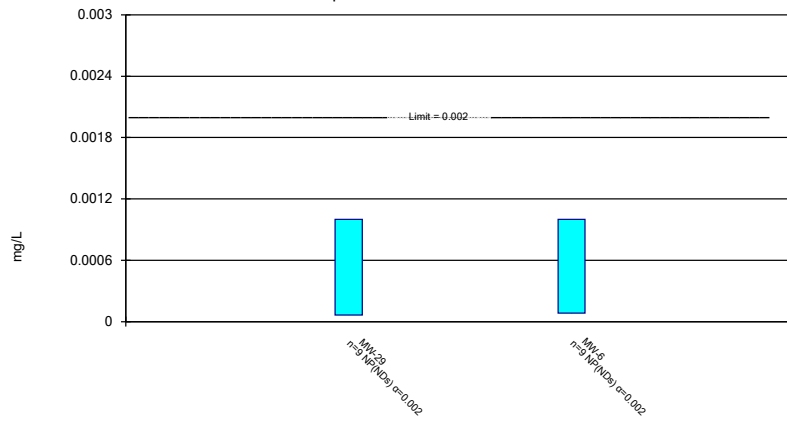
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 11/11/2021 3:32 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 11/11/2021 3:32 PM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

FIGURE J.

Federal Confidence Intervals - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/25/2021, 6:49 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	HGWC-13	0.4267	0.3553	0.01	Yes	20	0.06286	0	No	0.01	Param.
Lithium (mg/L)	MW-25D	0.05094	0.0455	0.04	Yes	9	0.002819	0	No	0.01	Param.
Molybdenum (mg/L)	HGWC-8	0.4921	0.4518	0.1	Yes	21	0.03653	0	No	0.01	Param.

Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/25/2021, 6:49 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Antimony (mg/L)	HGWC-10	0.003	0.00065	0.006	No	18	0.0005539	94.44	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-11	0.003	0.00038	0.006	No	18	0.0006175	94.44	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-13	0.003	0.00036	0.006	No	18	0.001312	61.11	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-7	0.003	0.0017	0.006	No	18	0.0006815	88.89	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-8	0.003	0.00064	0.006	No	18	0.0005563	94.44	No	0.01	NP (NDs)
Antimony (mg/L)	HGWC-9	0.003	0.00043	0.006	No	18	0.001001	83.33	No	0.01	NP (NDs)
Antimony (mg/L)	MW-24D	0.003	0.0017	0.006	No	9	0.0004333	88.89	No	0.002	NP (NDs)
Antimony (mg/L)	MW-26D	0.003	0.0013	0.006	No	9	0.0006205	77.78	No	0.002	NP (NDs)
Antimony (mg/L)	MW-27D	0.003	0.00016	0.006	No	9	0.00135	33.33	No	0.002	NP (normality)
Antimony (mg/L)	MW-28D	0.003	0.0019	0.006	No	9	0.0003667	88.89	No	0.002	NP (NDs)
Antimony (mg/L)	MW-29	0.003	0.00094	0.006	No	9	0.0006867	88.89	No	0.002	NP (NDs)
Antimony (mg/L)	MW-6	0.003	0.0014	0.006	No	9	0.0005333	88.89	No	0.002	NP (NDs)
Antimony (mg/L)	MW-7	0.003	0.00051	0.006	No	9	0.001041	55.56	No	0.002	NP (NDs)
Arsenic (mg/L)	HGWC-11	0.005	0.0017	0.01	No	20	0.001764	45	No	0.01	NP (normality)
Arsenic (mg/L)	HGWC-12	0.004509	0.003111	0.01	No	20	0.00123	10	No	0.01	Param.
Arsenic (mg/L)	HGWC-13	0.4267	0.3553	0.01	Yes	20	0.06286	0	No	0.01	Param.
Arsenic (mg/L)	HGWC-7	0.005	0.0019	0.01	No	20	0.0006932	95	No	0.01	NP (NDs)
Arsenic (mg/L)	HGWC-9	0.005	0.0008	0.01	No	20	0.001599	85	No	0.01	NP (NDs)
Arsenic (mg/L)	MW-19	0.005	0.00045	0.01	No	9	0.001517	88.89	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-20	0.005	0.00038	0.01	No	9	0.00196	66.67	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-25D	0.005	0.00075	0.01	No	9	0.002032	55.56	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-26D	0.005	0.0006	0.01	No	9	0.001897	77.78	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-27D	0.005	0.0002	0.01	No	9	0.002194	66.67	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-28D	0.005	0.0011	0.01	No	9	0.0013	88.89	No	0.002	NP (NDs)
Arsenic (mg/L)	MW-29	0.005	0.00037	0.01	No	9	0.001543	88.89	No	0.002	NP (NDs)
Barium (mg/L)	HGWC-10	0.08761	0.06522	2	No	20	0.01972	0	No	0.01	Param.
Barium (mg/L)	HGWC-11	0.05264	0.032	2	No	20	0.02019	0	sqrt(x)	0.01	Param.
Barium (mg/L)	HGWC-12	0.127	0.084	2	No	20	0.02089	0	No	0.01	NP (normality)
Barium (mg/L)	HGWC-13	0.09105	0.06791	2	No	20	0.02038	0	No	0.01	Param.
Barium (mg/L)	HGWC-7	0.07501	0.06859	2	No	20	0.005661	0	No	0.01	Param.
Barium (mg/L)	HGWC-8	0.07573	0.06317	2	No	20	0.01106	0	No	0.01	Param.
Barium (mg/L)	HGWC-9	0.1216	0.1056	2	No	20	0.01407	0	No	0.01	Param.
Barium (mg/L)	MW-19	0.06604	0.0484	2	No	9	0.009135	0	No	0.01	Param.
Barium (mg/L)	MW-20	0.09679	0.08499	2	No	9	0.006112	0	No	0.01	Param.
Barium (mg/L)	MW-24D	0.12	0.043	2	No	9	0.02374	0	No	0.002	NP (normality)
Barium (mg/L)	MW-25D	0.5115	0.3929	2	No	9	0.0614	0	No	0.01	Param.
Barium (mg/L)	MW-26D	0.135	0.08209	2	No	9	0.02741	0	No	0.01	Param.
Barium (mg/L)	MW-27D	1.5	0.95	2	No	9	0.1746	0	No	0.002	NP (normality)
Barium (mg/L)	MW-28D	0.7012	0.2255	2	No	9	0.2464	0	No	0.01	Param.
Barium (mg/L)	MW-29	0.08543	0.07568	2	No	9	0.005053	0	No	0.01	Param.
Barium (mg/L)	MW-5	0.05145	0.04411	2	No	9	0.003801	0	No	0.01	Param.
Barium (mg/L)	MW-6	0.09297	0.08147	2	No	9	0.005954	0	No	0.01	Param.
Barium (mg/L)	MW-7	0.06362	0.04816	2	No	9	0.008007	0	No	0.01	Param.
Beryllium (mg/L)	HGWC-11	0.0005	0.0001	0.004	No	18	0.0001948	61.11	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-13	0.0005	0.000093	0.004	No	18	0.000209	55.56	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-7	0.0005	0.00019	0.004	No	18	0.0001489	83.33	No	0.01	NP (NDs)
Beryllium (mg/L)	HGWC-8	0.0005	0.000087	0.004	No	18	0.0001927	72.22	No	0.01	NP (NDs)
Beryllium (mg/L)	MW-19	0.0005	0.000058	0.004	No	9	0.0001473	88.89	No	0.002	NP (NDs)
Beryllium (mg/L)	MW-28D	0.0005	0.000048	0.004	No	9	0.0002112	66.67	No	0.002	NP (NDs)
Beryllium (mg/L)	MW-7	0.0005	0.000051	0.004	No	9	0.0001497	88.89	No	0.002	NP (NDs)
Cadmium (mg/L)	HGWC-10	0.0005	0.0001	0.005	No	18	0.0001937	61.11	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-11	0.0005	0.0001	0.005	No	18	0.0001539	83.33	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-12	0.0005	0.0003	0.005	No	18	0.0001398	77.78	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-7	0.0005	0.0002	0.005	No	18	0.0001406	77.78	No	0.01	NP (NDs)
Cadmium (mg/L)	HGWC-8	0.00032	0.00017	0.005	No	18	0.0003607	5.556	No	0.01	NP (normality)
Cadmium (mg/L)	HGWC-9	0.0005	0.0002	0.005	No	18	0.0001463	83.33	No	0.01	NP (NDs)
Cadmium (mg/L)	MW-19	0.0002432	0.0001534	0.005	No	9	0.00014	22.22	x^(1/3)	0.01	Param.
Chromium (mg/L)	HGWC-10	0.02	0.005	0.1	No	18	0.003536	94.44	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-11	0.005	0.00061	0.1	No	18	0.001471	88.89	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-12	0.005	0.0025	0.1	No	18	0.001479	83.33	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-13	0.005	0.00059	0.1	No	18	0.00172	83.33	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-7	0.071	0.0016	0.1	No	18	0.01591	66.67	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-8	0.005	0.0015	0.1	No	18	0.001772	77.78	No	0.01	NP (NDs)
Chromium (mg/L)	HGWC-9	0.005	0.00067	0.1	No	18	0.001425	88.89	No	0.01	NP (NDs)
Chromium (mg/L)	MW-19	0.005	0.00047	0.1	No	9	0.002138	44.44	No	0.002	NP (normality)
Chromium (mg/L)	MW-20	0.005	0.00051	0.1	No	9	0.002184	66.67	No	0.002	NP (NDs)
Chromium (mg/L)	MW-24D	0.005	0.00042	0.1	No	9	0.001767	77.78	No	0.002	NP (NDs)
Chromium (mg/L)	MW-25D	0.005	0.00061	0.1	No	9	0.001463	88.89	No	0.002	NP (NDs)

Federal Confidence Intervals - All Results

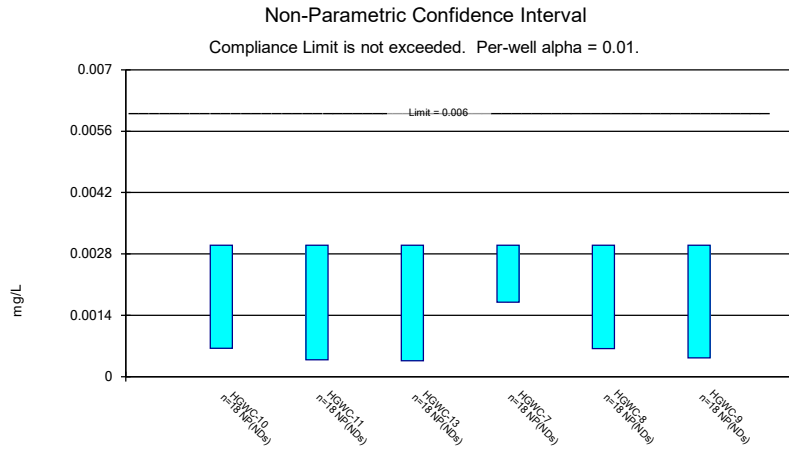
Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/25/2021, 6:49 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Chromium (mg/L)	MW-26D	0.005	0.00076	0.1	No	9	0.001978	44.44	No	0.002	NP (normality)
Chromium (mg/L)	MW-27D	0.005	0.0007	0.1	No	9	0.00187	77.78	No	0.002	NP (NDs)
Chromium (mg/L)	MW-28D	0.005	0.00078	0.1	No	9	0.00203	44.44	No	0.002	NP (normality)
Chromium (mg/L)	MW-29	0.005	0.001	0.1	No	9	0.001333	88.89	No	0.002	NP (NDs)
Chromium (mg/L)	MW-5	0.004351	0.00216	0.1	No	9	0.001135	0	No	0.01	Param.
Chromium (mg/L)	MW-6	0.005	0.00044	0.1	No	9	0.001978	77.78	No	0.002	NP (NDs)
Chromium (mg/L)	MW-7	0.005	0.0013	0.1	No	9	0.001469	22.22	No	0.002	NP (normality)
Cobalt (mg/L)	HGWC-10	0.005	0.0007	0.038	No	18	0.002058	66.67	No	0.01	NP (NDs)
Cobalt (mg/L)	HGWC-11	0.005	0.00098	0.038	No	18	0.001751	33.33	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-12	0.0018	0.0012	0.038	No	18	0.001186	11.11	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-13	0.004154	0.002647	0.038	No	18	0.001245	5.556	No	0.01	Param.
Cobalt (mg/L)	HGWC-7	0.0026	0.00065	0.038	No	18	0.001654	16.67	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-8	0.0023	0.0019	0.038	No	18	0.0007395	5.556	No	0.01	NP (normality)
Cobalt (mg/L)	HGWC-9	0.0011	0.00053	0.038	No	18	0.001428	11.11	No	0.01	NP (normality)
Cobalt (mg/L)	MW-19	0.0435	0.03028	0.038	No	9	0.006846	0	No	0.01	Param.
Cobalt (mg/L)	MW-20	0.005	0.0011	0.038	No	9	0.0013	88.89	No	0.002	NP (NDs)
Cobalt (mg/L)	MW-24D	0.005	0.00025	0.038	No	9	0.002192	66.67	No	0.002	NP (NDs)
Cobalt (mg/L)	MW-26D	0.005	0.0003	0.038	No	9	0.002407	44.44	No	0.002	NP (normality)
Cobalt (mg/L)	MW-27D	0.005	0.000091	0.038	No	9	0.002345	66.67	No	0.002	NP (NDs)
Cobalt (mg/L)	MW-28D	0.005	0.00093	0.038	No	9	0.001357	88.89	No	0.002	NP (NDs)
Cobalt (mg/L)	MW-29	0.001333	0.0006621	0.038	No	9	0.0003477	0	No	0.01	Param.
Cobalt (mg/L)	MW-6	0.005	0.00036	0.038	No	9	0.001978	22.22	No	0.002	NP (normality)
Combined Radium 226 + 228 (pCi/L)	HGWC-10	1.111	0.5962	5	No	20	0.453	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-11	1.209	0.6749	5	No	20	0.4703	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-12	1.089	0.5679	5	No	20	0.4592	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-13	1.037	0.6055	5	No	20	0.3795	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-7	0.9458	0.4368	5	No	20	0.4986	0	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-8	0.9917	0.6954	5	No	20	0.2609	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	HGWC-9	0.9483	0.5538	5	No	20	0.3474	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-19	1.114	0.4725	5	No	9	0.332	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-20	1.115	0.31	5	No	9	0.417	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-24D	0.7621	0.1304	5	No	9	0.3823	0	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-25D	1.247	0.7658	5	No	9	0.2491	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-26D	1.165	0.1241	5	No	9	0.539	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-27D	1.826	0.7882	5	No	9	0.5374	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-28D	1.367	0.4851	5	No	9	0.4566	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-29	1.06	0.2667	5	No	9	0.4108	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-5	1.072	0.4887	5	No	9	0.3021	0	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	MW-6	2.07	0.198	5	No	9	0.5053	0	No	0.002	NP (normality)
Combined Radium 226 + 228 (pCi/L)	MW-7	1.317	0.5092	5	No	9	0.4184	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-10	0.2118	0.08062	4	No	21	0.1403	19.05	sqrt(x)	0.01	Param.
Fluoride (mg/L)	HGWC-11	0.4436	0.2643	4	No	21	0.1625	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-12	0.394	0.1856	4	No	21	0.2485	4.762	x^(1/3)	0.01	Param.
Fluoride (mg/L)	HGWC-13	0.7128	0.5033	4	No	21	0.1899	0	No	0.01	Param.
Fluoride (mg/L)	HGWC-7	0.17	0.084	4	No	22	0.1138	9.091	No	0.01	NP (normality)
Fluoride (mg/L)	HGWC-8	0.6378	0.4818	4	No	22	0.1739	0	ln(x)	0.01	Param.
Fluoride (mg/L)	HGWC-9	0.2549	0.0956	4	No	21	0.1598	9.524	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-19	0.3219	0.1032	4	No	9	0.1399	0	x^(1/3)	0.01	Param.
Fluoride (mg/L)	MW-20	0.1	0.072	4	No	9	0.009333	88.89	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-24D	0.1031	0.04171	4	No	9	0.03986	44.44	sqrt(x)	0.01	Param.
Fluoride (mg/L)	MW-25D	2.2	1.4	4	No	9	0.2291	0	No	0.002	NP (normality)
Fluoride (mg/L)	MW-26D	0.1112	0.04811	4	No	9	0.04423	11.11	ln(x)	0.01	Param.
Fluoride (mg/L)	MW-27D	0.42	0.22	4	No	9	0.05979	0	No	0.002	NP (normality)
Fluoride (mg/L)	MW-28D	0.2555	0.1445	4	No	9	0.05745	0	No	0.01	Param.
Fluoride (mg/L)	MW-29	0.18	0.045	4	No	9	0.03592	66.67	No	0.002	NP (NDs)
Fluoride (mg/L)	MW-5	0.09166	0.05606	4	No	9	0.02074	22.22	No	0.01	Param.
Fluoride (mg/L)	MW-6	0.19	0.055	4	No	9	0.05586	22.22	No	0.002	NP (normality)
Fluoride (mg/L)	MW-7	0.17	0.069	4	No	9	0.02667	77.78	No	0.002	NP (NDs)
Lead (mg/L)	HGWC-10	0.001	0.00005	0.015	No	16	0.0002375	93.75	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-11	0.001	0.000099	0.015	No	16	0.0004165	62.5	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-12	0.001	0.000089	0.015	No	16	0.0004162	68.75	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-13	0.001	0.00014	0.015	No	16	0.0004348	62.5	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-7	0.001	0.00009	0.015	No	16	0.0004545	43.75	No	0.01	NP (normality)
Lead (mg/L)	HGWC-8	0.001	0.00013	0.015	No	16	0.000389	75	No	0.01	NP (NDs)
Lead (mg/L)	HGWC-9	0.001	0.00014	0.015	No	16	0.0004341	50	No	0.01	NP (normality)
Lead (mg/L)	MW-19	0.001	0.000038	0.015	No	7	0.0004944	42.86	No	0.008	NP (normality)
Lead (mg/L)	MW-20	0.0001863	0.00004985	0.015	No	7	0.0004775	42.86	ln(x)	0.01	Param.
Lead (mg/L)	MW-24D	0.0001552	0.00003672	0.015	No	7	0.0004465	28.57	ln(x)	0.01	Param.

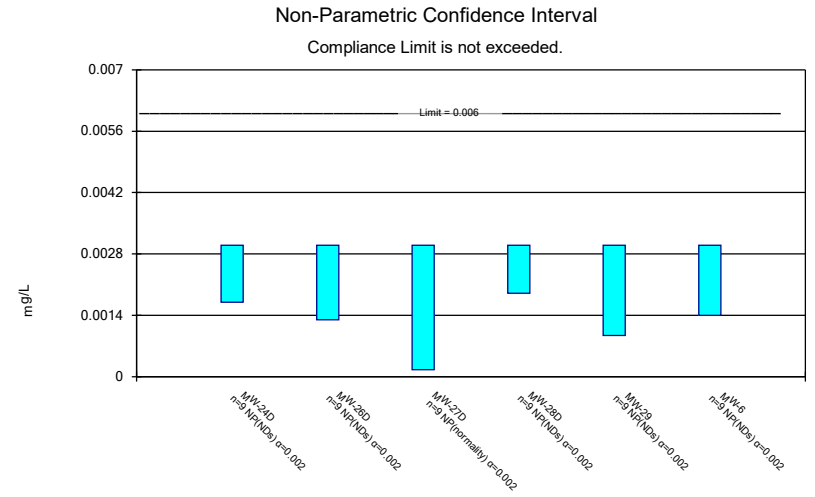
Federal Confidence Intervals - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/25/2021, 6:49 AM

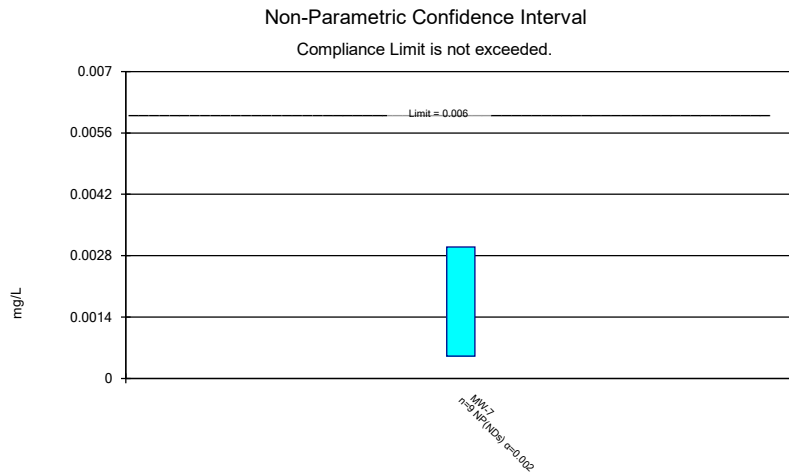
Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Std. Dev.	%NDs	Transform	Alpha	Method
Lead (mg/L)	MW-26D	0.001	0.00008	0.015	No	7	0.0004441	71.43	No	0.008	NP (NDs)
Lead (mg/L)	MW-27D	0.001	0.00013	0.015	No	7	0.0003618	71.43	No	0.008	NP (NDs)
Lead (mg/L)	MW-28D	0.0007798	0.00008112	0.015	No	7	0.0004152	28.57	sqrt(x)	0.01	Param.
Lead (mg/L)	MW-29	0.001	0.000052	0.015	No	7	0.0004899	57.14	No	0.008	NP (NDs)
Lead (mg/L)	MW-5	0.001	0.000047	0.015	No	7	0.0003602	85.71	No	0.008	NP (NDs)
Lead (mg/L)	MW-6	0.0002356	0.00004291	0.015	No	7	0.0004713	42.86	ln(x)	0.01	Param.
Lead (mg/L)	MW-7	0.001	0.000062	0.015	No	7	0.0003545	85.71	No	0.008	NP (NDs)
Lithium (mg/L)	HGWC-12	0.01082	0.008191	0.04	No	20	0.002314	0	No	0.01	Param.
Lithium (mg/L)	HGWC-13	0.03785	0.03067	0.04	No	20	0.006315	0	No	0.01	Param.
Lithium (mg/L)	HGWC-7	0.003	0.0021	0.04	No	20	0.00283	5	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-8	0.0029	0.0025	0.04	No	20	0.002763	5	No	0.01	NP (normality)
Lithium (mg/L)	HGWC-9	0.0045	0.004	0.04	No	20	0.002457	5	No	0.01	NP (normality)
Lithium (mg/L)	MW-19	0.01378	0.008886	0.04	No	9	0.002535	0	No	0.01	Param.
Lithium (mg/L)	MW-20	0.015	0.00082	0.04	No	9	0.006108	22.22	No	0.002	NP (normality)
Lithium (mg/L)	MW-24D	0.002888	0.002557	0.04	No	9	0.0001716	0	No	0.01	Param.
Lithium (mg/L)	MW-25D	0.05094	0.0455	0.04	Yes	9	0.002819	0	No	0.01	Param.
Lithium (mg/L)	MW-26D	0.03	0.0032	0.04	No	9	0.008797	0	No	0.002	NP (normality)
Lithium (mg/L)	MW-27D	0.008967	0.005855	0.04	No	9	0.001611	0	No	0.01	Param.
Lithium (mg/L)	MW-28D	0.01335	0.005939	0.04	No	9	0.003838	0	No	0.01	Param.
Lithium (mg/L)	MW-29	0.002401	0.00211	0.04	No	9	0.0001509	0	No	0.01	Param.
Molybdenum (mg/L)	HGWC-10	0.005	0.0014	0.1	No	20	0.001849	60	No	0.01	NP (NDs)
Molybdenum (mg/L)	HGWC-11	0.02626	0.01574	0.1	No	20	0.009269	0	No	0.01	Param.
Molybdenum (mg/L)	HGWC-12	0.04956	0.04565	0.1	No	20	0.003445	0	No	0.01	Param.
Molybdenum (mg/L)	HGWC-13	0.03572	0.03021	0.1	No	20	0.004847	0	No	0.01	Param.
Molybdenum (mg/L)	HGWC-7	0.0429	0.03482	0.1	No	21	0.007318	0	No	0.01	Param.
Molybdenum (mg/L)	HGWC-8	0.4921	0.4518	0.1	Yes	21	0.03653	0	No	0.01	Param.
Molybdenum (mg/L)	HGWC-9	0.033	0.0236	0.1	No	20	0.1006	0	No	0.01	NP (normality)
Molybdenum (mg/L)	MW-19	0.05804	0.03307	0.1	No	9	0.01293	0	No	0.01	Param.
Molybdenum (mg/L)	MW-24D	0.005	0.00027	0.1	No	9	0.002215	44.44	No	0.002	NP (normality)
Molybdenum (mg/L)	MW-25D	0.005	0.00094	0.1	No	9	0.001545	77.78	No	0.002	NP (NDs)
Molybdenum (mg/L)	MW-26D	0.02137	0.008627	0.1	No	10	0.007143	10	No	0.01	Param.
Molybdenum (mg/L)	MW-27D	0.004551	0.001204	0.1	No	9	0.001733	11.11	No	0.01	Param.
Molybdenum (mg/L)	MW-28D	0.02271	0.009909	0.1	No	9	0.006631	0	No	0.01	Param.
Molybdenum (mg/L)	MW-29	0.003271	0.002263	0.1	No	9	0.000522	0	No	0.01	Param.
Molybdenum (mg/L)	MW-6	0.002621	0.002179	0.1	No	9	0.0002291	0	No	0.01	Param.
Molybdenum (mg/L)	MW-7	0.005	0.0015	0.1	No	9	0.001629	44.44	No	0.002	NP (normality)
Selenium (mg/L)	HGWC-10	0.005	0.0041	0.05	No	20	0.001184	75	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-11	0.015	0.006546	0.05	No	20	0.007448	0	No	0.01	Param.
Selenium (mg/L)	HGWC-12	0.005	0.0011	0.05	No	20	0.0008721	95	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-13	0.005	0.0016	0.05	No	20	0.001286	90	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-8	0.005	0.0024	0.05	No	20	0.0005814	95	No	0.01	NP (NDs)
Selenium (mg/L)	HGWC-9	0.005	0.0037	0.05	No	20	0.0002907	95	No	0.01	NP (NDs)
Selenium (mg/L)	MW-19	0.00518	0.001815	0.05	No	9	0.00181	22.22	No	0.01	Param.
Selenium (mg/L)	MW-27D	0.005	0.00012	0.05	No	9	0.001627	88.89	No	0.002	NP (NDs)
Selenium (mg/L)	MW-5	0.003741	0.002193	0.05	No	9	0.0008016	0	No	0.01	Param.
Selenium (mg/L)	MW-7	0.005	0.0014	0.05	No	9	0.001716	44.44	No	0.002	NP (normality)
Thallium (mg/L)	HGWC-11	0.001	0.00008	0.002	No	20	0.0002832	90	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-12	0.001	0.0001	0.002	No	20	0.000422	70	No	0.01	NP (NDs)
Thallium (mg/L)	HGWC-13	0.0004208	0.000328	0.002	No	20	0.00008178	0	No	0.01	Param.
Thallium (mg/L)	HGWC-8	0.001	0.00009	0.002	No	20	0.000432	70	No	0.01	NP (NDs)
Thallium (mg/L)	MW-19	0.001	0.00019	0.002	No	9	0.0003308	22.22	No	0.002	NP (normality)
Thallium (mg/L)	MW-28D	0.001	0.000092	0.002	No	9	0.0003027	88.89	No	0.002	NP (NDs)
Thallium (mg/L)	MW-29	0.001	0.000064	0.002	No	9	0.000312	88.89	No	0.002	NP (NDs)
Thallium (mg/L)	MW-6	0.001	0.000082	0.002	No	9	0.000306	88.89	No	0.002	NP (NDs)



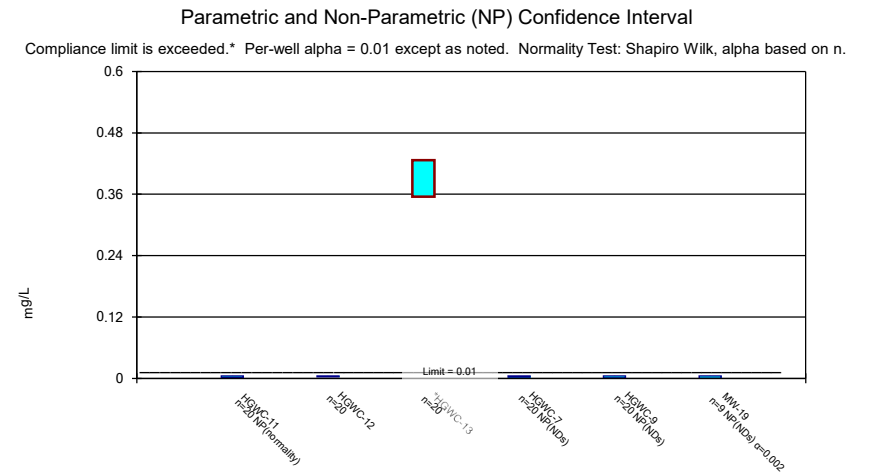
Constituent: Antimony Analysis Run 10/25/2021 6:46 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1



Constituent: Antimony Analysis Run 10/25/2021 6:46 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1



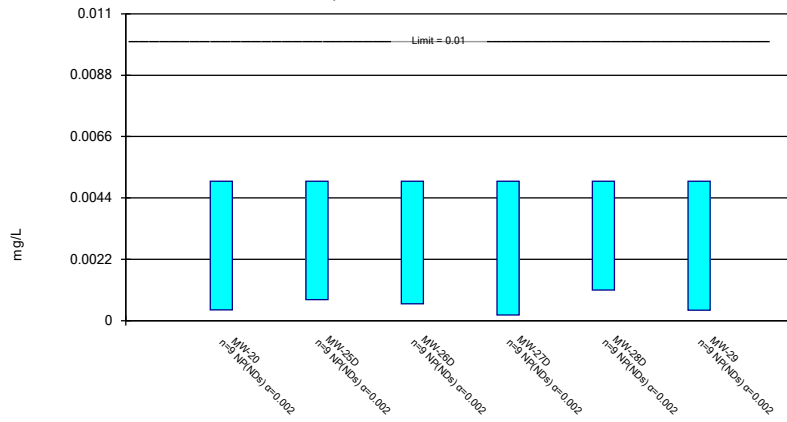
Constituent: Antimony Analysis Run 10/25/2021 6:46 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1



Constituent: Arsenic Analysis Run 10/25/2021 6:46 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

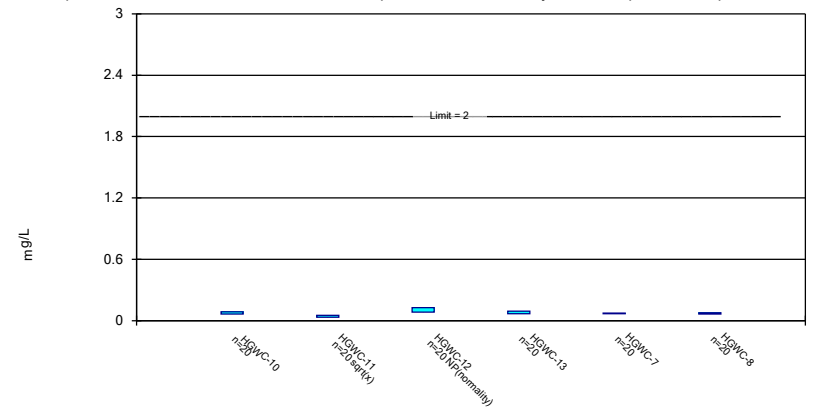
Compliance Limit is not exceeded.



Constituent: Arsenic Analysis Run 10/25/2021 6:46 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

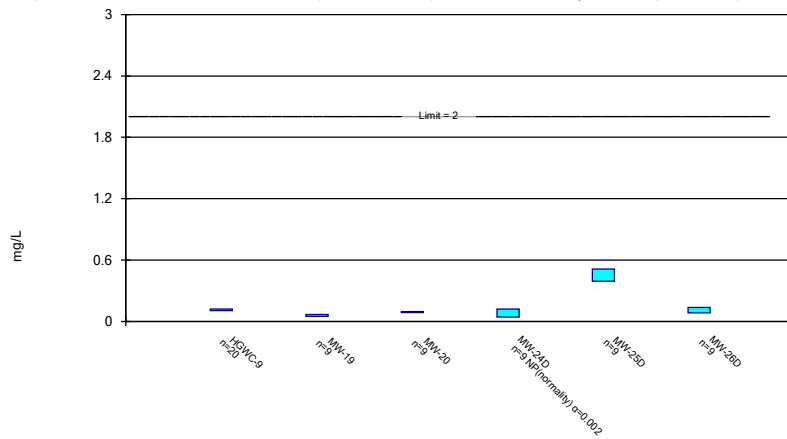
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 10/25/2021 6:46 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

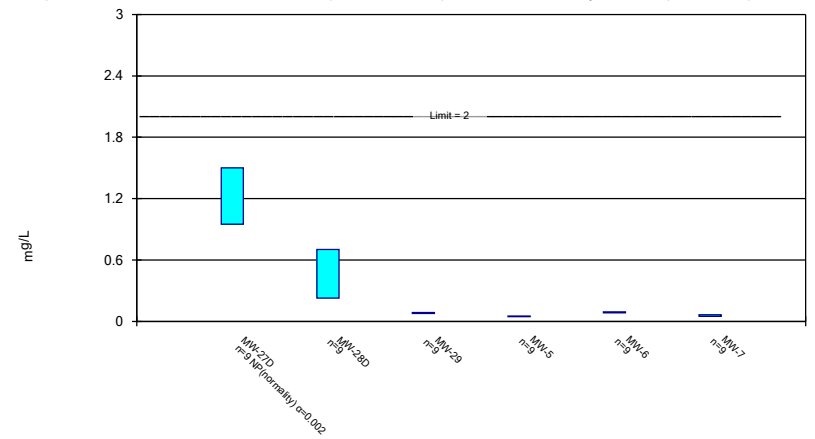
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 10/25/2021 6:46 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

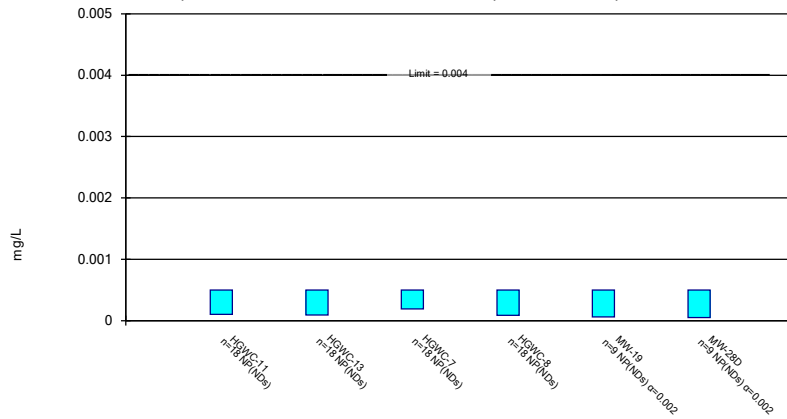
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

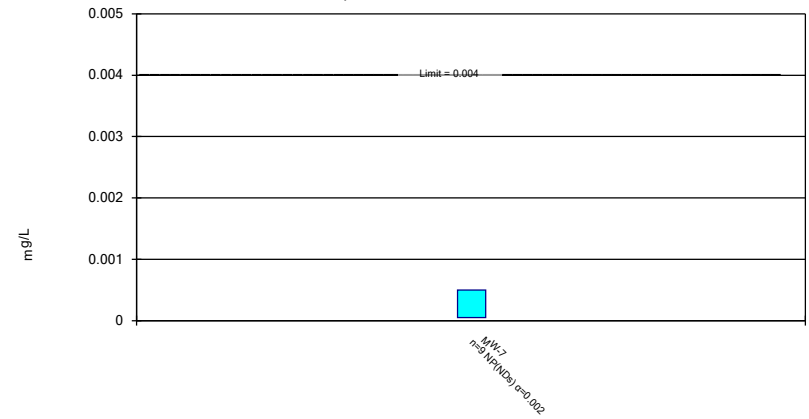
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Beryllium Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

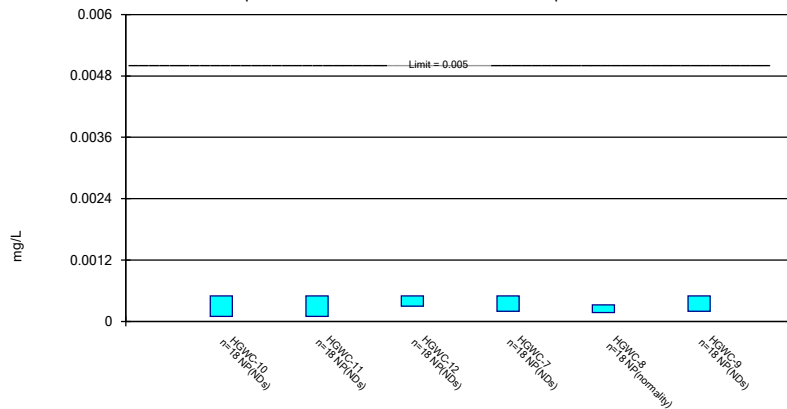
Compliance Limit is not exceeded.



Constituent: Beryllium Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

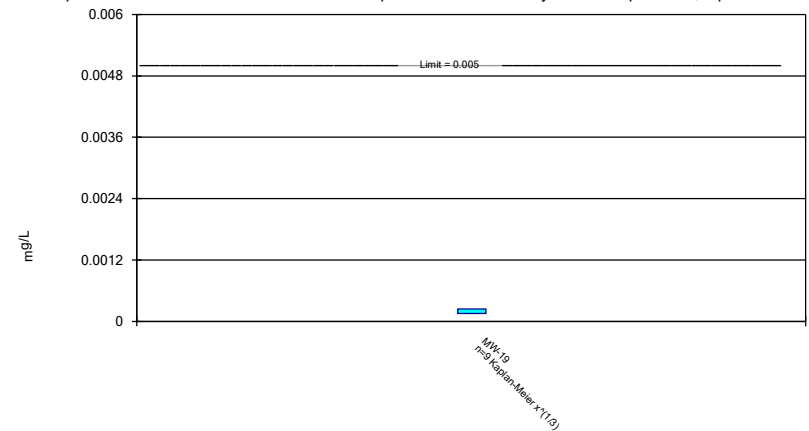
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Cadmium Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

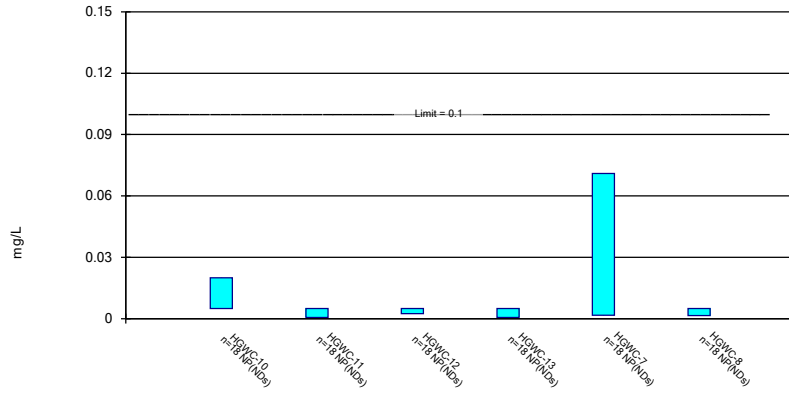
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

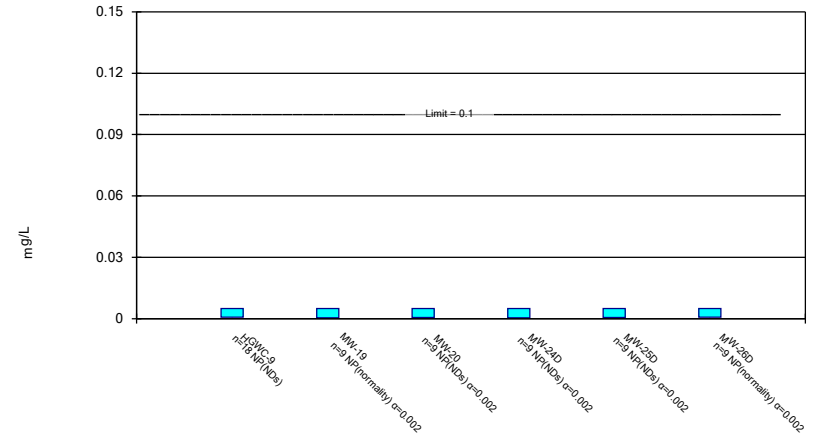
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

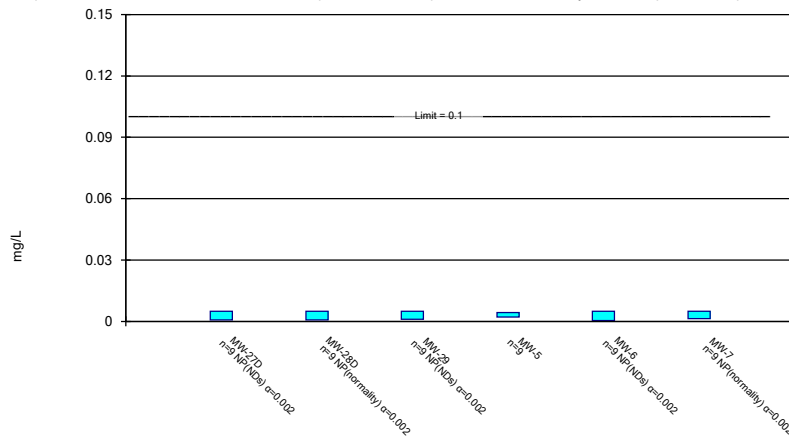
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Chromium Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

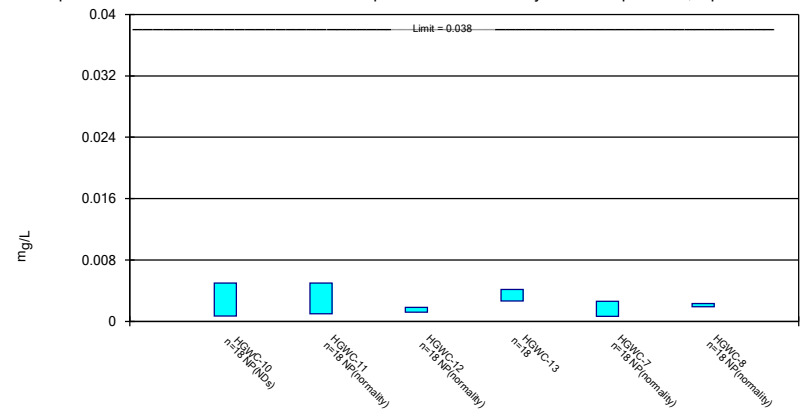
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

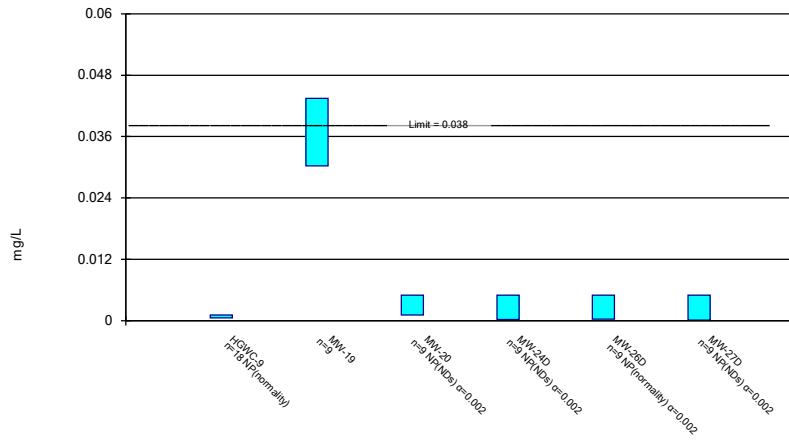
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

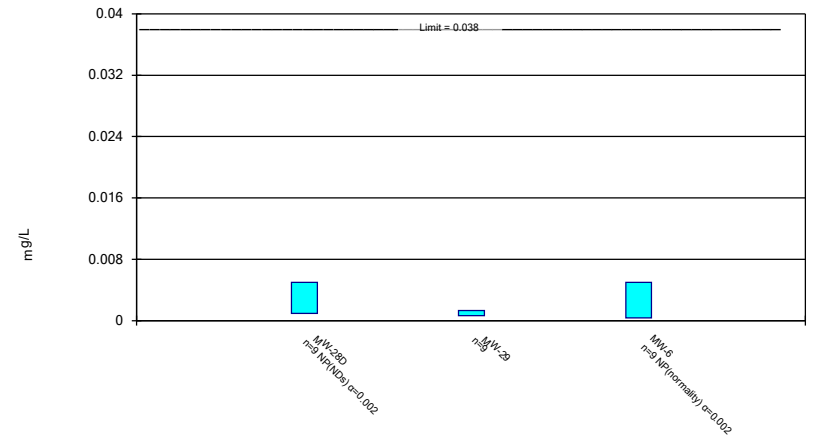
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

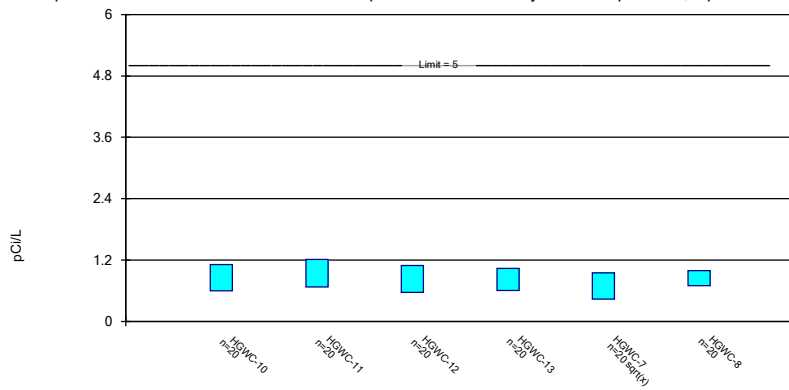
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

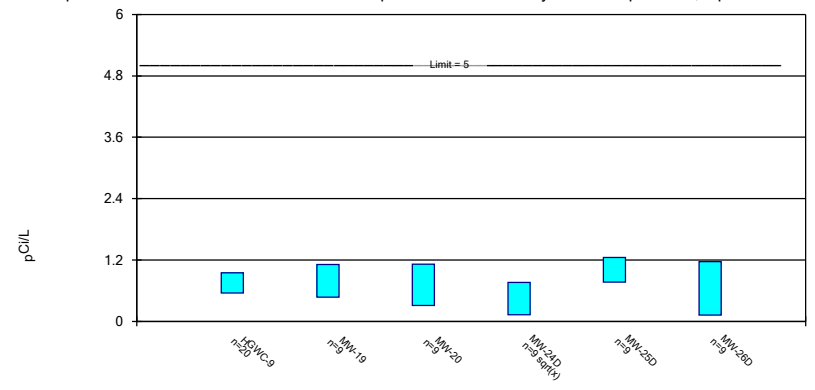
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

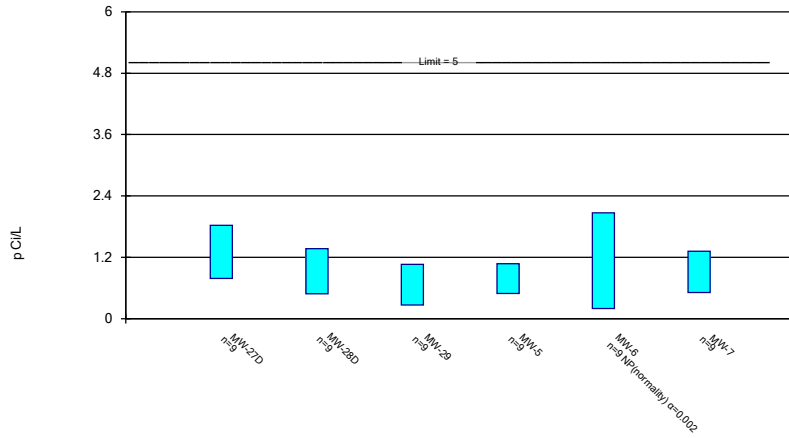
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

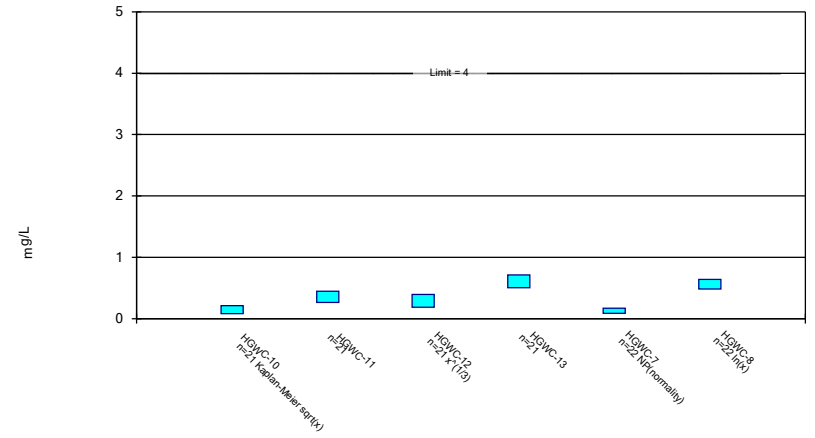
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

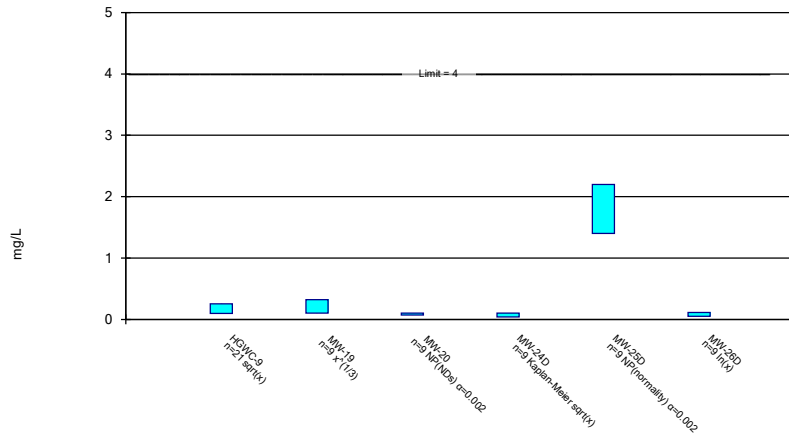
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

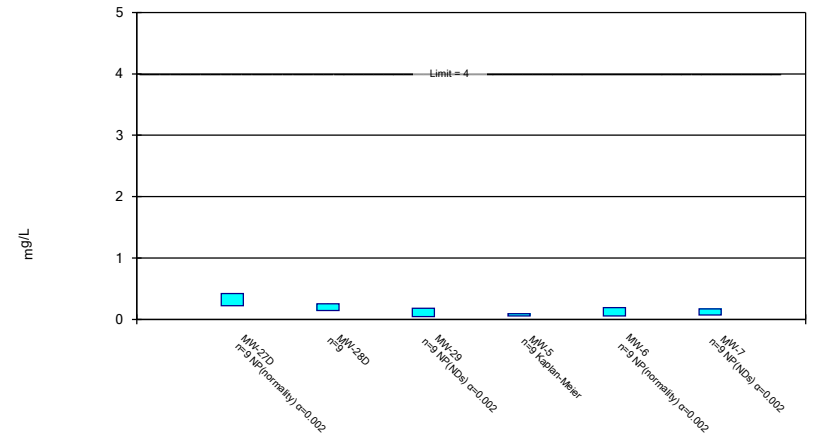
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

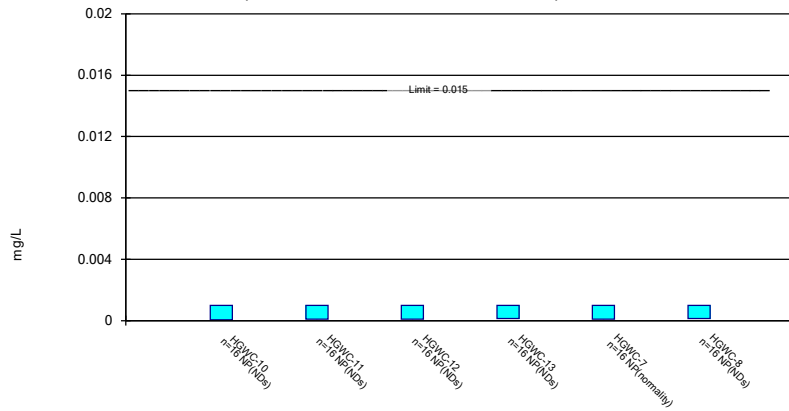
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

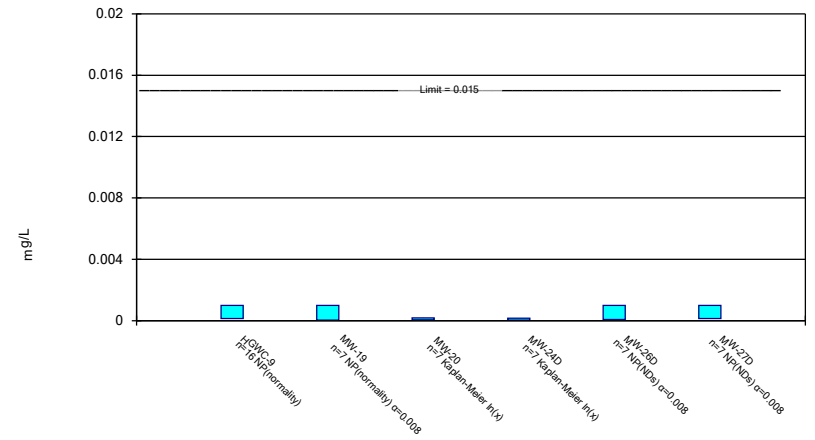
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 10/25/2021 6:47 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

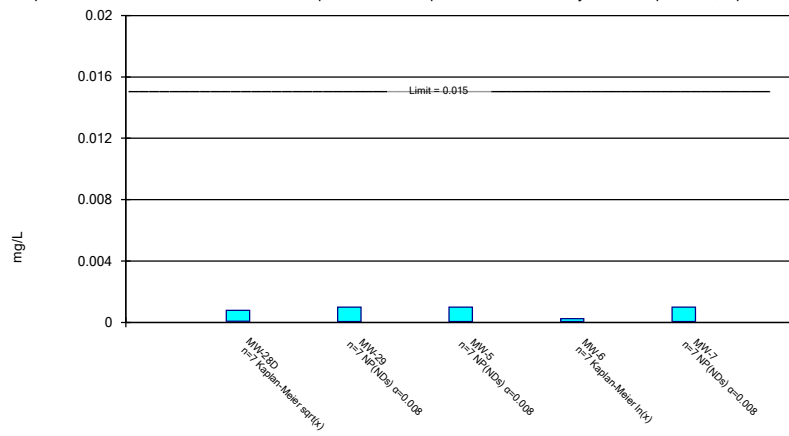
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 10/25/2021 6:47 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

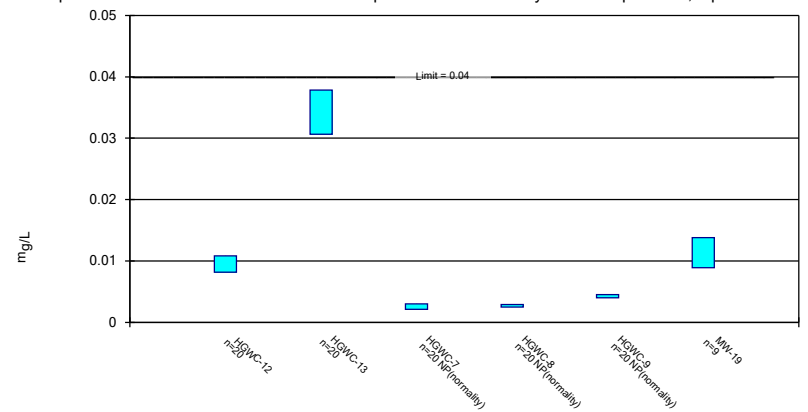
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 10/25/2021 6:47 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

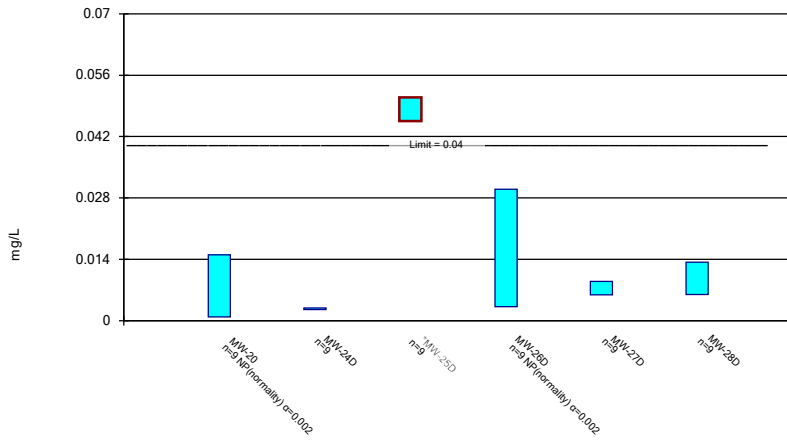
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 10/25/2021 6:47 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

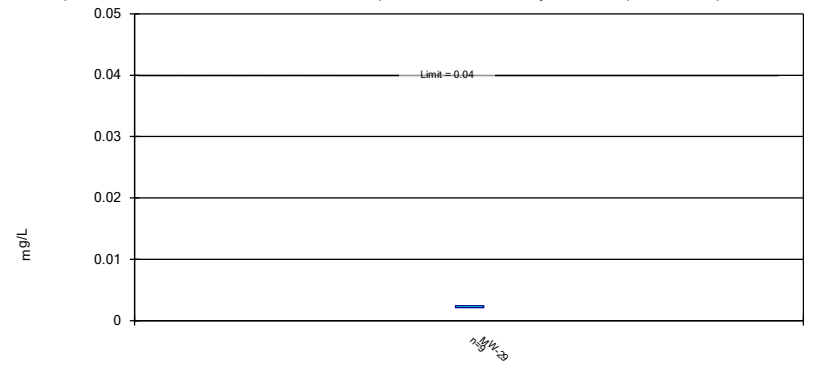
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 10/25/2021 6:47 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric Confidence Interval

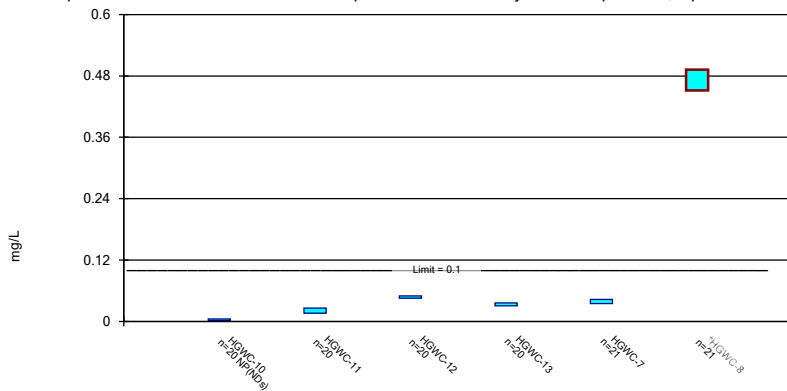
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 10/25/2021 6:47 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

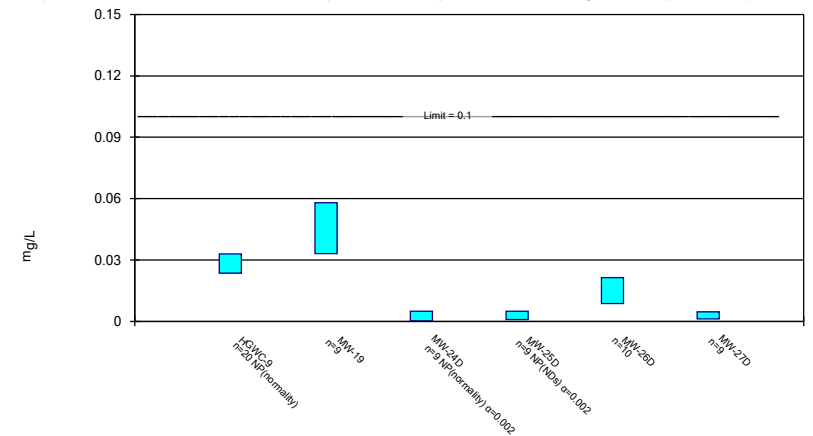
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 10/25/2021 6:47 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

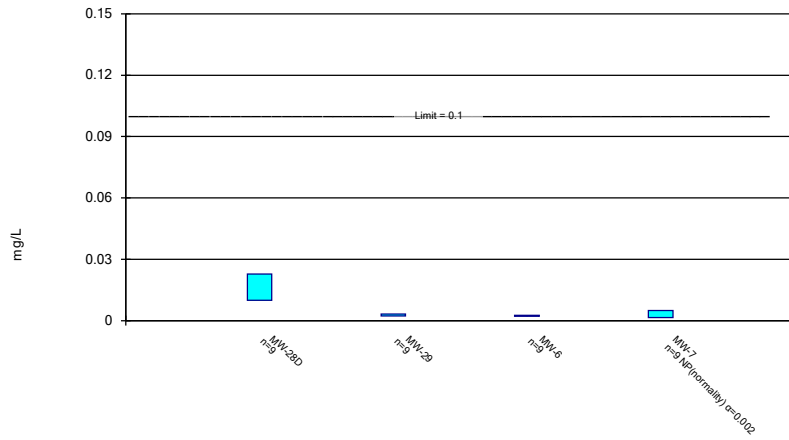
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 10/25/2021 6:47 AM View: Appendix IV
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

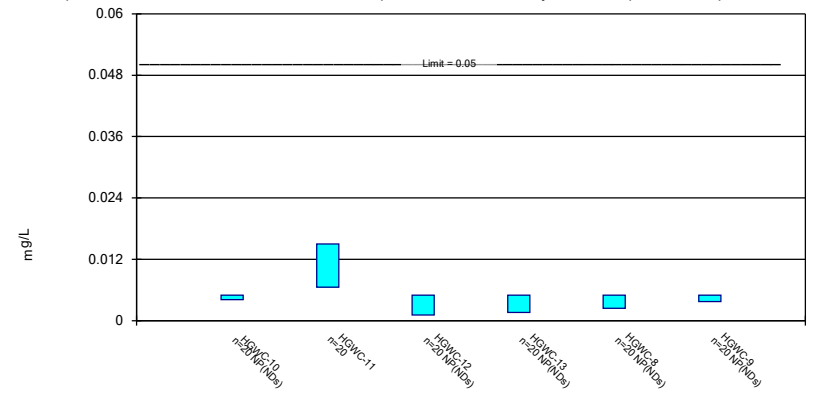
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

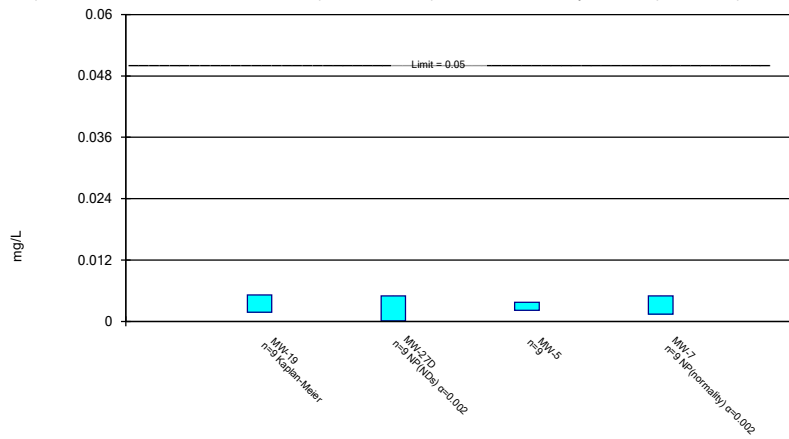
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

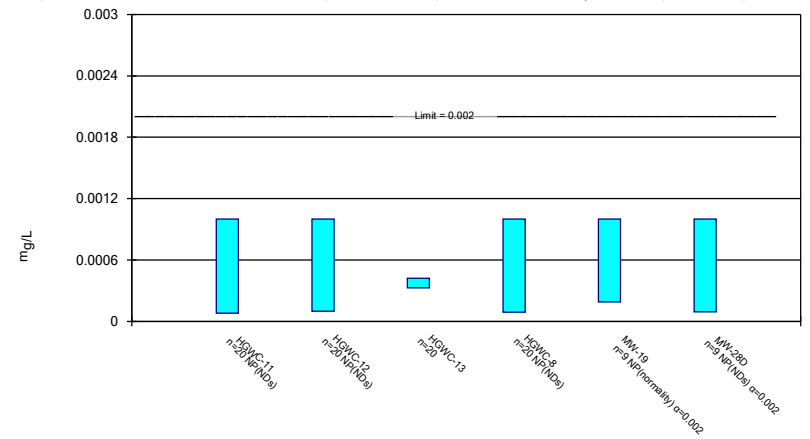
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Parametric and Non-Parametric (NP) Confidence Interval

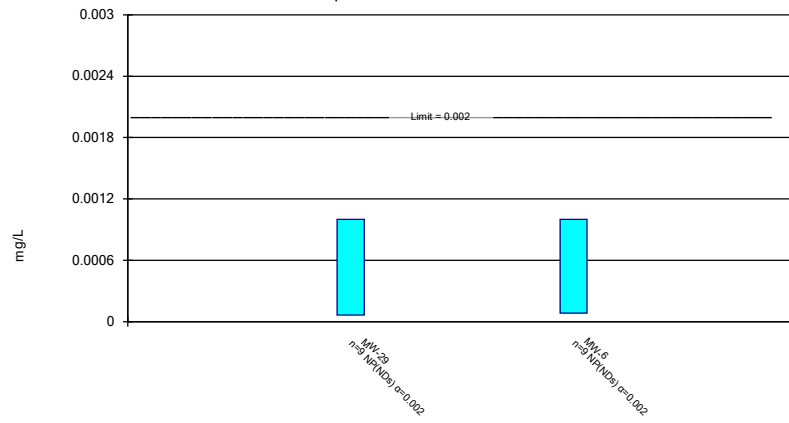
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Thallium Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 10/25/2021 6:47 AM View: Appendix IV
Plant Hammond Client: Southern Company Data: Hammond AP-1

FIGURE K.

Appendix IV Trend Test Summary - Significant Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/25/2021, 7:17 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Lithium (mg/L)	HGWA-1 (bg)	-0.006059	-119	-81	Yes	20	45	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-2 (bg)	-0.0003434	-84	-81	Yes	20	30	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-7	0.00396	155	87	Yes	21	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-9	0.002522	128	81	Yes	20	0	n/a	n/a	0.01	NP

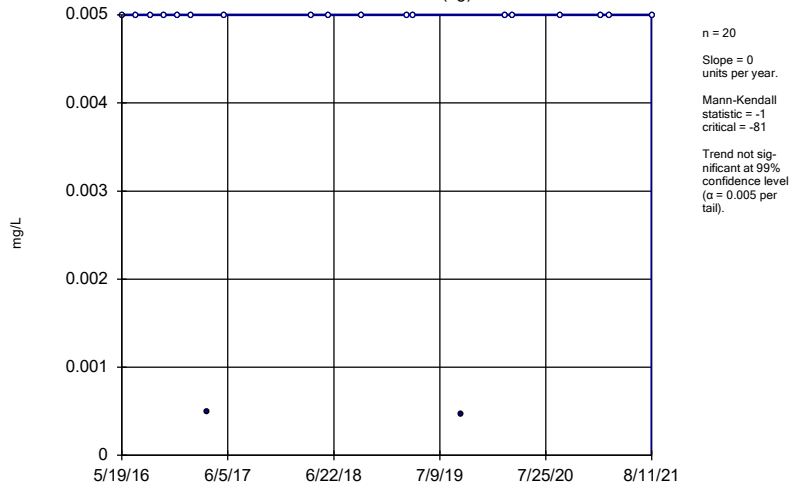
Appendix IV Trend Test Summary - All Results

Plant Hammond Client: Southern Company Data: Hammond AP-1 Printed 10/25/2021, 7:17 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Arsenic (mg/L)	HGWA-1 (bg)	0	-1	-81	No	20	90	n/a	n/a	0.01	NP
Arsenic (mg/L)	HGWA-2 (bg)	0	20	81	No	20	60	n/a	n/a	0.01	NP
Arsenic (mg/L)	HGWA-3 (bg)	0	8	81	No	20	60	n/a	n/a	0.01	NP
Arsenic (mg/L)	HGWA-43D (bg)	-0.003883	-10	-18	No	7	28.57	n/a	n/a	0.01	NP
Arsenic (mg/L)	HGWA-44D (bg)	0	-2	-18	No	7	85.71	n/a	n/a	0.01	NP
Arsenic (mg/L)	HGWC-13	0.0173	61	81	No	20	0	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-1 (bg)	-0.006059	-119	-81	Yes	20	45	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-2 (bg)	-0.0003434	-84	-81	Yes	20	30	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-3 (bg)	0.00003978	21	81	No	20	5	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-43D (bg)	0.001273	11	18	No	7	0	n/a	n/a	0.01	NP
Lithium (mg/L)	HGWA-44D (bg)	0.01521	13	18	No	7	0	n/a	n/a	0.01	NP
Lithium (mg/L)	MW-25D	-0.0008246	-11	-25	No	9	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-1 (bg)	0	0	87	No	21	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-2 (bg)	0	0	81	No	20	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-3 (bg)	0	0	87	No	21	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-43D (bg)	-0.001109	-4	-18	No	7	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWA-44D (bg)	0.003529	12	18	No	7	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-11	-0.001035	-19	-81	No	20	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-12	-0.0002265	-14	-81	No	20	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-13	-0.0002928	-12	-81	No	20	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-7	0.00396	155	87	Yes	21	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-8	-0.005012	-34	-87	No	21	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	HGWC-9	0.002522	128	81	Yes	20	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	MW-19	-0.006345	-7	-25	No	9	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

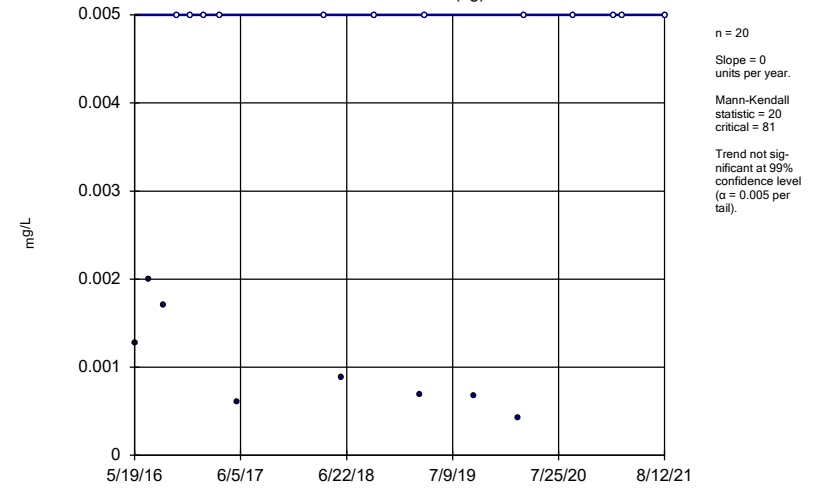
HGWA-1 (bg)



Constituent: Arsenic Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

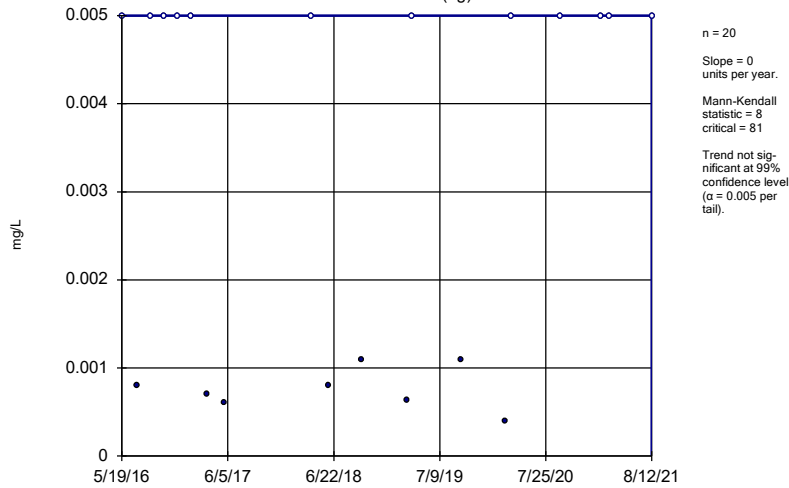
HGWA-2 (bg)



Constituent: Arsenic Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

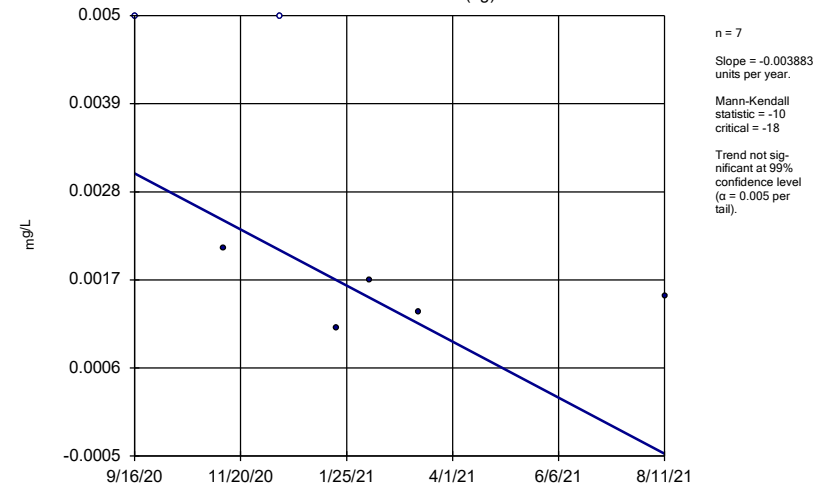
HGWA-3 (bg)



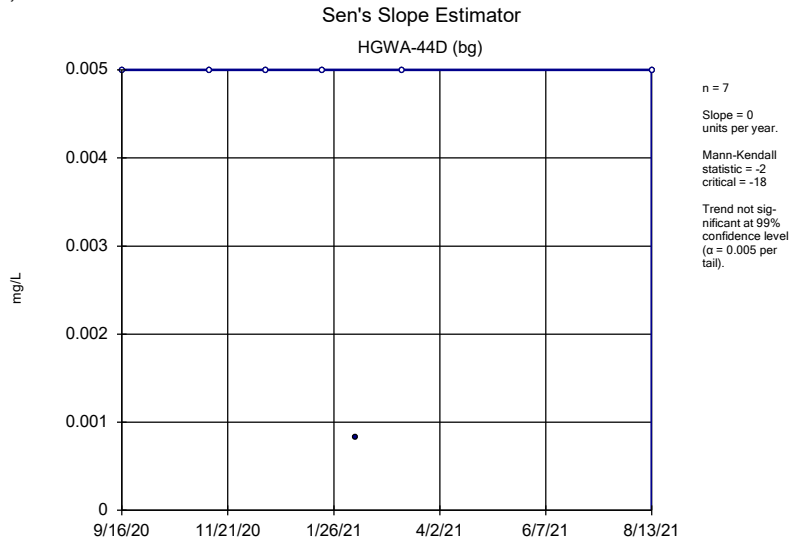
Constituent: Arsenic Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

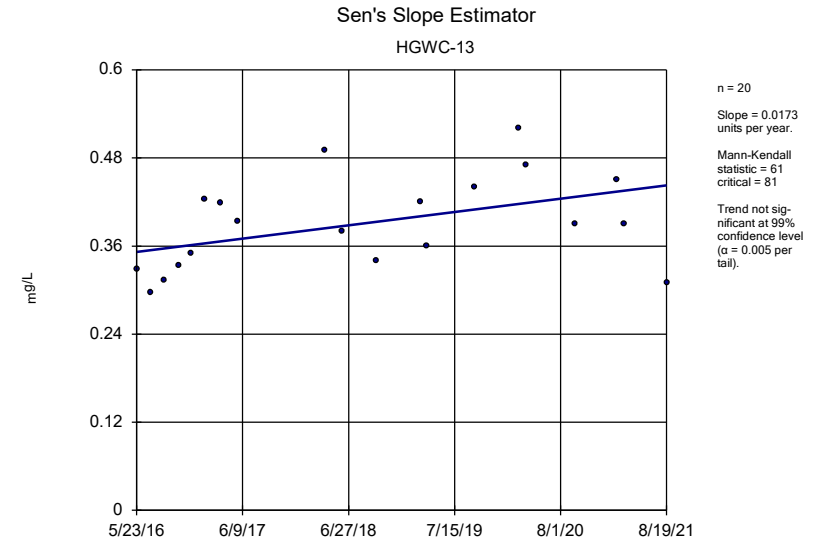
HGWA-43D (bg)



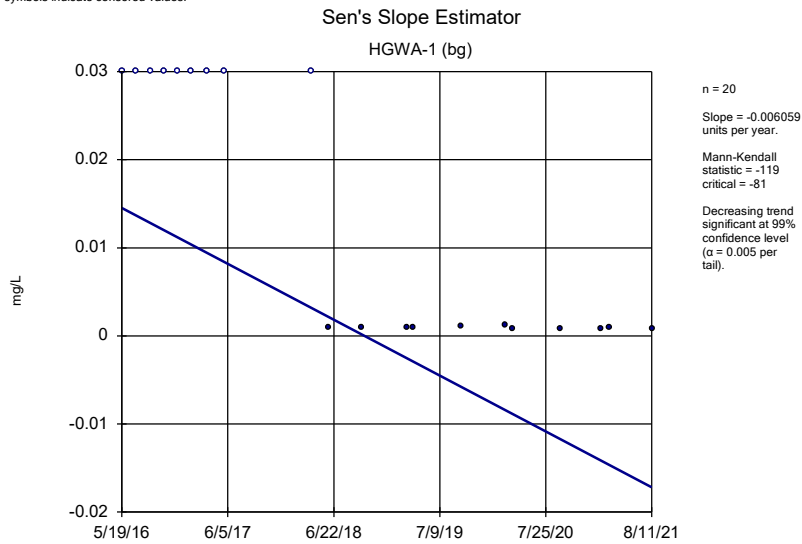
Constituent: Arsenic Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
Plant Hammond Client: Southern Company Data: Hammond AP-1



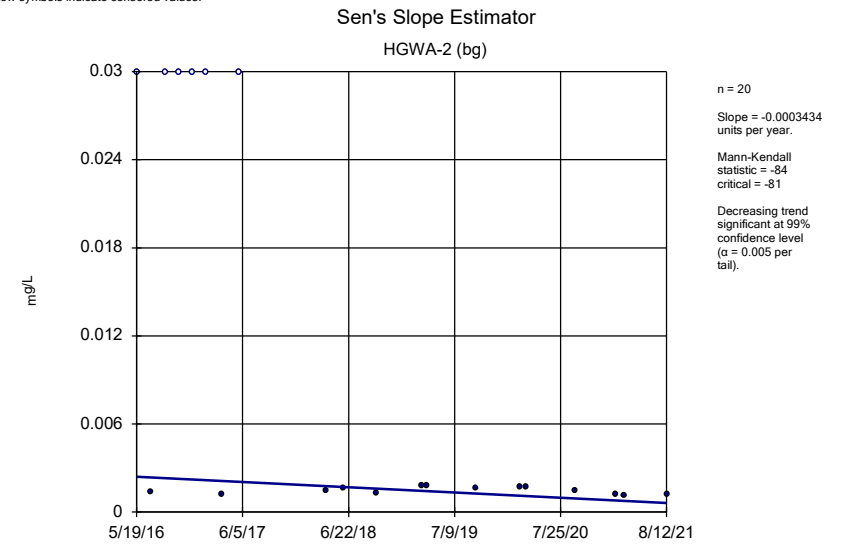
Constituent: Arsenic Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1



Constituent: Arsenic Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

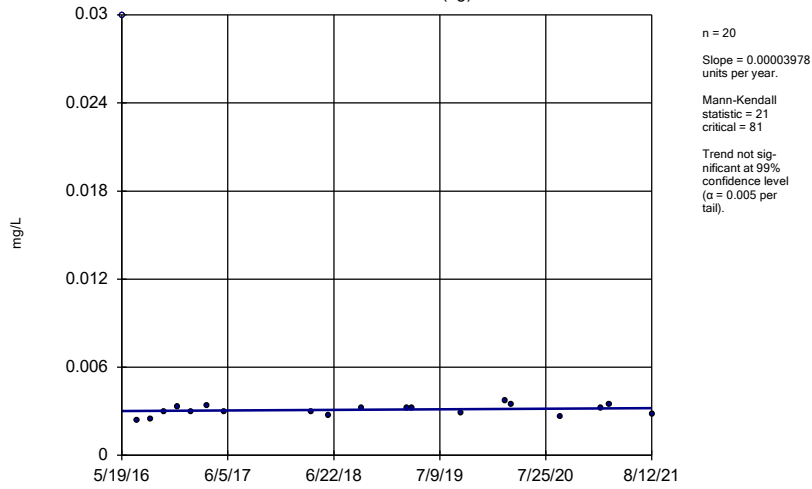


Constituent: Lithium Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1



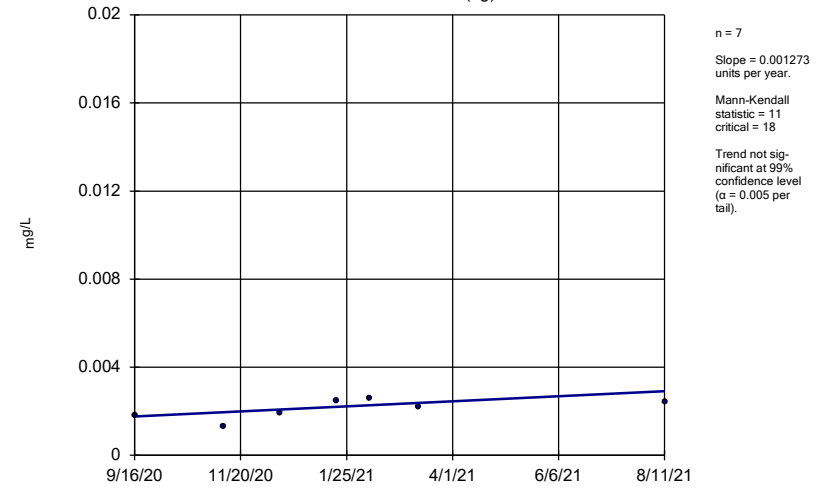
Constituent: Lithium Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-3 (bg)



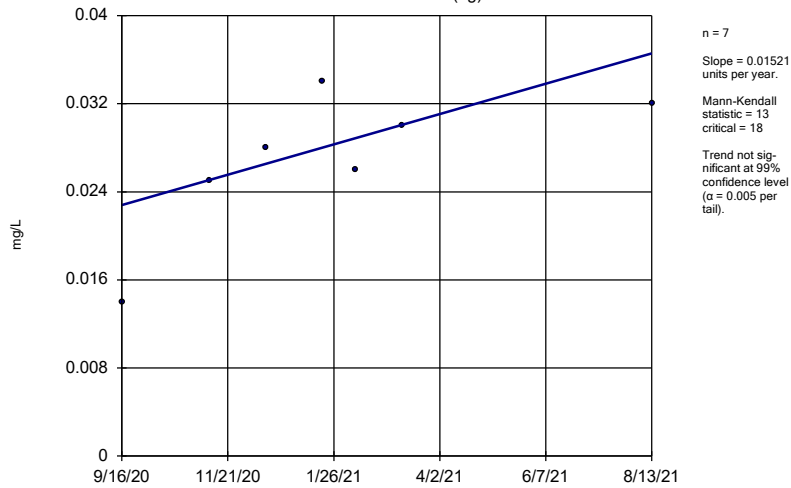
Constituent: Lithium Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-43D (bg)



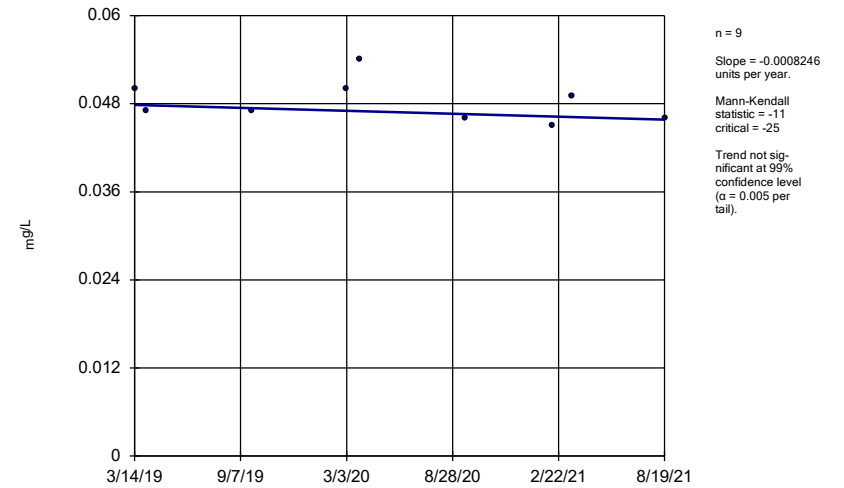
Constituent: Lithium Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator
HGWA-44D (bg)

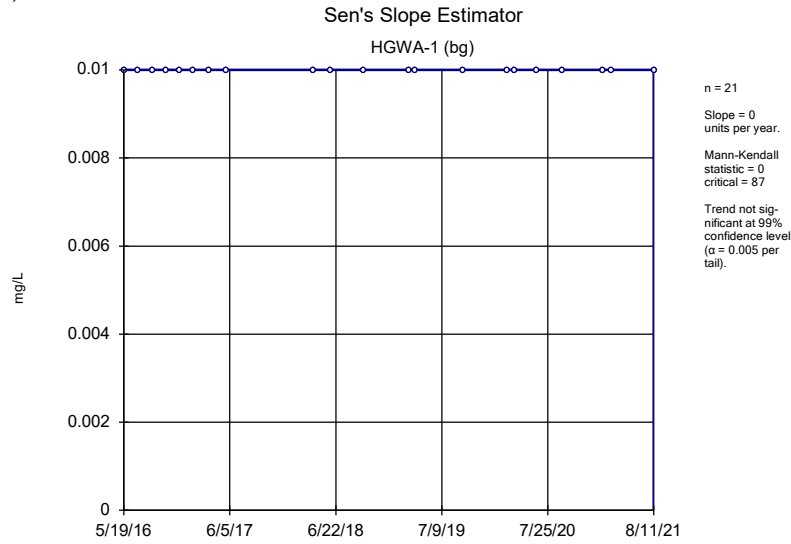


Constituent: Lithium Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
Plant Hammond Client: Southern Company Data: Hammond AP-1

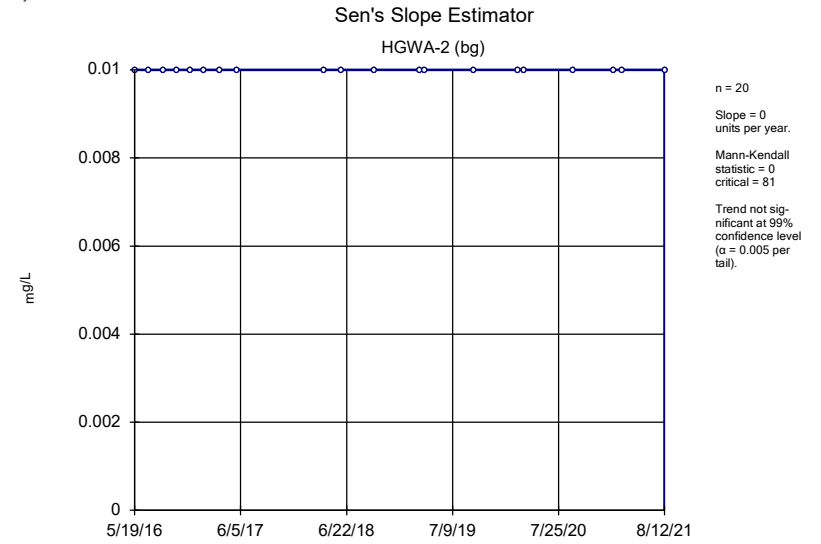
Sen's Slope Estimator
MW-25D



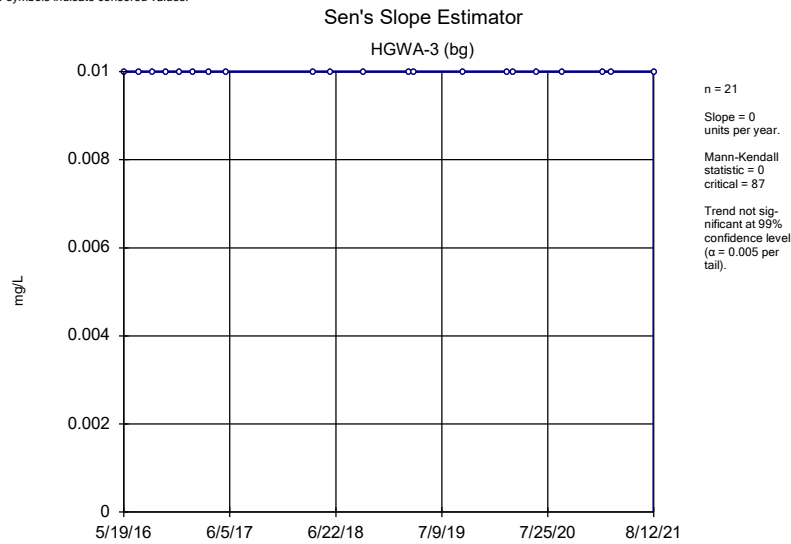
Constituent: Lithium Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
Plant Hammond Client: Southern Company Data: Hammond AP-1



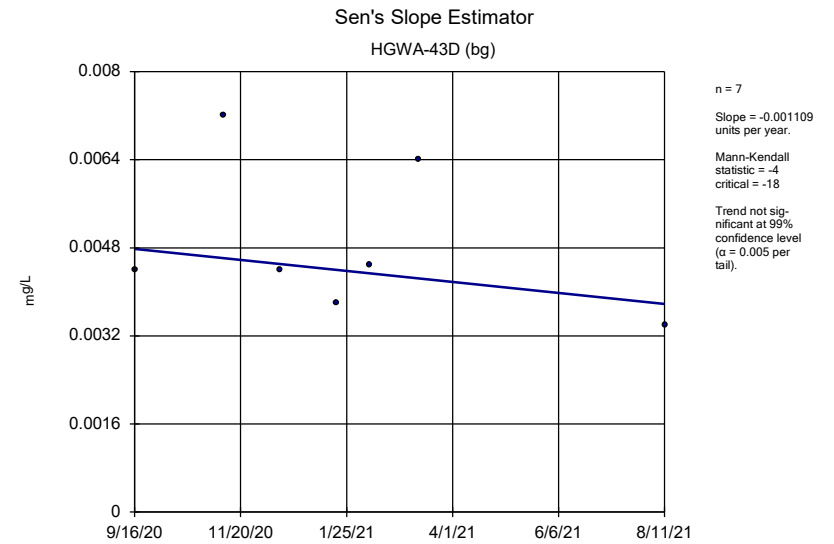
Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
Plant Hammond Client: Southern Company Data: Hammond AP-1



Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
Plant Hammond Client: Southern Company Data: Hammond AP-1



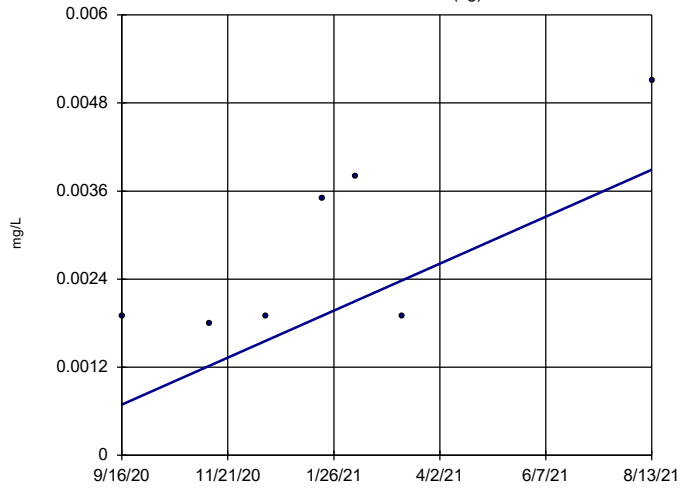
Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
Plant Hammond Client: Southern Company Data: Hammond AP-1



Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWA-44D (bg)

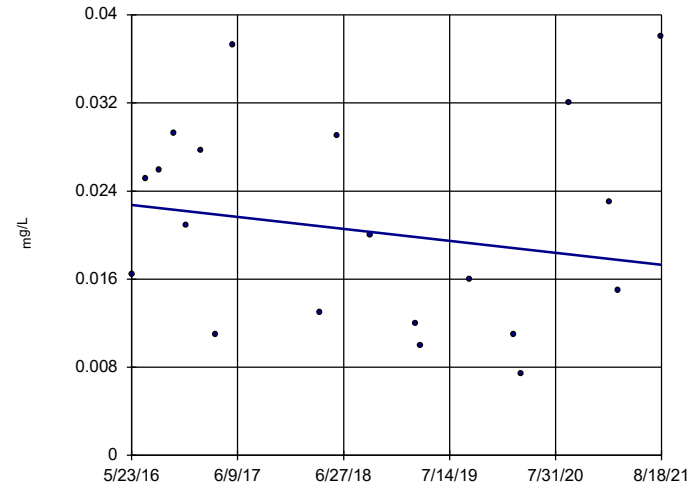


n = 7
 Slope = 0.003529 units per year.
 Mann-Kendall statistic = 12
 critical = 18
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWC-11

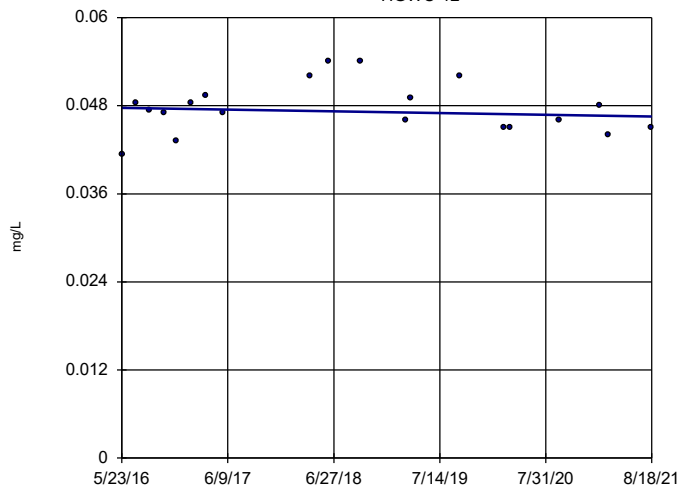


n = 20
 Slope = -0.001035 units per year.
 Mann-Kendall statistic = -19
 critical = -81
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

HGWC-12

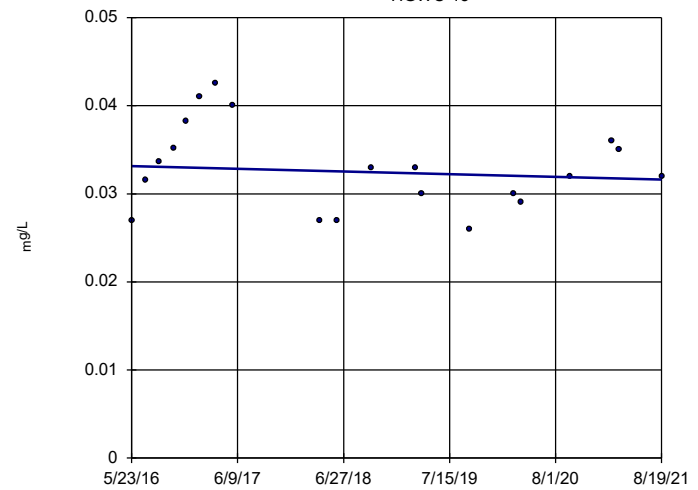


n = 20
 Slope = -0.0002265 units per year.
 Mann-Kendall statistic = -14
 critical = -81
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator

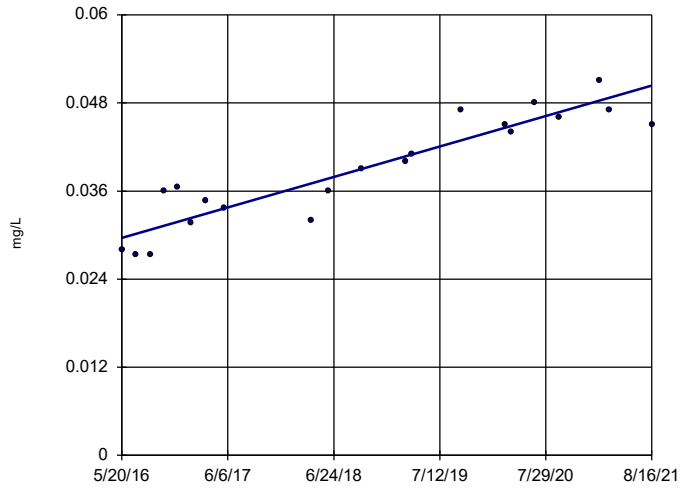
HGWC-13



n = 20
 Slope = -0.0002928 units per year.
 Mann-Kendall statistic = -12
 critical = -81
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

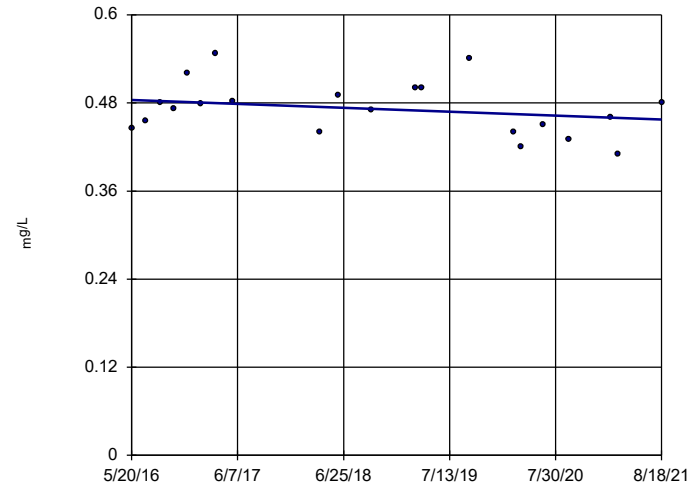
Sen's Slope Estimator HGWC-7



n = 21
 Slope = 0.00396
 units per year.
 Mann-Kendall
 statistic = 155
 critical = 87
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

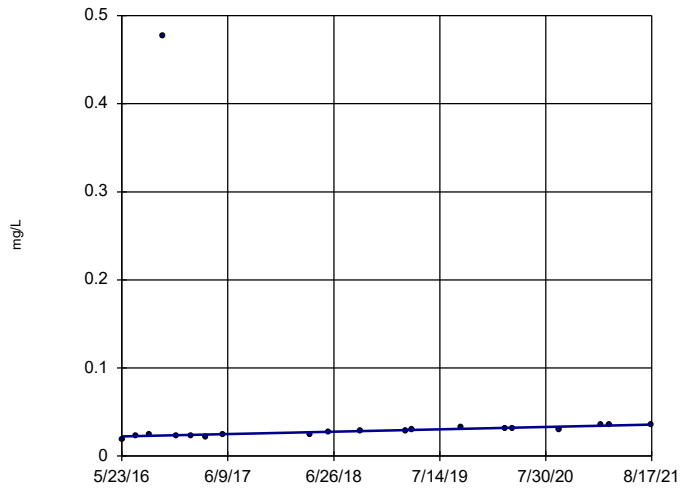
Sen's Slope Estimator HGWC-8



n = 21
 Slope = -0.005012
 units per year.
 Mann-Kendall
 statistic = -34
 critical = -87
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

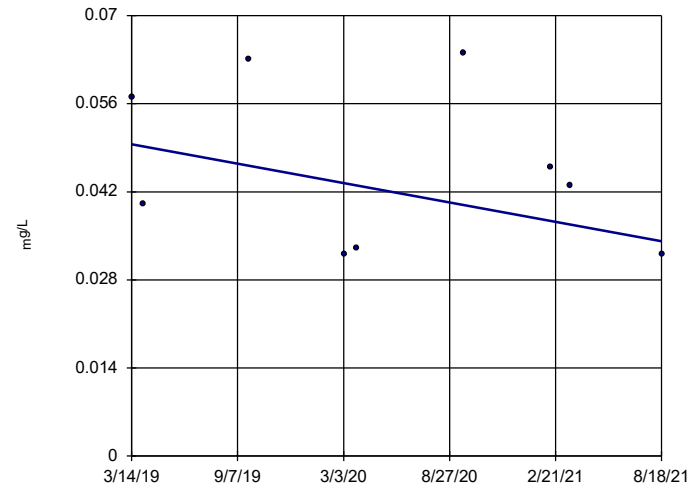
Sen's Slope Estimator HGWC-9



n = 20
 Slope = 0.002522
 units per year.
 Mann-Kendall
 statistic = 128
 critical = 81
 Increasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1

Sen's Slope Estimator MW-19



n = 9
 Slope = -0.006345
 units per year.
 Mann-Kendall
 statistic = -7
 critical = -25
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Molybdenum Analysis Run 10/25/2021 7:15 AM View: Appendix IV - Exceedances
 Plant Hammond Client: Southern Company Data: Hammond AP-1